Republic of the Marshall Islands

Marshall Islands
Demographic and Health Survey
2007

Economic Policy, Planning and Statistics Office
Majuro, Marshall Islands

Asian Development Bank,
Manila, Philippines
http://www.adb.org

Secretariat of the Pacific
Community, Noumea,
New Caledonia
http://www.spc.int

Macro International Inc.
Calverton, Maryland, USA
http://www.measuredhs.com

August 2008

Original text: English

Secretariat of the Pacific Community Cataloguing-in-publication data

Marshall Islands demographic and health survey 2007 / Economic Policy, Planning and Statistics Office, Republic of the Marshall Islands

1. Demographic surveys — Marshall Islands. 2. Health surveys — Marshall Islands. 3. Marshall Islands — Population — Statistics.

I. Title. II. Republic of the Marshall Islands Economic Policy, Planning and Statistics Office. III. Secretariat of the Pacific Community

304.6099683 AACR2

ISBN: 978-982-00-0299-9

This report summarizes the findings of the 2007 Republic of the Marshall Islands Demographic and Health Survey (RMIDHS) implemented by the Economic Policy, Planning and Statistics Office (EPPSO). The Secretariat of the Pacific Community (SPC) was the executing agency for the project. The Government of the Marshall Islands provided financial assistance in terms of in-kind contribution of government staff time, office space, and logistical support. The project was funded jointly by the Asian Development Bank (ADB), Australian Agency for International Development (AusAID), and New Zealand Agency for International Development (NZAID). SPC was responsible for sample design, preparing the overall project plan and budget, train EPPSO staff in project planning and implementation management, providing data processing support, and compiling the full DHS report.
Macro International Inc. in Calverton, Maryland, USA provided technical assistance in the areas of survey design, questionnaire and manual adaptation, conduct of pretest and main training, fieldwork monitoring, systems development, data processing and tabulation programs as part of its contract with ADB. The opinions expressed in this report are those of the authors and do not necessarily reflect the views of the donor organizations.

Additional information about the survey may be obtained from the Economic Policy, Planning and Statistics Office, Office of the President, P.O. Box 7, Majuro, MH 969600 (telephone: +692 625 3802; fax: +692 625 3805; email: planning@ntamar.net; website: www.spc.int/prism/country/sb/stats/).

Information about SPC can be obtained by contacting the Statistics and Demography Programme, Secretariat of the Pacific Community, BP D5, 98848 Noumea Cedex, New Caledonia (telephone: +687 262000; fax: +687 263818; email: spc@spc.int; website: www.spc.int/demog).

Information about the DHS program may be obtained from DHS, Macro International Inc., 11785 Beltsville Drive, Suite 300, Calverton, MD 20705, USA (telephone: +1 301 572 0200; fax: +1 301 572 0999; email: reports@macrointernational.com).

Recommended citation:
Economic Policy, Planning and Statistics Office (EPPSO), SPC and Macro International Inc. 2007. *Republic of the Marshall Islands Demographic and Health Survey 2007*.

Prepared for publication at the Secretariat of the Pacific Community
Noumea, New Caledonia, 2008
and printed with Ultimo Group, Auckland, New Zealand

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ACKNOWLEDGEMENTS

The 2007 Republic of the Marshall Islands Demographic and Health Survey (2007 RMIDHS) was one of four pilot DHSs in the Pacific under the Asian Development Bank/Secretariat of the Pacific Community (ADB/SPC) Regional DHS Pilot Project. The primary objective of the survey was to provide up-to-date information for policy-makers, planners, researchers and program managers to use in the planning, implementation, monitoring and evaluation of population and health programs in the country. The survey was intended to provide key estimates of the demographics and health of the country. In addition, the content of the survey was expanded to include questions on disability and gender-related violence.

The findings of the 2007 RMIDHS are very important for measuring the achievements of family planning and other health programs. To ensure better understanding and use of these data, the results of the survey should be widely disseminated at different planning levels. Different dissemination techniques will be used to reach different segments of society.

The 2007 RMIDHS is the result of an earnest effort put forth by different individuals and organizations. Conducted under the ADB/SPC Regional DHS Pilot Project, with technical assistance provided by Macro International Inc. and SPC, the survey was implemented by EPPSO. We acknowledge with much gratitude the generous financial support provided by ADB and the Australian International Assistance Bureau, enabling EPPSO to undertake this survey, and we are particularly thankful to the Secretary of the Ministry of Health, Ms Justina Langidrik, who chaired the Steering Committee, which offered guidance on the implementation of the survey from planning right through the preparation of this report.

EPPSO would like to acknowledge the efforts of a number of organizations and technical experts in different fields of population and health for their valuable input into the various phases of this survey, including finalization of survey questionnaires, training of field staff, assistance with data processing, reviewing of draft tables, and compiling this comprehensive report. We extend our deep appreciation to Macro International Inc and SPC for their excellent technical support. We thank Dr Elizabeth Go, DHS Consultant, and Mr Han Raggers, Macro Data processing specialist for their efforts; and we are equally appreciative of the support provided by SPC's Statistics and Demography Programme, particularly Mr Graeme Brown, Dr Gerald Haberkorn, Mr Rick Baxter, Ms Leilua Taulealo, Ms Kaobari Matikarai and Mr Arthur Jorari. We also like to acknowledge the assistance provided by the United Nations Population Fund (UNFPA) (Dr Annette Robertson, Dr Jean-Louis Rallu) and SPC's Public Health Programme (Dr Justus Benzler, Ms Kathryn Crouchley, Ms Karen Fukofuka Nemaaia) for peer reviewing key chapters.

Special thanks go to the staff of EPPSO: Ms Hemline Ysawa, DHS Project Director; Mr Augustine Rilang, Deputy DHS Project Director; Mr John Henry, Senior Statistician; Ms Caroline Neamon, Statistician; Ms Joyceline Mellan, Statistician; and Maybelline Bing and Charles Paul. We also acknowledge with appreciation the input by Dr Godfrey Waidubu, Public Health physician, who made many valuable contributions during the project.

We would like to extend our heartiest appreciation to all of the mayors and councilors in the local governments where the DHS took place. The cooperation and assistance from these local governments – Majuro, Kwajalein, Ujae, Maloelap, Likiep, Mili, Alinglaplap and Enewetak – were critical to the successful completion of this important survey.

We are grateful for the efforts of officials at national and local government levels who supported the survey. Finally, we highly appreciate all the field staff and, more importantly, the survey respondents, whose participation was critical to the successful completion of the survey.

Carl Hacker
Director
Economic Policy, Planning and Statistics Office
Majuro
Republic of the Marshall Islands

CONTRIBUTORS TO THE REPORT

Mr Carl Hacker, Director, EPPSO
Mr Arthur Jorari, SPC Statistics and Demography Programme
Ms Kaobari Matikarai, SPC Statistics and Demography Programme

REVIEWERS

Dr Gerald Haberkorn, SPC Statistics and Demography Programme
Mr Justus Benzler SPC Public Health Programme
Ms Kathryn Crouchley SPC Public Health Programme
Ms Karen Fukofuka SPC Public Health Programme
Dr Annette Robertson UNFPA, Fiji Islands
Ms Hemline Ysawa, EPPSO
Dr Godfrey Waidubu, Ministry of Health
Dr Kennar Briand, Ministry of Health
Dr Zachraias Zachraias, Ministry of Health

Resource persons

Ms Justina Langidrik, Secretary, Ministry of Health
Mr Carl Hacker, Director, EPPSO
Ms Hemline Ysawa, EPPSO
Dr Godfrey Waidubu, Ministry of Health
Dr Kennar Briand, Ministry of Health
Dr Zachraias Zachraias, Ministry of Health
Mr Wilbur Heine, Ministry of Health
Mr Graeme Brown, SPC Statistics and Demography Programme
Dr Gerald Haberkorn, SPC Statistics and Demography Programme
Mr Arthur Jorari, SPC Statistics and Demography Programme
Ms Leilua Taulealo, SPC Statistics and Demography Programme
Ms Kaobari Matikarai, SPC Statistics and Demography Programme
Dr Elizabeth Go, ADB/Macro Consultant
Dr Han Raggars, Macro Data Processing Consultant

SUMMARY OF FINDINGS

The 2007 RMI Demographic and Health Survey (DHS) is a nationally representative survey of 1,625 women aged 15–49 and 1,055 men aged 15+. The 2007 DHS is the first for the country and one of the four DHSs conducted in the Pacific as part of the Asian Development Bank (ADB)/Secretariat of the Pacific Community (SPC) Pacific Demographic and Health Surveys Pilot Project. The primary purpose of the RMIDHS is to furnish policy-makers and planners with detailed information on fertility; family planning; infant, child and maternal health; nutrition; and knowledge of HIV and other sexually transmitted infections.

FERTILITY

Survey results indicate that the total fertility rate (TFR) for the country is 4.5 births per woman. The TFR in urban areas is much lower than in rural areas (4.1 and 5.2 children respectively).

Education and wealth have a marked effect on fertility, with less educated mothers having more children on average than women with more than secondary-level education and women in the lowest wealth quintile having two more children than women in the highest wealth quintile.

Childbearing starts early and is nearly universal. Marshallese women have an average of 2.4 children by their late twenties and more than five children by the time they reach 50 years.

The initiation of childbearing in the Marshall Islands has not changed much over time, although it seems that there has been a slight increase in age at first birth in recent years. The median age at first birth in Marshall Islands is 20.7 years for women aged 25–29 – the youngest cohort for which a median age can be estimated. The findings further show that women in the highest wealth quintile, urban women, and women who have more than secondary-level education tend to have their first child at a later age than other women. Women with secondary education start having children at least two years later than those with less education (20.3 and 18.6 years respectively).

Marriage patterns are an important determinant of fertility levels in a population. The age at first marriage for women appears to be slowly increasing in the Marshall Islands. The median age at first marriage has increased from 19.1 years of age among women aged 40–44 to 20.2 years among women aged 25–29. Marshallese women tend to initiate sexual intercourse about two years before marriage, as evidenced by the median age at first intercourse among women aged 20–49 of 17.3 years compared with the median age at first marriage of 19.7 years. Like age at first marriage, age at first sex appears to be very slowly increasing among women in the Marshall Islands. While the percentages of women who had sexual intercourse by exact age 15 are the same or similar among younger cohorts of women and older women, the percentage of women who first had sexual intercourse by exact age 18 is lower among younger cohorts of women than older women.

Men, in contrast, tend to marry several years later than women and initiate sexual activity several years before marriage. The median age at marriage among men aged 20–49 is 22 years, while the median age at first intercourse is 16.5 years. The age at first sex for men has remained relatively constant over the years.

Almost two-thirds of non-first births in the Marshall Islands (32 percent) occur at least 24 months after the birth of the previous sibling, while 72 percent occur within 36 months. The overall median birth interval is 30 months. Birth intervals vary by place of residence: urban women have slightly shorter intervals between births than rural women (29.3 months compared with 31 months).

FAMILY PLANNING

Overall, knowledge of family planning is very high in the Marshall Islands, with 97 percent of all women and 99 percent of all men aged 15–49 having heard of at least one method of contraception. Pills, injectables, condoms and female sterilization are the most widely known modern methods among both women and men.

Sixty-three percent of currently married women have used a family planning method at least once in their lifetime. The modern methods commonly used for family planning by married women are female sterilization, injectables, and pills, with

withdrawal as the most commonly used traditional method.

Modern methods are more widely used than traditional methods, with 59 percent of currently married women using a modern method and 14 percent using a traditional method. The most popular modern method is female sterilization. Married women in urban areas are less likely to use contraception (43 percent) than women in rural areas (48 percent).

Almost all (94 percent) currently married women obtain methods of contraception from public medical sources, while 6 percent obtain their method from other facilities, including private medical services, where 0.5 percent of women obtain their contraceptive method.

Overall, 8 percent of currently married women have an unmet need for family planning services. The need for spacing (3 percent) is lower than the need for limiting (5 percent). If all currently married women who say they want to space or limit the number of children were to use family planning, the contraceptive prevalence rate in the Marshall Islands would increase from 63 percent to 71 percent. Currently, only 45 percent of the demand for family planning is being met.

MATERNAL HEALTH

Ninety-five percent of women who had a live birth in the five years preceding the survey received antenatal care (ANC) from a skilled health professional for their most recent birth. Over three in four (77 percent) women make four or more ANC visits during their pregnancy. The median duration of pregnancy for the first antenatal visit is 4.3 months, indicating that Marshallese women start ANC at a relatively late stage in pregnancy.

Among women who received ANC, over half (53 percent) report that they were informed about how to recognize signs of problems during pregnancy. Weight and blood pressure measurements were taken for 92 percent and 93 percent of women respectively. Urine and blood samples were taken from 85 percent of women. Only 20 percent of women received two or more tetanus toxoid injections during their most recent pregnancy. In the case of an additional 38 percent of women, the baby was protected against neonatal tetanus because of previous immunizations the woman had received.

Over 8 in 10 births occur in a health facility. Overall, 94 percent of births are delivered with the assistance of a trained health professional – that is, a doctor, nurse, midwife, medical assistant, or clinical officer – while only 2 percent are delivered by a traditional birth attendant (TBA). Less than 1 percent (0.8) of births are attended by a relative or some other person, while 0.6 percent of births are delivered without any type of assistance at all.

Postpartum care is extremely high in the Marshall Islands. Only 21 percent of women who had a live birth in the five years preceding the survey received no postnatal care at all, and 64 percent of mothers received postnatal care within the critical first two days after delivery. Seventy-three percent of women received first postnatal care from trained health professionals, while 3 percent were cared for by a TBA.

Concern that there was no female care provider available, no care provider available, and no drugs available were the common problems cited in accessing health care in the Marshall Islands.

CHILD HEALTH

Thirty-four percent of children aged 12–23 months were fully vaccinated at the time of the survey: about 70 percent had received the BCG vaccination and 54 percent had been vaccinated against measles. Because DPT and polio vaccines are often administered at the same time, their coverage rates are expected to be similar. However, differences in coverage of DPT and polio result in part from stock-outs of the vaccines. Over 70 percent of children received the first doses of DPT and of polio. However, only 48 percent of children received the third dose of DPT and only 46 percent received the third dose of polio.

The occurrence of diarrhea varies by age of the child. Young children aged 12–23 months are more prone to diarrhea than children in other age groups. There is not much variation in the prevalence of diarrhea by child's sex. Diarrhea is more common among children who live in households with a non-improved or shared toilet facility than among children who live in households with improved, not shared facilities. Surprisingly, diarrhea is common among children who live in households with an improved source of drinking water. Although there is not much

difference, rural children are more likely than urban children to get sick with diarrhea (10 percent versus 9 percent). The pattern of prevalence of diarrhea by mother's level of education is not clear, while the prevalence of diarrhea generally decreases as wealth quintile increases – however, this is not clear.

Almost three in four (70 percent) children with diarrhea were treated with some kind of oral rehydration therapy (ORT) or increased fluids. About 4 in 10 children (38 percent) were treated with oral rehydration salt (ORS) prepared from an ORS packet, 13 percent were given recommended home fluids, and 43 percent were given increased fluids.

ORPHANHOOD

Over 4 in 10 Marshallese households included one or more children who stayed with neither their natural father nor their natural mother. A higher percentage of households with foster children was found in rural areas than in urban areas (50 percent compared with 44 percent). Only 1 in 10 Marshallese households contains orphans. There are more households with single orphans (8 percent) than with double orphans (1 percent). No major variations exist between rural and urban households regarding households with orphans.

About 6 out of 10 (56 percent) Marshallese children aged less than 18 years live with both parents, while 13 percent live with their mother and not with their father even though the father is alive somewhere. Female children aged 0–9 years living in rural areas are more likely to be found living with their mothers.

Marshallese children not living with either parent constitute about a quarter (23.2 percent). They are likely to be aged 2–17 years, living in rural areas and in the lowest to the middle wealth quintile households. There is very little variation by sex.

Overall, one-quarter (25 percent) do not live with their biological parents; this percentage increases as the age of the child increases and is greater in rural areas. Meanwhile, 4 percent of these Marshallese children have either one or both parents dead.

BREASTFEEDING AND NUTRITION

Breastfeeding is nearly universal in the Marshall Islands, with 95 percent of children born in the five years preceding the survey having been breastfed at some time. There is very little difference in whether children were ever breastfed by most background characteristics except place of residence and wealth status. There is an obvious difference in the proportion ever breastfed between rural and urban, where the practice is almost universal (97 percent) in rural areas compared to 93 percent in urban areas. Similarly, the proportions of children being breastfed are likely to be higher among mothers in lower wealth quintile households than mothers in richer households.

The median duration of breastfeeding is 15.4 months, while the median duration for exclusive breastfeeding is 0.7 months and the median duration for predominant breastfeeding is 0.9 months. In contrast, the mean duration is longer, with overall mean duration of breastfeeding 18.1 months, mean duration for exclusive breastfeeding 2.3 months, and mean duration for predominant breastfeeding 2.8 months. There is little difference in the duration of breastfeeding by sex of the child. Rural children are breastfed for a slightly longer duration than urban children (19.9 months compared to 14.2 months). Mothers with secondary education breastfeed their children for a shorter duration than mothers with less education.

Between the ages of six months and 23 months, children consume foods made from grains more often than any other food group. Ninety-three percent of breastfeeding children and 99 percent of non-breastfeeding children in this age group ate foods made from grains in the day and night preceding the interview. The next most commonly consumed food group is 'meat, fish, poultry and eggs'. Around 83 percent of breastfeeding children and 94 percent of non-breastfeeding children ate meat, fish, poultry and/or eggs. The third commonly consumed food group is fruits and vegetables, which are rich in vitamin A and were consumed by 61 percent of breastfeeding children and 69 percent of non-breastfeeding children.

Ninety-one percent of youngest children aged 6–23 months living with their mother received breast milk or other milk or milk products during the 24-hour period before the survey; 83 percent

had a minimally diverse diet (i.e. they had been fed foods from the minimum number of food groups depending on their age and breastfeeding status); and 65 percent had been fed the minimum number of times appropriate for their age. In summary, over half (55 percent) of Marshallese children aged 6–23 months met the minimum standard with respect to all three infant and young child feeding (IYCF) practices.

Ninety-three percent of youngest children aged 6–35 months living with their mother consumed foods rich in vitamin A in the 24-hour period before the survey. Consumption of foods rich in vitamin A increases from 72 percent among children aged 6–8 months to 97 percent of children aged 12–35 months.

The staple diet of mothers of young Marshallese children consists of foods made from grains (96 percent) and food from the group meat, fish, shellfish, poultry, and eggs (96 percent). Almost three in four women (71 percent) consume fruits and vegetables rich in vitamin A whereas 82 percent of women consume *other solid or semi- solid food.* Forty-two percent of mothers drink milk, while 71 percent drink tea and coffee and 93 percent drink other liquids.

Seventeen percent of the children who were tested for swelling on top of their feet had a dent remaining in the skin: there is no clear pattern by age of children but there are certainly variations, with the lowest observed among 6–11-month-olds (13 percent) and the highest among children aged less than six months (19 percent). The biggest difference is among urban and rural residents, where 23 percent of the children in urban areas had dents remaining in the skin after testing compared to only 3 percent in rural areas.

Eight percent of children who were observed aged 0–5 years had hair that was thinly spread on their head, while 5 percent had sparsely growing hair and 2 percent had yellow-colored hair, indicating malnutrition. These observed abnormalities, particularly the thinly spread hair growth, are likely to be found in children who are aged less than 6–23 months, children in rural areas, children whose mothers have no or only primary education, children born to mothers whose age at the child's birth is less than 35 years, and children born to mothers who are in the lowest to the middle wealth quintile households. Similar background characteristics are observed for those with the abnormalities of sparsely growing hair and yellow-colored hair.

The results of observations made during the 2007 RMIDHS concerning thinness and wastage among children aged 0–5 for whom wasting was observed for selected parts of their bodies show that almost 1 in 10 children 0–5 years of age (7 percent) were observed to have low weight for age, indicating thinness in the children's head. Interestingly, among the children whose weight for age was observed for selected parts of the body, about the same proportion had thinness in the observed body parts. The results indicate that about 10 percent of children aged 0–5 years have very low weight for their age. These Marshallese children are more likely to be aged 12–35 months, be male, live in rural areas, have mothers with no or only primary-level education, have mothers who were aged less than 20 years at the time of the children's birth, and be in the poorest households than other children.

The results of the observed overall nutritional status for children aged 0–5 years at the time of the survey show that over 8 in 10 (83 percent) children aged 0–5 years were observed to be well nourished while 13 percent were observed to be malnourished after the various tests and targeted observations.

HIV/AIDS AND STIs

Knowledge about AIDS is almost universal among the adult Marshallese population. A very high proportion of both women and men have heard of the virus (96 percent and 97 percent respectively). The results also show that the level of knowledge is quite high for both women and men at different ages and in different marital status categories, places of residence, education levels and household wealth quintiles.

Men and women were specifically asked if one can reduce the risk of acquiring HIV through consistently using condoms, limiting sexual intercourse to one uninfected partner who has no other sex partners, and abstaining from sexual intercourse. The results show that 73 percent of women and 90 percent of men agree that using a condom at every sexual intercourse can reduce the risk of getting HIV, while 86 percent of women

and 92 percent of men agree that limiting sexual intercourse to one uninfected partner is a way to avoid contracting HIV.

Generally, most women and men are aware of reducing the chance of getting HIV through these specified prevention methods: limiting sex to one uninfected partner (86 percent and 92 percent respectively), abstaining from sex (85 percent and 89 percent), using a condom (73 percent and 90 percent) and using a condom and limiting sex to one uninfected partner (67 percent and 87 percent).

Sixty-seven percent of women and 72 percent of men know that a healthy-looking person can have the virus that causes AIDS. Knowledge that people cannot get the AIDS virus by sharing food with a person who has AIDS is lower (61 percent of women and 65 percent of men) than knowledge that the AIDS virus cannot be transmitted by supernatural means (80 percent of women and 81 percent of men). That is, respondents were also asked if they thought that people could get the AIDS virus because of witchcraft or other supernatural means, and the majority of respondents rejected this idea.

One in three women (33 percent) and 45 percent of men have comprehensive knowledge of HIV and AIDS. Women in urban areas are more likely to have comprehensive knowledge than their rural counterparts (39 percent compared with 21 percent). Married women with more than secondary-level education and those in the fourth and highest wealth quintile are more likely to have comprehensive knowledge than other women. As for women, comprehensive knowledge is more common among men in urban areas who are currently married, men with higher education, and men in the fourth and higher wealth quintile.

Eighty-two percent of women and 78 percent of men know that HIV can be transmitted from a mother to her child by breastfeeding. A very low proportion of women (18 percent) and an even lower percentage of men (12 percent) know that there are special drugs that a doctor or nurse can give to a pregnant woman infected with the AIDS virus to reduce the risk of transmitting the virus to the baby. About 1 in 10 women and men (15 percent and 11 percent respectively) aged 15–49 know that HIV can be transmitted through breastfeeding and that the risk of transmission can be reduced by special drugs.

Most women and men express positive attitudes and opinions toward family members who have AIDS. For example, 74 percent of women and 72 percent of men report that they would not want to keep secret that a family member has the AIDS virus, while over half (56 percent) of the women and two in three men (66 percent) are willing to care for an HIV-infected family member. In contrast, only 28 percent of women and 21 percent of men report that they would buy vegetables from a shopkeeper who has the AIDS virus.

Almost all men (95 percent) in the age group of 15–49 years agree that a wife is justified in refusing to have sexual intercourse with her husband if she knows that the husband has a sexually transmitted disease. The same proportion of men also agree that the wife is justified in refusing sexual intercourse or asking the husband to use a condom.

Most adult women and men agree that children aged 12–14 years should be taught about using condoms to avoid getting HIV. Nine in 10 women and men (91 percent of women and 90 percent of men) support the idea of educating children about condom use to prevent HIV.

Most Marshallese women and men believe that the best way to raise HIV and AIDS awareness is through radio programs. About 62 percent of women and 53 percent of men suggest that HIV and AIDS awareness programs are best carried out through radio services.

An equal proportion of women and men believe that health workers are the best people to discuss HIV and AIDS with (93 percent). The results obviously show that almost all Marshallese women and men are more likely to trust health workers to discuss HIV- and AIDS-related issues, which is an indication of a perception that HIV and AIDS are health issues and not socioeconomic or development issues.

Among women and men who had sexual intercourse in the past 12 months, 3 percent of women had multiple partners compared to 9 percent of men. Having multiple sexual partners is

more likely among younger women and men who are either 'never married' or divorced, separated or widowed than among other groups. Meanwhile, 18 percent of women compared to 39 percent of men had higher-risk sex during the same 12-month period. Among those women and men who had higher-risk sex in the past 12 months, twice as many men as women used condoms (20 percent compared to 10 percent).

The results show that most Marshallese women and men are likely to know where to go for an HIV test (90 percent and 89 percent respectively). Even though most people know where to get tested, only a little over one in three had the courage to get an HIV test (39 percent of women and 37 percent of men) compared to over half the women and men who had never had an HIV test. Almost an equal proportion of women and men were tested for HIV in the 12 months before the DHS (22 percent and 21 percent respectively). Of these who were tested in the last 12 months, 67 percent of women and 56 percent of men received counseling with the test.

Forty-one percent of women received HIV counseling during antenatal care, 48 percent were offered an HIV test during ANC, and 40 percent were tested for HIV during ANC. Overall, 24 percent of women were counseled, offered an HIV test and received an HIV test, while almost three in four women (72 percent) reported that they received postnatal counseling. These results show that fewer than half of all women were tested for HIV during ANC visits, while 7 in 10 women received postnatal counseling.

Ten percent of women and 3 percent of men reported that they had a sexually transmitted infection (STI) or symptoms of an STI in the 12 months preceding the survey. Women aged 25–29 and men aged 15–29 have the highest likelihood of reporting symptoms of an STI. Never-married women and married men are less likely to report symptoms of an STI. Women and men in rural areas are more likely to report symptoms of an STI than their counterparts in urban areas.

About 14 percent of young women and 27 percent of young men in the 15–24 age group had their first sex very early in life, i.e. before the age of 15. About 60 percent of young women and 73 percent of young men had sex before they turned 18. Early sexual initiation is more likely among young adults who know where to obtain condoms than those who do not know a source of condom supply.

WOMEN'S EMPOWERMENT

Data for the 2007 RMIDHS show that 35 percent of currently married women and almost 80 percent of currently married men were employed at some time in the year prior to the DHS. Most of these women and men are likely to be paid in cash (87 percent and 94 percent respectively). Women are more likely to work but not receive payment (3 percent) than men (0.2 percent). Similarly, women are more likely to be paid in cash or in kind than men (9 percent and 5 percent respectively).

Overall, about one in four women (25 percent) mainly decide by themselves how their earnings are to be spent. Almost 6 in 10 women (58 percent) report that they make the decision jointly with their husband/partner, while 15 percent report that the decision is mainly made by their husband/partner.

Regarding the magnitude of a woman's earnings relative to those of her husband/ partner, over one in three working women report that their earnings are either more or less than those of their husband/partner (39 percent and 37 percent respectively), and over 1 in 10 (13 percent) report that their husbands or partners do not bring in any money.

The data show that almost one in four (23 percent) Marshallese married women whose husbands receive cash earnings report that their husbands/partners are the main decision-makers on the use of their cash earnings, compared with over one in three married men (38 percent) who report themselves as being so. A larger percentage of women (65 percent) than men (50 percent) report that decision-making is joint between the husband and wife.

Over one in three women (38 percent) are more likely to decide mainly by themselves how their cash earnings are used if their husband/partner has no earnings or did not work in the preceding 12 months, compared to over half (53 percent) who make joint decisions with their husband/

partner. Women are only slightly more likely to make decisions about the use of their earnings on their own if they earn more than their husband/partner (25 percent) than if they earn less (24 percent).

While 19 percent of women say they make decisions regarding daily household purchases on their own, only 7 percent report that they make decisions about major household purchases by themselves. About 2 in 10 (18 percent) married women independently decide on their own health care. Some women report that their husbands/partners are more likely to make independent decisions. Over 20 percent of women report that their husbands/partners make decisions about large household purchases by themselves while almost one in four (24 percent) women report that their husbands/partners make decisions about their health care. In terms of visits to a woman's family or relatives, women are most likely to report that they make these decisions jointly with their husband/partner (64 percent). Women are likely to report that all four decisions are made jointly with their husband/ partner.

Twenty-eight percent of men think that mainly husbands should make decisions about major household purchases and 24 percent think that mainly husbands should make decisions about visits to the wife's family or relatives, compared to 59 percent who think that it should be a joint decision. Almost half of all men (47 percent) think that mainly their wives should make decisions relating to purchases of daily household needs, compared to 37 percent who think it should be a joint decision. Only 14 percent of currently married men believe that the number of children to have should be decided mainly by the husband, while over 8 in 10 men (81 percent) say that it should be a joint decision between husbands and wives.

Data show that most women find violence against women justified in certain circumstances. Over half of all women (56 percent) agree that at least one of the reasons asked about in the RMIDHS is sufficient justification for violence against women. This indicates that Marshallese women generally accept violence as part of male–female relationships, which is not surprising because traditional norms teach women to accept, tolerate, and even rationalize battery.

Men were also asked about their opinions on the justification of violence against women under certain circumstances. Almost 6 in 10 men agree that it is justified for at least one of the specified reasons. It is interesting to note that this is about the same as the percentage of women who agree with at least one of the reasons (56 percent compared to 58 percent).

The data show that over 8 in 10 men believe that a woman has a right to refuse to have sex with her husband for all the specified reasons. Younger men (15–19 years), men who have never married, men who are unemployed, men with no children, men in rural areas, men with no or only primary-level education, and men who are from the poorest households are the least likely to agree with all of the reasons for a wife to refuse sex with her husband.

DOMESTIC VIOLENCE

The 2007 RMIDHS included a module on violence. About 3 in 10 women have experienced physical violence since the age of 15. More than half of these women, or 22 percent of all women, have experienced physical violence in the past 12 months. Four percent of women experience physical violence often, while 18 percent experienced violence occasionally in the past 12 months.

Physical violence is higher among Marshallese women in urban areas than those in rural areas (29 percent compared with 27 percent). Similarly, women in rural areas are more likely to have experienced physical violence in the past 12 months, and to have experienced it often during that time.

Among women who have experienced physical violence since age 15, 72 percent report that a current husband or partner committed physical violence against them, while 21 percent report that they experienced violence by a former husband/partner. Other perpetrators commonly reported by women are parents or stepparents (20 percent), and sisters and brothers (6 percent).

Women who have ever been pregnant were asked about their experience of physical violence during pregnancy. Overall, 7 percent of Marshallese women have experienced physical violence while

pregnant. Results by background characteristics reveal that the likelihood of having experienced violence during pregnancy decreases with increasing age but increases with the number of living children.

The 2007 RMIDHS investigated women's experience of sexual violence, including a question on whether the respondent's first sexual intercourse was forced. First sexual intercourse forced against their will is much more common among women aged less than 15–29 (8 percent). These women are more likely to have experienced the forced sexual encounter before first marriage or first cohabitation than at the time of first marriage or first cohabitation (9 percent compared to 6 percent).

Marshallese women were asked about six specific acts of control exercised by their husbands or partners. Among ever-married women aged 15–49 whose husband/partner has ever demonstrated specific types of controlling behaviors, 4 in 10 (40 percent) said that their husbands or partners insist on knowing where they are at all times. Similarly, almost 4 in 10 (38 percent) women reported that their husband/ partner is jealous or angry if they talk to other men, while a similar proportion (36 percent) of women cited that they are frequently accused of being unfaithful. One in five respondents (20 percent) went on to say that they are not permitted to meet their female friends, and 17 percent said that their husband/partner does not trust them with money.

Respondents were asked about seven specific acts of physical violence, two of sexual violence, and three of emotional violence. The results show that 22 percent of women have experienced physical violence at the hands of their husband or partner, 11 percent have experienced sexual violence, and 15 percent have experienced emotional violence. Overall, almost one-third of ever-married women (30 percent) have experienced violence (physical, sexual, or emotional) by a husband or other intimate partner.

Ninety-three percent of women who have experienced emotional violence by their current or most recent husband experienced such violence in the 12 months preceding the survey, and 22 percent of them experienced emotional violence often. Similarly, 90 percent of women who have ever experienced physical or sexual violence by their current or most recent husband experienced such violence in the 12 months preceding the survey, and 14 percent have experienced such violence often.

Almost half the women (49 percent) who have ever experienced physical violence by their current or most recent husband/partner suffered the injuries asked about, compared with 33 percent of women who suffered sexual violence and 42 percent of women who suffered physical or sexual violence. For each type of violence, women were most likely to report having experienced cuts, bruises, or aches, followed by eye injuries, sprains, dislocations, or burns. Women were least likely to report having suffered the most severe injuries; nevertheless, more than 1 in 10 women (ranging between 1 and 4 percent) who have ever experienced physical or sexual violence by their husband reported suffering deep wounds, broken bones, broken teeth, or other serious injuries.

Twelve percent of ever-married women report that they have initiated physical violence against their current or most recent husband, while 9 percent say they had committed such violence in the 12 months preceding the survey.

Twenty-six percent of women who have experienced violence seek help, compared to 52 percent who never told anyone and 14 percent who sought help specifically from someone. Women who experience physical violence only or both physical and sexual violence are more likely to seek help than those who experience sexual violence only.

MORTALITY

For the most recent period (i.e. 0–4 years before the survey, reflecting roughly 2003–2007), the infant mortality rate (IMR) is 21 deaths per 1,000 live births. This means that two in every 100 babies born in RMI do not live to their first birthday. Of those who survive to their first birthday, 16 out of 1,000 die before reaching their fifth birthday. The overall under-five mortality is 37 deaths per 1,000 live births, which implies that four in every 100 Marshallese babies do not survive to their fifth birthday.

The first month of life is associated with the highest risk to survival. The neonatal mortality rate is 15 deaths per 1,000 live births, implying that nearly two out of every 100 infant deaths occur during the first month of life. As childhood mortality declines, post-neonatal mortality usually declines faster than neonatal mortality because neonatal mortality is frequently caused by biological factors that are not easily addressed by primary care interventions. In RMI, post-neonatal mortality is six per 1,000 births.

The IMR in rural RMI during the 10 years before the 2007 DHS was 37 deaths per 1,000 births, as opposed to 30 in urban areas. This rural IMR of 37 is above the national average of 33 deaths per 1,000 births. The urban–rural gap in childhood mortality appears to be consistent as the age of children increases, except for post-neonatal mortality, where there is no difference between rural and urban populations, and for child mortality, where the gap is quite small (one death per 1,000). Surprisingly, the probability of dying between the first and fifth birthday for urban infants is 8 percent higher than for rural infants.

In comparing the mortality rates for urban and rural areas, it is important to note that 'urban' covers only two islands: Majuro and Ebeye. These two islands are home to over 68 percent of the total population of RMI. Both of the islands are entirely urban and have different socioeconomic environments in terms of general sanitation and nutrition; however, a large proportion of the population is not employed by the formal sector.

For neonatal mortality, 27 deaths per 1,000 births were observed for mothers with secondary-level education compared to 14 per 1,000 for mothers with no education or primary education. In other words, the probability of a baby dying in the first month of life for mothers with secondary education is 46 percent higher than for infants whose mothers have no or primary-level education. This contributes directly to the above-national-average IMR of 35 deaths per 1,000 to mothers with secondary-level education compared to 28 deaths per 1,000 for mothers with no or primary education.

In contrast, post-neonatal mortality and childhood mortality are higher for mothers with no or primary-level education than for mothers with secondary education. This leads to the observation that the under-five mortality rates for children whose mothers have no or primary education and for those whose mothers have secondary education are the same, at 47 deaths per 1,000. It is worth noting that most of the benefit of secondary education over no or primary education is due to a difference in IMR (28 versus 35). There is virtually no difference between the children of women with secondary education and the children of women with no or primary education in under-five mortality rates.

In RMI, perinatal mortality increases with the level of education of the mother, with the largest difference observed between women with no or primary education and those with more than secondary education (20 pregnancy losses or early deaths per 1,000 pregnancies compared with 25). Perinatal mortality is lowest among women with no or primary education (20 pregnancy losses or early deaths per 1,000 pregnancies).

Twenty-four percent of births in RMI are not in any high-risk category. An additional 21 percent of births are first-order births to mothers aged 18–34 years – considered an unavoidable risk category. The remaining 55 percent of births in RMI are in at least one of the specified avoidable high-risk categories. Over one-third of births (38 percent) are in only one of the high-risk categories (mostly high birth order >3, 18 percent, and 13 percent for short birth interval of <24 months), while 16.9 percent are in multiple high-risk categories. The births in multiple high-risk categories are mostly found in the following combination: birth order higher than three with birth interval <24 months (9 percent of births).

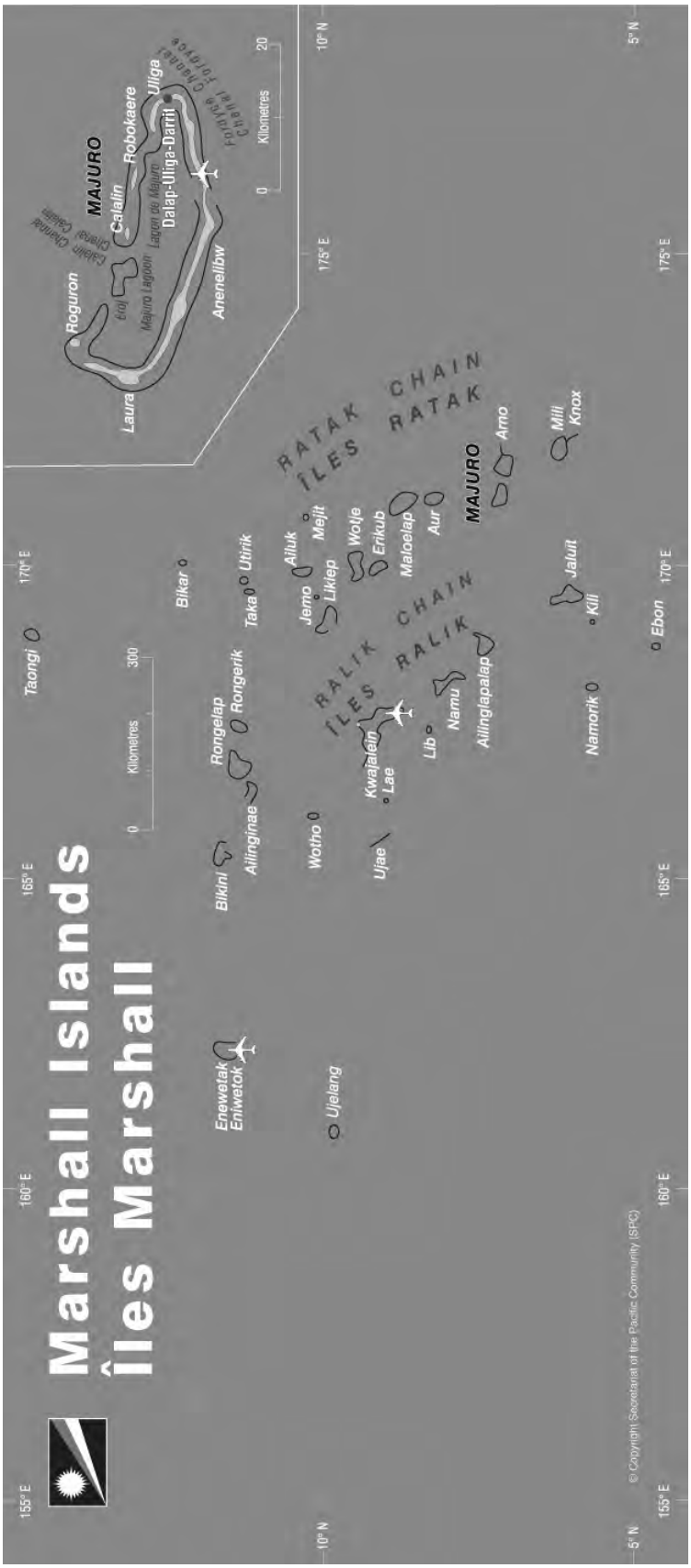
DHS INDICATORS REQUIRED BY INTERNATIONAL AGENCIES

INDICATOR	NATIONAL	DIFFERENTIALS URBAN	DIFFERENTIALS RURAL
Millennium Development Goals (MDG)/United Nations Population Fund (UNFPA)			
Net enrolment ratio in primary education (net attendance ratio)	83.2	81.1	87.1
Net enrolment ratio in primary education (net attendance ratio – males)	82.5	80.3	86.5
Net enrolment ratio in primary education (net attendance ratio – females)	83.8	81.8	87.7
Literacy rate of women aged 15–49 years	95.3	96.3	93.2
Literacy rate of men aged 15–49 years	94.4	93.9	95.3
Literacy rate of women aged 15–24 years	96.1	-	-
Literacy rate of men aged 15–24 years	93.6	-	-
	1.02	1.02	1.01
	1.15	1.19	0.98
Ratio of girls to boys in primary, secondary, and tertiary education	-	-	-
Ratio of literate women to men, 15–24 years old	1.03	-	-
Ratio of literate women to men, 15–49 years old	1.01	1.03	0.98
Share of women in wage employment in the non-agricultural sector	58.0	52.0	72.0
Under-five mortality rate	46	44	49
Infant mortality rate	33	30	37
Percent of one-year-old children immunized against measles	6.2	-	-
Percent of children aged 12–23 months immunized against measles	54.1	55.9	50.0
Percent of births attended by skilled health personnel	94.1	96.7	89.5
Contraceptive prevalence rate	45	42.7	48.3
Percent of population using solid fuels	33.6	7.9	95.2
Percent of population with sustainable access to an improved water source, urban and rural	98.4	97.8	99.7
Percent of population with access to improved sanitation, urban and rural	70.7	82.4	52.6

INDICATOR	NATIONAL	DIFFERENTIALS URBAN	DIFFERENTIALS RURAL
HIV/UNGASS (United Nations General Assembly Special Session on HIV/AIDS)			
Condom availability and quality			
Adult support of education on condom use for prevention of HIV/AIDS among young people:	90.6	91.5	88.8
Women and men	89.8	91.5	86.3
Knowledge of a formal source of condoms among young people (15–24 years): Women and	82	82	83
men	91	92	88
	4.3	5.1	2.6
Accepting attitudes toward those living with HIV – composite of four components	7.4	9.9	1.9
	56.1	60.0	47.5
Willing to care for family member: Women and men	65.7	74.1	47.4
			14.7
	21.3	24.3	17.3
Would buy fresh vegetables from a shopkeeper with AIDS: Women and men	27.9	32.7	
Female teacher who is HIV+ but not sick should be allowed to continue teaching in school:	14.5	15.9	11.4
Women and men	14.2	17.4	7.2
	72.4	72.8	71.3
Not secretive about family member's HIV status: Women and men	73.5	69.0	83.1
	95.8	97.0	93.4
Heard of HIV/AIDS: Women and men	96.6	96.0	98.0
Knowledge of HIV prevention methods: Women and men			
	73.1	76.5	66.0
Use of condoms: Women and men	89.7	90.8	87.1
	85.7	86.2	84.7
Only one/limiting partner: Women and men	91.8	92.2	90.7
	85.4	85.6	84.9
Abstain from sex: Women and men	89.0	88.1	90.8
No incorrect beliefs about AIDS			
	67.4	69.7	62.4
Healthy-looking person can have the AIDS virus: Women and men	72.3	72.1	72.7
	79.8	82.7	73.6
AIDS cannot be transmitted by supernatural means: Women and men	80.9	85.1	71.5
	61.4	68.4	46.6
Cannot become infected by sharing food with someone who has AIDS: Women and men	65.2	69.8	55.1
Knowledge of mother-to-child transmission (MTCT) during pregnancy and through	15.4	15.9	14.5
breastfeeding: Women and men	10.5	10.4	10.6
Voluntary counseling and testing			
HIV testing behavior among young people sexually active in the last 12 months: Women and	26.7	27.3	25.6
men	19.4	14.3	29.5
Mother-to-child transmission			
Pregnant women counseled and tested for HIV	23.5	28.3	15.4
Pregnant women counseled for HIV during ANC visit	40.5	50.0	24.3
Pregnant women tested for HIV during ANC visit	40.1	43.4	34.4

INDICATOR	NATIONAL	DIFFERENTIALS	
		URBAN	RURAL
HIV/UNGASS			
Sexual negotiation and attitudes			
Women's ability to negotiate safer sex with husband	94.6	95.8	91.9
Sexual behavior			
	18.1	17.2	19.8
Higher-risk sex in the last year: Women and men	39.4	41.6	35.0
Multiple partners in the last year among sexually active respondents aged 15–49: Women	3.3	3.3	3.3
and men	9.0	8.6	9.8
Condom use at last higher-risk sex			
	10.3	10.0	10.8
Last sex with anyone: Women and men	20.3	23.7	12.6
Commercial sex in last year: Men aged 15–49 years	0.5	0.5	0.5
Condom use at last commercial sex, reported by client	0.5	0.5	0.5
Young people's sexual behavior			
	17.6	18.1	16.6
Median age at first sex among young women and men aged 20–24 years	16.5	16.7	16.2
	19.8	na	na
Abstinence of never-married young women and men	16.1	na	na
	13.6	8.7	24.2
Sex before the age of 15: Women and men aged 15–24 years	26.5	24.4	31.1
	60.4	52.5	76.6
Sex before the age of 18: Women and men aged 15–24 years	73.4	70.4	79.2
	45.3	40.1	60.5
Young people having premarital sex in last year: Women and men	66.5	65.6	69.3
	8.1	8.1	7.9
Young people using a condom during premarital sex: Women and men	19.7	24.8	5.3
	7.0	na	na
Young people (15–24 years) having multiple partners in last year: Women and men	13.0	na	na
	8.9	8.0	10.4
Young people using a condom at last higher-risk sex: Women and men	21.7	26.4	11.1
Young people (15–24 years) using a condom at last higher-risk sex of all young people	9.0	na	na
surveyed: Women and men	22.0	na	na
	9.9	10.3	9.2
Condom use at first sex: Young women and men	16.2	21.5	4.7
Age-mixing in sexual relationships: Women			
Young women aged 15–19, non-marital, non-cohabiting partner in the last 12 months	3.8	3.6	4.4
Young women aged 15–24, any partner in the last 12 months	4.7	na	na
Forced sex among young people			
	9.3	9.5	9.1
Sex among young people while they are intoxicated: Women and men	38.3	49.3	13.4
Sex with commercial sex workers among young people: Men	0.6	na	na
Appropriate diagnosis and treatment of STIs			
	65.3	na	na
Seeking treatment for STIs: Women and men	84.8	na	Na
Social impact			
Birth registration	96	96	96
Prevalence of orphanhood under 18 who are orphans (single & double)	4.5	4.9	4.5
Prevalence of orphanhood among children under 15 (single & double)	3.5	na	na

MAP OF THE REPUBLIC OF THE MARSHALL ISLANDS



CHAPTER 1. INTRODUCTION

1.1. HISTORY, GEOGRAPHY, AND ECONOMY

1.1.1. History

The first Marshallese are thought to have reached the islands from Southeast Asia in ocean-going canoes some 2,000 years ago. According to legend supported by archaeological evidence, the settlers arrived in the northern part of the group and slowly moved through the double chain of islands. The social structure that developed over time was shaped to a large extent by the environment, and land constraints in particular. Traditional authority was built around land, with the community organized in bwij (lineage groups) under several alap (clan leaders), and each household living on its own weto (cross-island strip) and each weto typically offering a range of soil types and vegetation (ADB 2001).

Often-fierce competition for scarce land and coastal resources resulted in the formation of a strong hierarchical social structure. As the hereditary chief of the bwij, the iroj held the right to adjudicate the use of land and coastal resources, manage the resources of the community as a whole, and organize both the defense of those resources and offensive operations to expand the resource base. Despite the strongly hierarchical structure, anthropological evidence shows relatively uniform material well-being in the community. That the iroj did not personally accumulate wealth is interpreted as evidence of an egalitarian redistribution system, possibly under the command of the iroj. Workers (rijerbal) provided labor and constituted, along with the alap, the strength of the iroj, thus forming the basis for mutual dependence. The land tenure system has survived colonization and the modern era, with access and use rights to land still held by the iroj and alap. However, poverty and governance have changed considerably with the transition to a monetary economy.

The first outsiders to reach the Marshall Islands were Spanish navigators searching for a westerly route to the Spice Islands (Malukus) in the 16th century. John William Marshall, a British sea captain, sailed through the atolls in 1788 while en route from Australia to China and proclaimed them the Marshall Islands. German trading companies began arriving in the 1860s to establish a base for copra production in the Ralik Islands, which stretch between Ujae and Ebon atolls. The Germans worked with the iroj to acquire both land and labor for copra production. A treaty of friendship was signed in 1875 between imperial Germany and all of the Ralik chiefs, which led to the establishment of a German consulate on Jaluit. Germany bought the rest of the islands from Spain in 1885, thus consolidating its claim on the entire Marshall Island group (Marshall Islands Visitors Authority 2004). Copra became a dominant industry and a head tax payable in copra was introduced, with the iroj responsible for collecting it and receiving a share of it. This elevated the iroj to representatives of the imperial authority, which consolidated the powers of the chiefs with the backing of a modern state. The last point is important with regard to pressures for good governance, as the iroj of the modern era draw legitimacy from both the modern state and the alap and rijerbal.

Japan took over the islands when World War I broke out, remaining in control from 1914 to 1944. The Japanese maintained the administrative set-up left behind by the displaced Germans, except that Tokyo-based trading companies now ran the copra and trade store operations. Annual copra production during the Japanese era reached 5,000 tons, and Japanese manufactured goods were distributed throughout the colony aboard regular inter-island shipping (ADB 2001). The lead-up to World War II saw Japan fortify the islands, building airfields and supporting seaport infrastructure on Kwajalein, Wotje, Mili, and Maloelap, from which they launched the Pacific War. The Americans captured Kwajalein and Enewetak in January and February of 1944 respectively, becoming another colonial power until the country achieved independence in 1986.

The United States administered RMI as part of the Trust Territories of the Pacific Islands. Between 1946 and 1958, the US conducted some 67 nuclear tests in Bikini and Enewetak atolls. People who were resettled from these and other atolls for the tests received compensation, and the RMI Government

continues to seek final reconciliation with the US for the tests. The Asian Development Bank (ADB) notes that a 'blend of ignorance, negligence, and intent in the conduct of the tests exposed thousands of Marshallese civilians and several hundred American servicemen to radiation' (ADB 2001).

The nuclear testing program left Bikini uninhabited, with its original residents resettled on Kili Island, Ejit Island (in Majuro Atoll), and other areas. Residents of Rongelap Atoll, which was exposed to fallout, were relocated and currently live on Mejatto Island in Kwajalein Atoll, on Majuro, and in other areas. The health costs for those affected by the nuclear testing are paid by a special health fund. The US has maintained a military base in Kwajalein Atoll since the end of the war, and since the 1960s has used it to test ballistic missiles. The US provides land-lease payments to Kwajalein landowners through an agreement with the RMI Government, which has an agreement with the landowners for the use of the atoll. The US provides further direct budgetary support and permits access to special grants from the US Government. These transfers from the US are the major source of foreign exchange and have annually been well in excess of 50 percent of gross domestic product (GDP).

RMI's relationship with the US continues under the Compact of Free Association, which went into effect in 1986. Certain provisions of the Compact, including economic assistance, expired in 2001 and were subsequently renegotiated for an additional 20 years commencing in May 2004. An important aspect of the Compact is its provision allowing Marshallese to live and work in the US with little restriction. An estimated 15,000 Marshallese have taken advantage of this access, but remittance flows have not been significant. In fact, some estimates see an outflow of funds from RMI to the US. Likely reasons for this anomaly are the poor economic and social conditions most Marshallese migrants in the US face. On the whole, migrants have held poorly paid menial jobs and used their income to support a large, unemployed Marshallese community in the US. Many migrant families live below the US poverty line, which both explains the lack of remittance income to RMI and offers lessons about what could be done to take better advantage of this opportunity.

RMI's colonial history and rapid transition to a monetized economy heavily dependent on aid, rent, and compensation have had significant socio-psychological impacts. Many Marshallese who directly benefit from transfers have become wealthy quickly. More broadly, transfers have fuelled a large public sector and fostered a dependency mindset. Domestically, many Marshallese continue to expect government handouts, and internationally RMI as a nation continues to rely heavily on and actively solicit transfers from the US and other countries.

1.1.2. Geography

RMI is located in the Central Pacific Ocean, and is comprised of 29 scattered and remote atolls in the Eastern Ratak (Sunrise) and Western Ralik (Sunset) chains. There exist approximately 1,225 islands and islets in the Marshall Islands, none of which is above 10 feet in elevation above sea level. The land area is less than 0.01 percent of the total surface area, with the total land area of 181 square kilometers and some 370 km of coastline, with an exclusive economic zone of 2 million km^2. The Marshall Islands has a unique geography, which is a challenge to delivery of basic health services. Transportation, electricity, and communication are limited by the isolated nature of many of the islands and atolls.

1.1.3. Economy

Traditionally, coastal fisheries and subsistence agriculture served as the major sources of livelihood for most people. Such livelihoods are no longer an option for the majority of the population following RMI's rapid population growth over the past half-century. Today, the highly urbanized Marshallese depend on large financial transfers from abroad and imports, in particular imported food. The potential of the natural environment to sustain the population has meanwhile been diminished by contamination with solid and radioactive wastes and overexploitation of marine resources both nearshore and offshore.

The two major urban atolls, Majuro and Kwajalein, the latter of which includes Ebeye Island, are home to two-thirds of the population. Population densities in some of the urban settlements exceed 28,000 people/km^2. The bulk of the population, particularly those in crowded urban centers, depend on cash income and imports for sustenance. However, employment opportunities are limited. The geographic isolation of RMI and its consequently high transportation and communication costs have severely limited income growth. Not surprisingly, fewer than 1 percent of RMI's 9,161 wage-earners in 2004 worked in manufacturing.

In 2004 the public sector accounted for 41 percent of wage employment, and national government employees' average annual earnings of $13,275 were over one and a half times higher than the average for the private sector. The relatively high public sector wages draw the best personnel into the government, which is the largest sector of the economy and sets wages and employment conditions for the economy as a whole. However, poor productivity in the public sector has been a drag on economic performance (see Chapter 3). External assistance funds most public sector outlays, with the bulk of the recurrent budget being funded through the Compact of Free Association with the United States. A brief historic review helps explain the basis for such extensive foreign assistance.

Economic growth in the first decade of independence was fairly steady, with the per capita GDP expanding by 30 percent from 1986 to 1995, or 3 percent per annum. This decade of growth reflected the front-loaded transfer of economic assistance under the new Compact, which was structured in three five-year blocks from 1986 to 2001, with the bulk of the transfers received and spent during the first two periods to 1995.

The per capita GDP saw a steady decline in the six-year period to 2001, falling by 20 percent. The slow recovery from 2001 to 2004 has been driven by higher government expenditure fuelled by Compact bump-up funds,[6] the commencement of transfers under the new Compact economic package in 2004, and increased financial assistance from Taipei, China.

The per capita GDP in 2004 ($2,340) was higher than in 1986 ($2,065) but lower than the peak in 1995 ($2,647). The gain in per capita GDP since independence has been very slow, averaging less than 1 percent per annum, and has shrunk in the past decade. Caution has to be exercised in interpreting these numbers, but clearly the past two decades have seen little or no economic progress. Given the large transfers to RMI from abroad, the gross national income (GNI) provides a better measure of expenditures, including as it does net factor income and transfers from abroad, as well as domestic production.

Transfers are particularly relevant to RMI as they include large payments for labor and land used by the US on Kwajalein, fees collected from the ship registry and licensing foreign fishing vessels, and interest and dividend income from abroad. Payments to workers at the Kwajalein military base in 2004 amounted to $18 million, base rents another $9 million, and fishing licenses and ship registrations $1 million each. These four items together amounted to 22 percent of GDP. Including these transfers yields a per capita GNI for FY2004 (in 2003 prices) of $2,667.

Over the seven years to 2004, the real per capita GNI has increased at an annual average rate of 0.4 percent. At this rate, growth in the next decade will be only 4.1 percent, which is highly unlikely to translate into reduced poverty. Such a low rate of income growth in an environment of rising income inequality will increase both the number of people in poverty and the severity of that poverty.

1.2. POPULATION

Population censuses have been carried out in the Marshall Islands since 1930, first at five-yearly intervals and then at decennial intervals. Table 1.1 provides a summary of the basic demographic indicators available for RMI from the census data for 1930–1999. The Marshall Islands population increased four times after 1930, from around 10,000 in 1930 to over 50,840 in 1999. The population grew at a rapid rate between 1958 and 1988, from 1.2 percent to 4.2 percent, but the growth rate has slowed since 1988 to 1.5 percent (EPPSO 1999). A recent projection (2007) estimated the Marshallese population size to be over 52,700.[1]

The population density has greatly increased over the same period, from 57 persons per km^2 in 1930 to 726 persons per km^2 in 1999. Marshall Islands is predominantly rural in terms of atoll distribution, but in terms of population distribution, the proportion of the urban population has increased steadily over time and in 1988 was estimated to be higher than the rural population, from about 48 percent in 1980 to 65 percent in 1988. The 1999 Population and Housing Census results show that almost the same proportion (65 percent) of the Marshallese population lives in urban areas now. Life expectancy in the Marshall Islands is improving, increasing by about seven years between 1980 and 1999. Female life expectancy in 1999 was slightly higher than male life expectancy (69.4 years versus 65.7 years).

Table 1.1. Basic demographic indicators – selected demographic indicators, RMI 1930–1999

	1930	1935	1958	1967	1970	1973	1980	1988	1999
Total population	10,412	10,446	13,928	18,925	20,206	24,135	30,873	43,380	50,840
Intercensal growth rate (percent)	1.5	0.1	1.2	3.4	2.2	5.5	3.5	4.2	1.5
Density (population/kilometre^2)	57	58	77	104	111	133	170	240	726
Percent urban	-	-	-	-	-	-	47.8	64.5	65.0
Life expectancy									
Male	-	-	-	-	-	-	-	-	65.7
Female	-	-	-	-	-	-	-	-	69.4
Total	-	-	-	-	-	-	60.0	61.0	67.5
- equals to unknown (not available)									

Source: EPPSO, 1999a

1.3. POPULATION AND REPRODUCTIVE HEALTH POLICIES AND PROGRAMS

1.3.1. Evolution of population policy

During the 1960s until the early 1990s, the Marshall Islands experienced very high rates of population growth. Growth rates during this period exceeded over 4 percent and there was much concern by the government to implement programs and planning to cope with the demands of a fast-growing population. The first population policy for the Marshall Islands was officially adopted in December 1990 with help from various organizations in the United Nations system. Changes in socioeconomic conditions were a driving force behind the development of a comprehensive and far-reaching policy document. The very large growth in the population was placing pressure on education, medical services and job creation. The policy was updated in 1995. However, since 1995 there has been no further update or revision. During the mid-1990s ADB supported the government and Ministry of Health with a Health and Population Program Loan that supported activities such as family planning, the creation of community health councils, public health services, and a significant construction program for dispensaries on the outer islands.

[1] SPC population projections 2007.

During a visit by the United Nations Population Fund (UNFPA) to the Marshall Islands in January 2004, the idea of conducting a demographic and health survey (DHS) was first discussed. It had been five years since the last population census and there was more and more interest in ascertaining the general health situation of the population. Much of the thinking revolved around using the results of the DHS as a baseline for basic health indicators, but they could also be used for reviewing and reformulating the population policy. At the same time, the Marshall Islands was entering into a new phase of its Compact of Free Association with the United States. This placed much more emphasis on the health and education sectors, and also on the improved use of data and statistics for policy- and decision-making. The result was a decision to go forward with implementation of a DHS to assist the Marshall Islands with improving health indicators and health data to assist with policy-making, program review and meeting reporting obligations under the Millennium Development Goals (MDGs) and the Compact of Free Association.

1.4. OBJECTIVES OF THE SURVEY

The principal objective of the Republic of the Marshall Islands 2007 Demographic and Health Survey (2007 RMIDHS) is to provide current and reliable data on fertility and family planning behavior, child mortality, adult and maternal mortality, children's nutritional status, the utilization of maternal and child health services, and knowledge of HIV and AIDS. The specific objectives of the survey are to:

- collect data at the national level that will allow the calculation of key demographic rates;
- analyze the direct and indirect factors that determine the level and trends of fertility;
- measure the level of contraceptive knowledge and practice among women and men by method, urban/rural residence, and region;
- collect high-quality data on family health, including immunization coverage among children, prevalence and treatment of diarrhea and other diseases among children under five, and maternity care indicators (including antenatal visits, assistance at delivery, and postnatal care);
- collect data on infant and child mortality;
- obtain data on child feeding practices, including breastfeeding, and collect 'observation' information to use in assessing the nutritional status of women and children;
- collect data on knowledge and attitudes of women and men about sexually transmitted infections (STIs), HIV and AIDS and evaluate patterns of recent behavior regarding condom use; and
- collect data on support to mentally ill persons and information on the incidence of suicide.

This information is essential for informed policy decisions, planning, monitoring, and evaluation of programs on health in general and reproductive health in particular at both national level and in urban and rural areas. A long-term objective of the survey is to strengthen the technical capacity of government organizations to plan, conduct, process, and analyze data from complex national population and health surveys. Moreover, the 2007 RMIDHS provides national, rural, and urban estimates on population and health that are comparable to data collected in similar surveys in other Pacific DHS pilot countries and other developing countries.

1.5. ORGANIZATION OF THE SURVEY

The 2007 RMIDHS was carried out under the ADB/Secretariat of the Pacific Community (SPC) Pacific Regional Pilot DHS Project, and was executed by the RMI Economic Policy, Planning and Statistics Office (EPPSO) in collaboration with the Ministry of Health (MOH). Macro International Inc. provided technical assistance through its MEASURE DHS project. The survey was funded by ADB.

A steering committee was formed to be responsible for coordination, oversight, advice, and decision-making on all major aspects of the survey. The steering committee was composed of representatives from

various ministries and key stakeholders, including MOH and EPPSO. A technical advisory committee and technical subcommittee were also formed.

1.6. SAMPLE DESIGN

The primary focus of the 2007 RMIDHS was to provide estimates of key population and health indicators, including fertility and mortality rates, for the country as a whole and for urban and rural areas separately. The survey used the sampling frame provided by the list of census enumeration areas, with population and household information from the 1999 RMI Census and the 2006 Community Survey.

The survey was designed to obtain completed interviews of 1,070 women aged 15–49. In addition, males aged 15–59 in every second household were interviewed. To take non-response into account, a total of 608 households countrywide were selected: 295 in urban areas and 313 in rural areas.

1.7. QUESTIONNAIRES

Three questionnaires were administered for the 2007 RMIDHS: a household questionnaire, a women's questionnaire, and a men's questionnaire. These were adapted to reflect population and health issues relevant to the Marshall Islands at a series of meetings with various stakeholders from government ministries and agencies, non-governmental organizations (NGOs) and international donors. The final draft of the questionnaires was discussed at a questionnaire design workshop organized by EPPSO in September 2006 in Majuro. The survey questionnaires were then translated into the local language (Marshallese) and pretested from November 16 to December 13, 2006.

The household questionnaire was used to list all the usual members and visitors in the selected households and to identify women and men who were eligible for the individual interview. Some basic information was collected on the characteristics of each person listed, including age, sex, education, and relationship to the head of the household. For children under age 18, the survival status of their parents was determined. The household questionnaire also collected information on characteristics of the household's dwelling unit, such as the source of water, type of toilet facilities, materials used for the floor of the house, and ownership of various durable goods. Additionally, it was used to record information on mental illness and suicide experiences of members of the household.

The women's questionnaire was used to collect information from all women aged 15–49. The women were asked questions on:

- characteristics such as education, residential history, and media exposure;
- pregnancy history and childhood mortality;
- knowledge and use of family planning methods;
- fertility preferences;
- antenatal, delivery, and postnatal care;
- breastfeeding and infant feeding practices;
- immunization and childhood illnesses;
- marriage and sexual activity;
- their own work and their husband's background characteristics; and
- awareness and behavior regarding HIV and other STIs.

The men's questionnaire was administered to all men aged 15–59 living in every second household in the 2007 RMIDHS sample. It collected much of the same information found in the women's questionnaire, but was shorter because it did not contain a detailed reproductive history or questions on maternal and child health or nutrition.

1.8 LISTING, PRETEST, TRAINING, AND FIELDWORK

1.8.1. Listing

Using an existing structure database from the RMI Environmental Protection Authority, EPPSO was able to divide Majuro into 17 zones and Ebeye into nine zones. Then, using geographic information system (GIS) software, a 30 percent random coverage for structures was provided that colored and plotted all structures to be surveyed. The target survey sample was 20 percent, but because the database included all structures there was an intentional over-sample to compensate for commercial and government buildings, abandoned buildings, and auxiliary structures such as cookhouses and separate toilet facilities. This enabled EPPSO to produce large wall maps for Ebeye and Majuro that identified all houses to be surveyed, as well as smaller maps of each zone, which were provided to all personnel involved with fieldwork. Part of the training ensured that personnel could use and work with the maps as well as global positioning system (GPS) devices to help map every household surveyed. The sample strata were defined as:

0 Out of scope (total population est. 2006 = 13)

1 Urban

2 Very close to Majuro

3 Higher income, not isolated and good schools

4 Have relatively more services, power station, better housing, good dispensary, public high schools, isolated

5 'Typical' outer islands

6 Isolated outer islands

After the selection of the six strata throughout RMI, a listing operation was carried out in the selected strata starting in September 2006. On the outer islands, a decision was made to survey as many of the households as possible during the week to two weeks that personnel would be on island. Most atolls had relatively small populations so surveying all or most households was seen as more practical than using even smaller sample sizes. In the urban areas of Majuro and Ebeye, a more traditional random survey operation was developed and implemented.

1.8.2. Pretest

Prior to the start of the fieldwork, the questionnaires were pretested in the Marshallese language to make sure that the questions were clear and could be understood by the respondents. In order to conduct the pilot survey, two interviewers were recruited, along with EPPSO staff, to interview in both English and Marshallese. These interviewers later became team leaders and field editors. The pilot survey was conducted from November 16 to December 13, 2006 in three selected sites. Both rural and urban households were selected for the pretest. Based on the findings of the pretest, the household, women's and men's questionnaires were further refined.

1.8.3. Training

Before training commenced, local advertisements were placed seeking men and women to be interviewers. Potential candidates completed a short skills assessment in English and mathematics. They were then interviewed by EPPSO project managers to assess the interviewing skills required for the surveys. Training of interviewers, field editors, supervisors and reserves was conducted from January 4 to February 3, 2007. The questionnaires were used during the training, with the Marshallese versions being simultaneously checked against the English questionnaires to ensure accurate translation. In addition to classroom training,

trainees did several days of field practice to gain more experience in interviewing in the three local languages and fieldwork logistics.

A total of 26 participants were trained at the Ministry of Health. The training was conducted by MOH, Macro and SPC advisers. EPPSO and staff from MOH conducted different sessions on population and health issues. After the training on how to complete the household, women's and men's questionnaires, all trainees were given written and oral tests to gauge their understanding of the DHS questionnaires and interviewing techniques. On the basis of the scores on the exam and overall performance in the classroom, 26 trainees were selected to participate in the main fieldwork. From the group, two of the best male trainees were selected as supervisors and two of the best female interviewers were identified as field editors. The remaining 22 trainees were selected to be interviewers. The trainees not selected to participate in the fieldwork were kept as reserves in case people were sick or unable to participate. During the course of the survey several people on reserve were called in as there were several cases of people having family emergencies.

After completing the interviewers' training, the field editors and supervisors were trained for an additional three days on how to supervise the fieldwork and edit questionnaires in the field in order to ensure data quality.

This process of assessment and training made sure that the field supervisors, field editors, interviewers and data processors were of very high caliber, and this was demonstrated in the high degree of teamwork and quality data obtained. Not enough good things can be said about the quality of the training, work, effort and dedication that were put in by all the people involved with this very complicated project.

1.8.4. Fieldwork

Data collection began on February 8, 2007 by four field teams, each consisting of three female interviewers, one male interviewer, a male supervisor and a female field editor. Fieldwork was completed on June 7, 2007. Fieldwork supervision was coordinated by EPPSO; three quality control teams made up of one male and one female member each monitored data quality. Additionally, close contact between EPPSO and the field teams was maintained through field visits by senior staff. Regular communication was also maintained through cell phones and small two-way radios.

1.9. DATA PROCESSING

The processing of the 2007 RMIDHS results began soon after the start of fieldwork. Completed questionnaires were returned periodically from the field to the EPPSO data processing center in Majuro, where they were entered and edited by four data processing personnel specially trained for this task. The data processing personnel were supervised by EPPSO staff. The concurrent processing of the data was an advantage since field check tables were generated early on to monitor various data quality parameters. As a result, specific and ongoing feedback was given to the field teams to improve performance. The data entry and editing of the questionnaires was completed by June 30, 2007. Data processing was done using CSPro.

1.10. RESPONSE RATES

Table 1.2 shows household and individual response rates for the 2007 RMIDHS. A total of 1,141 households were selected for the sample, of which 1,131 were found to be occupied during data collection. Of these existing households, 1,106 were successfully interviewed, giving a household response rate of 98 percent.

In the households, 1,742 women were identified as eligible for the individual interview. Interviews were completed with 1,625 women, yielding a response rate of 93 percent. Of the 1,218 eligible men identified in the selected sub-sample of households, 87 percent were successfully interviewed. Response rates were

higher in rural than urban areas, with the rural–urban difference in response rates most marked among eligible men.

Table 1.2. Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence (unweighted), Marshall Islands 2007

	Residence		
Result	Urban	Rural	Total
Household interviews			
Households selected	578	563	1,141
Households occupied	576	555	1,131
Households interviewed	552	554	1,106
Household response rate	95.8	99.8	97.8
Interviews with women aged 15–49			
Number of eligible women	972	770	1,742
Number of eligible women interviewed	884	741	1,625
Eligible women response rate	90.9	96.2	93.3
Interviews with men aged 15+			
Number of eligible men	671	547	1,218
Number of eligible men interviewed	559	496	1,055
Eligible men response rate	83.3	90.7	86.6

[1] Households interviewed/households occupied
[2] Respondents interviewed/eligible respondents

CHAPTER 2. HOUSEHOLD POPULATION AND HOUSING CHARACTERISTICS

In the following substantive chapters of this report, a number of demographic and health-related topics (e.g. respondent characteristics, fertility, contraceptive behavior, infant and child mortality) are viewed across different subgroups of the population. One focus of the chapter is to describe the environment in which the survey respondents live. This description shows general characteristics of the population such as age–sex structure, literacy and education, household arrangements (headship, size), and housing facilities (sources of water supply, sanitation facilities, dwelling characteristics, household possessions). A distinction is made between urban and rural settings, where many of these indicators usually differ.

Besides providing the background for better understanding of the many social and demographic phenomena discussed in the following chapters, this general description is useful for assessing the level of economic and social development of the population.

2.1. HOUSEHOLD POPULATION BY AGE AND SEX

The 2007 RMIDHS included a household questionnaire, which was used to elicit information on the socioeconomic characteristics of usual residents and visitors who had spent the previous night in the selected households. Table 2.1 shows the reported distribution of the household population in five-year age groups, by sex and urban–rural residence. The data show that there are slightly more men (4,071) than women (3,922), with men constituting 51 percent of the population and women constituting 49 percent. The sex composition of the population does not show significant variation by urban–rural residence, in fact the proportions were the same at 51 percent and 49 percent respectively for men and women.

Table 2.1. Household population by age, sex, and residence

Percent distribution of the de facto household population by five-year age groups, according to sex and residence, Marshall Islands 2007

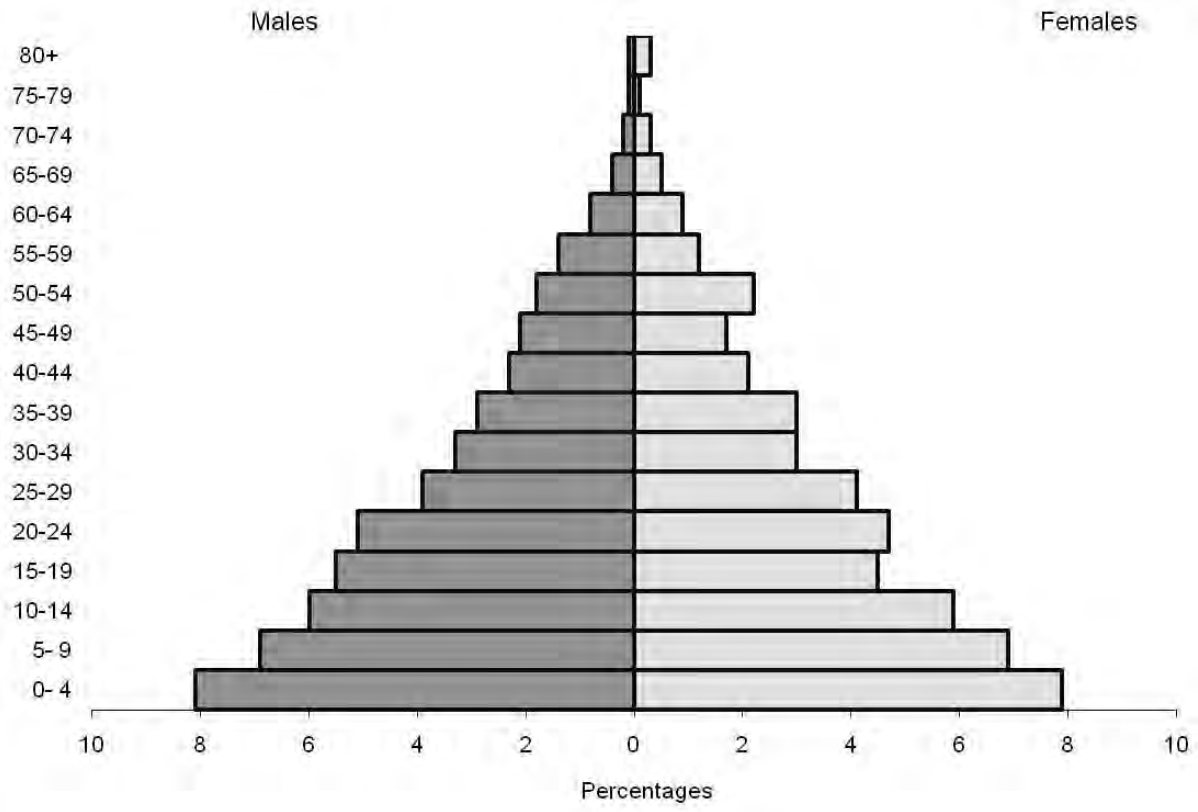
	Urban			Rural			Total		
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total
<5	15.1	15.8	15.5	18.0	16.7	17.4	16.0	16.1	16.0
5–9	12.0	13.2	12.6	17.2	16.1	16.7	13.5	14.1	13.8
10–14	11.1	11.3	11.2	13.2	13.9	13.6	11.7	12.1	11.9
15–19	12.2	10.1	11.2	7.2	7.1	7.1	10.7	9.2	10.0
20–24	10.1	9.6	9.9	9.9	9.9	9.9	10.1	9.7	9.9
25–29	8.0	8.3	8.2	6.8	8.2	7.5	7.6	8.3	8.0
30–34	6.8	6.2	6.5	5.7	5.7	5.7	6.5	6.0	6.3
35–39	5.8	6.3	6.1	5.5	5.4	5.4	5.7	6.0	5.9
40–44	5.1	4.6	4.8	3.2	3.4	3.3	4.5	4.2	4.4
45–49	4.0	3.1	3.6	4.2	3.9	4.0	4.0	3.4	3.7
50–54	3.6	4.5	4.0	3.5	4.2	3.8	3.5	4.4	4.0
55–59	3.0	2.7	2.8	2.5	2.1	2.3	2.8	2.5	2.7
60–64	1.5	1.8	1.7	1.4	1.5	1.5	1.5	1.7	1.6
65–69	0.8	1.0	0.9	0.8	0.8	0.8	0.8	0.9	0.8
70–74	0.4	0.6	0.5	0.6	0.4	0.5	0.4	0.6	0.5
75–79	0.3	0.2	0.3	0.2	0.4	0.3	0.3	0.3	0.3
80+	0.2	0.6	0.4	0.1	0.4	0.3	0.2	0.5	0.3
Don't know/missing	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	2,877	2,771	5,649	1,195	1,151	2,346	4,071	3,922	7,995

Note: Total includes one person whose sex was not recorded.

The table further depicts RMI as a young population, with a large proportion of the population being in the younger age groups. The population under age 20 constitutes 52 percent of the total population. The older age groups are very small in comparison, as can be seen in the population pyramid in Figure 2.1. In

general, the population pyramid reflects a broad-base pattern, characteristic of RMI with over half of its population being young. This type of age structure has a built-in momentum for the growth of the country's population. When the young population eventually reaches reproductive age, the result will be a high population growth rate for some years to come.

Figure 2.1. Population pyramid of the Marshall Islands, 2007



2.2. HOUSEHOLD COMPOSITION

Table 2.2 presents the headship and composition of households in RMI. Two in 10 households are headed by women while 8 in 10 households are headed by men. The proportion of female-headed households is slightly higher in urban areas than in rural areas (24 percent and 20 percent respectively).

About 1 in every 10 households has 1–2 members. One–two member households are more likely to be found in urban areas (10.3 percent) than in rural areas (8.7 percent). Excluding the household size of seven, rural areas have consistently higher percentages of households of 4–8 persons than urban areas. In urban areas, 33 percent of households have nine or more members compared with 25 percent in rural areas, indicating the need for housing in urban areas. Table 2.2 also shows that the mean household size is 7.2 persons. This is slightly lower than the figure of 7.8 obtained from the 1999 Population and Housing Census (Office of Planning and Statistics 1999). The mean household size is larger in urban areas (7.6 persons) than in rural areas (6.6 persons).

2.3. FOSTERHOOD AND ORPHANHOOD

In RMI, a person younger than 18 years old is defined as a child. Information on fosterhood and orphanhood of children is presented in Table 2.2. Over 4 in 10 Marshallese households included one or more children who were staying with neither their natural father nor their natural mother. There was a higher percentage of households with foster children in rural areas than in urban areas (50 percent and 44 percent respectively). Almost 1 in 10 Marshallese households has orphans. There are more households with single orphans (8 percent) than with double orphans (1 percent). Single orphans refer to children who one of their parents died while double orphan means for children who both father and mother have died. There are no major variations between rural and urban regarding households with orphans.

Table 2.2. Household composition

Percent distribution of households by sex of head of household and by household size, mean size of household, and percentage of households with orphans and foster children under 18, according to residence, Marshall Islands 2007

	Residence		
Characteristic	Urban	Rural	Total
Household headship			
Male	76.1	80.1	77.4
Female	23.9	19.9	22.6
Total	100.0	100.0	100.0
Number of usual members			
1	4.0	2.9	3.6
2	6.3	5.8	6.2
3	8.3	6.7	7.8
4	10.2	14.0	11.4
5	10.3	13.3	11.3
6	9.6	14.2	11.1
7	11.3	7.8	10.1
8	7.0	10.4	8.1
9+	33.1	24.8	30.4
Total	100.0	100.0	100.0
Mean size of households	7.6	6.6	7.2
Percentage of households with orphans and foster children under 18			
Foster children[1]	44.2	49.8	46.0
Double orphans	1.0	1.7	1.2
Single orphans	8.7	5.6	7.7
Foster and/or orphan children	46.9	50.8	48.2
Number of households	747	359	1,106

Note: Table is based on de jure household members, i.e. usual residents.

[1] Foster children are those under age 18 living in households with neither their mother nor their father present.

The distribution of de jure children under age 18 by living arrangements and survival status of parents and related information is presented in Table 2.3. About 6 out of 10 (56 percent) Marshallese children younger than 18 years live with both parents; 13 percent live with their mother and not with their father even though the father is alive somewhere. Female children aged 0–9 years living in rural areas are more likely to be found living with their mothers. Except for the highest household wealth quintile, children living with their mothers are almost equally distributed in all lower wealth quintiles. In contrast, those children aged younger than 18 years living with their fathers count for only 3 percent – and these are likely to be in the age range 15–17 years, living in urban areas and from the middle to the highest household wealth quintiles; there is very little difference in the number of boys and girls in this living arrangement.

Table 2.3. Children's living arrangements and orphanhood

Percent distribution of de jure children under age 18 by living arrangement and survival status of parents, percentage of children not living with a biological parent, and percentage of children with one or both parents dead, according to background characteristics, Marshall Islands 2007

Background characteristic	Living with both parents	Living with mother but not with father		Living with father but not with mother		Not living with either parent				Missing information on father/ mother	Total	Percentage not living with a biological parent	Percentage with one or both parents dead	Number of children
		Father alive	Father dead	Mother alive	Mother dead	Both alive	Only father alive	Only mother alive	Both dead					
Age														
0–4	66.5	16.4	0.9	1.9	0.3	13.0	0.3	0.2	0.4	0.2	100.0	13.9	2.1	1,277
<2	71.8	18.8	1.1	0.6	0.0	7.0	0.0	0.0	0.3	0.4	100.0	7.3	1.4	554
2–4	62.5	14.5	0.7	2.8	0.5	17.6	0.5	0.4	0.5	0.0	100.0	19.0	2.6	723
5–9	56.9	12.7	1.0	3.9	0.2	23.8	0.8	0.2	0.3	0.2	100.0	25.1	2.4	1,105
10–14	47.6	11.3	2.9	5.3	0.3	29.8	0.5	1.8	0.4	0.2	100.0	32.5	5.9	951
15–17	44.5	7.6	3.3	3.0	1.1	35.9	0.3	1.8	2.1	0.6	100.0	40.0	8.5	483
Sex														
Male	55.9	11.8	1.6	3.7	0.2	24.8	0.6	0.6	0.6	0.2	100.0	26.5	3.5	1,953
Female	56.6	14.1	1.9	3.2	0.5	21.6	0.3	1.0	0.6	0.1	100.0	23.6	4.3	1,862
Residence														
Urban	58.8	12.4	1.9	3.9	0.5	20.6	0.6	0.9	0.4	0.2	100.0	22.5	4.3	2,601
Rural	50.9	14.1	1.4	2.5	0.1	28.9	0.2	0.5	0.9	0.3	100.0	30.6	3.2	1,215
Wealth quintile														
Lowest	54.1	15.1	2.6	2.2	0.1	24.9	0.1	0.4	0.3	0.1	100.0	25.8	3.6	496
Second	55.1	14.5	0.7	2.5	0.2	25.6	0.5	0.7	0.2	0.1	100.0	27.0	2.3	528
Middle	49.9	15.8	0.7	3.0	0.0	27.3	0.0	0.9	1.7	0.5	100.0	30.0	3.4	685
Fourth	58.9	13.7	1.2	4.5	0.1	18.8	1.1	1.0	0.5	0.2	100.0	21.3	3.9	1,144
Highest	59.3	8.1	3.1	3.6	1.1	23.4	0.3	0.7	0.2	0.1	100.0	24.6	5.4	963
Total <15	58.0	13.7	1.5	3.5	0.3	21.4	0.5	0.6	0.4	0.2	100.0	22.9	3.3	3,333
Total <18	56.2	12.9	1.7	3.4	0.4	23.2	0.5	0.8	0.6	0.2	100.0	25.1	3.9	3,816

Note: Table is based on de jure members, i.e. usual residents.

The 2007 RMIDHS results from Table 2.3 also shows that Marshallese children aged below 18 years not living with either parent constitute about a quarter (23.2 percent). These are likely to be between the ages of two and 17 years, living in rural areas and in the lowest to the middle wealth quintile households. There is very little variation by sex.

Overall, one-quarter (25 percent) do not live with their biological parents, which is likely to increase as age of the child increases and is likely to be in rural areas. The variation by wealth quintile ranges from 21 percent to 30 percent. Meanwhile, 4 percent of these Marshallese children have either one or both parents dead.

2.4. HOUSING CHARACTERISTICS

Increased access to safe drinking water results in improved health outcomes in the form of reduced cases of water-borne diseases such as dysentery and cholera. Information was collected in the 2007 RMIDHS about certain characteristics of household drinking water, including source of drinking water, time taken to collect water, persons who usually collect water, water treatment prior to drinking, and type of sanitation facility.

Table 2.4 shows that 89 percent of households use improved water sources. In urban areas, close to 8 in every 10 households have access to an improved water source while almost every household has access to an improved water source in rural areas. Rainwater is still a major source of drinking water (65 percent), while rainwater and piped water are the second most important source (13 percent). These two sources combined are used by about three quarters (78 percent) of households. Only about 10 percent of households have access to public tap/standpipe/from neighbor while another 10 percent have access to bottled water. Obviously the percentage of households with access to public tap water is much higher in urban areas (14 percent) than rural areas (0.2 percent). These results complement the results of the 1999 Population and Housing Census.

Regarding time taken to draw water, findings show major urban–rural differences. In urban areas, 4.8 percent of households take less than 30 minutes to obtain drinking water, compared with only 0.8 percent of rural households. Similarly, most urban households (23 percent) still take more than 30 minutes to make a round trip to and from the drinking water source compared to only 0.4 percent in rural areas. Interestingly, most rural households have access to drinking water on premises.

The 2007 RMIDHS findings show that most of the burden of fetching drinking water rests on men over age 15. Women usually collect water in only 3 percent of households, and urban women are more likely to be involved (4 percent) than their rural counterparts (0.7 percent). Marshallese children (girls and boys under age 15) are less likely to fetch water (less than 1 percent of households). It should be noted that households could report more than one person who usually collects water. In urban areas, men usually collect water in a higher percentage of households than other family members under age 15 (23 percent) compared with only 0.5 percent for rural men, where most households have water on premises.

Water from an improved source can be contaminated at collection, during transportation, and during storage. Information was collected on whether or not water is treated prior to drinking. The majority of households (61 percent) use an appropriate treatment method on their drinking water while 37 percent use no treatment. The most commonly reported method of treatment is boiling. Five in every 10 households or half of Marshallese households boil water prior to drinking. This method is practiced by almost equal proportion of households in both urban and rural areas (47 percent and 56 percent respectively).

Table 2.4. Household drinking water

Percent distribution of households and de jure population by source, time to collect, and person who usually collects drinking water; and percentage of households and de jure population by treatment of drinking water, according to residence, Marshall Islands 2007

	Households			Population		
Characteristic	Urban	Rural	Total	Urban	Rural	Total
Source of drinking water						
Improved source	83.6	99.4	88.8	88.8	99.7	92.0
Piped water into dwelling/yard/plot	0.7	0.0	0.5	0.9	0.0	0.6
Public tap/standpipe/from neighbor	14.3	0.2	9.7	17.2	0.2	12.2
Protected dug well	0.1	0.2	0.1	0.0	0.2	0.1
Rainwater	49.5	98.4	65.4	48.6	98.5	63.3
Rainwater and piped water	19.1	0.6	13.1	22.0	0.8	15.8
Non-improved source	0.7	0.0	0.5	0.3	0.0	0.2
Unprotected dug well	0.4	0.0	0.3	0.3	0.0	0.2
Tanker truck/cart with small tank	0.3	0.0	0.2	0.1	0.0	0.0
Bottled water, improved source for cooking/washing[1]	13.5	0.0	9.1	9.0	0.0	6.4
Bottled water, non-improved source for cooking/washing[1]	1.2	0.0	0.8	1.0	0.0	0.7
Other	1.0	0.6	0.8	0.8	0.3	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percentage using any improved source of drinking water	97.1	99.4	97.9	97.8	99.7	98.4
Time to obtain drinking water (round trip)						
Water on premises	70.4	98.8	79.6	65.8	99.1	75.6
Less than 30 minutes	4.8	0.8	3.5	5.6	0.6	4.1
30 minutes or longer	23.1	0.4	15.7	27.6	0.3	19.6
Don't know/missing	1.8	0.0	1.2	1.0	0.0	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Person who usually collects drinking water						
Adult female 15+	4.3	0.7	3.2	4.7	0.5	3.5
Adult male 15+	22.9	0.5	15.7	27.3	0.4	19.4
Female child under age 15	0.5	0.0	0.3	0.4	0.0	0.3
Male child under age 15	0.9	0.0	0.6	0.9	0.0	0.6
Other	0.7	0.0	0.5	0.8	0.0	0.5
Water on premises	70.4	98.8	79.6	65.8	99.1	75.6
Missing	0.2	0.0	0.1	0.1	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Water treatment prior to drinking2						
Boiled	46.5	55.6	49.5	47.4	55.8	49.9
Bleach/chlorine	12.0	18.6	14.2	12.7	18.1	14.3
Strained though cloth	5.6	5.1	5.4	5.8	5.9	5.8
Ceramic, sand or other filter	4.3	3.7	4.1	3.8	4.1	3.9
Other	0.8	8.0	3.1	0.8	8.8	3.2
No treatment	43.5	23.7	37.1	42.7	23.6	37.0
Percentage using an appropriate treatment method3	56.3	69.4	60.5	57.1	68.9	60.6
Number	747	359	1,106	5,656	2,358	8,014

[1] Because the quality of bottled water is not known, households using bottled water for drinking are classified as using an improved or non-improved source according to their water source for cooking and washing.

[2] Respondents may report multiple treatment methods, so the sum of treatment may exceed 100 percent.

[3] Appropriate water treatment methods include boiling, bleaching, straining, filtering, and solar disinfecting.

Poor sanitation coupled with unsafe water sources increases the risk of water-borne diseases and illnesses due to poor hygiene. This has contributed immensely to the disease burden in RMI. Households without proper toilet facilities are more exposed to the risk of diseases such as dysentery, diarrhea, and typhoid fever than those with improved sanitation facilities. Table 2.5 shows that about 7 in 10 households use improved toilet/latrine facilities compared to about 3 in 10 households that use non-improved toilet/latrine facilities. Households with improved toilet facilities of *flush/pour flush to piped sewer system* account for 41 percent and are mostly in urban areas (60 percent), while those with *flush/pour flush* to septic tank account for 25 percent and are more likely to be in rural areas (35 percent). Overall, 15 percent of the households in RMI have no toilet facilities of any kind. This problem is more common in rural areas, where about 37 percent of households have no toilet facilities, than in urban areas, where only 4 percent of households have no facilities. The DHS result supports what was found in the 1999 Population and Housing Census.

Table 2.5. Household sanitation facilities

Percent distribution of households and de jure population by type of toilet/latrine facilities, according to residence, Marshall Islands 2007

	Households			Population		
Type of toilet/latrine facility	Urban	Rural	Total	Urban	Rural	Total
Improved, not shared facility						
Flush/pour flush to piped sewer system	59.7	0.4	40.5	61.1	0.6	43.3
Flush/pour flush to septic tank	19.7	35.3	24.8	20.5	35.6	25.0
Flush/pour flush to pit latrine	0.9	6.0	2.5	0.7	6.2	2.3
Ventilated improved pit (VIP) latrine	0.2	8.7	3.0	0.1	10.2	3.1
Non-improved facility						
Any facility shared with other households	13.0	12.0	12.7	11.8	11.8	11.8
Flush/pour flush not to sewer/septic tank/pit latrine	0.8	0.4	0.7	0.7	0.3	0.6
Bucket	0.8	0.0	0.6	0.8	0.0	0.5
No facility/bush/field/beach	4.3	36.8	14.8	3.6	35.0	12.8
Other	0.1	0.3	0.1	0.1	0.2	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	747	359	1,106	5,656	2,358	8,014

Note: Total includes cases with missing information on the type of facility, which are not shown separately.

Table 2.6 provides information that relates to other characteristics of dwellings, such as whether or not the household has electricity, the main construction materials used for the floor, the number of rooms used for sleeping, the type of power/fuel used for cooking, and the location of cooking.

Seventy-two percent of households in RMI have access to electricity. This result is similar but at a higher level than what was found in the 1999 Population and Housing Census. Access to electricity is much higher in urban areas – almost universal (92 percent) – than in rural areas (32 percent). Indeed, findings show that over 6 in 10 Marshallese households in rural areas do not have access to electricity.

The type of material used for the floor of a dwelling may be viewed as an indicator of the quality of housing (a wealth dimension) as well as an indicator of health risk. Some floor materials, such as earth and sand, pose a health problem since they can act as breeding grounds for pests and may be a source of dust. They are also more difficult to keep clean.

Overall, over 8 out of every 10 Marshallese households (88 percent) have floors made of vinyl-asphalt strips, ceramic tiles or cement. In general, these materials are almost equally used by urban households whereas rural households are likely to use mostly cement as a floor material. On the other hand, 3 percent of rural households have earth or sand floors, compared with only 0.5 percent of the urban households.

The number of rooms used for sleeping gives an indication of the extent of crowding in households. Crowding in one sleeping room increases the risks of infection by diseases. In RMI, a room for sleeping with more than two persons is considered to be overcrowded. Overall, over one-quarter of all households (27 percent) use only one room for sleeping. A higher percentage of households in rural areas sleep in one room than in urban areas (37 percent and 27 percent respectively). Households in urban areas are more likely to use two or more rooms for sleeping than households in rural areas.

Smoke from solid fuels for cooking, such as charcoal, wood, and other biomass fuels, is a major cause of respiratory infections. The type of fuel used for cooking, the location where food is cooked, and the type of stove used are all related to indoor air quality and the degree to which household members are exposed to the risk of respiratory infections and other diseases. Half of all Marshallese households cook in the same house, over one-quarter (27 percent) use a separate building, while almost another quarter (23 percent) cook outdoors. Rural households are more likely to cook in a separate building (60 percent) or outdoors (37 percent) while urban households are more likely to cook inside (73 percent).

Cooking fuel affects the air quality for household members. Clean fuel is not affordable in most cases and most households resort to using solid fuels that emit a lot of smoke. As a result, household members are likely to be exposed to air pollution. Reducing the proportion of the population relying on solid fuels is an MDG. In RMI, this proportion is 34 percent.

Table 2.6. Other household characteristics

Percent distribution of households and de jure population by housing characteristics and percentage using solid fuel for cooking; and among those using solid fuels, percent distribution by type of fire/stove, according to residence, Marshall Islands 2007

	Households			Population		
Housing characteristic	Urban	Rural	Total	Urban	Rural	Total
Electricity						
Yes	91.6	32.1	72.3	92.1	32.3	74.5
No	8.4	67.9	27.7	7.9	67.7	25.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Flooring material						
Earth, sand	0.5	3.3	1.4	0.2	3.3	1.1
Wood planks	1.8	3.3	2.3	1.1	2.7	1.6
Wood planks with vinyl carpet	1.0	0.0	0.7	0.6	0.0	0.4
Plywood	1.1	6.2	2.8	0.5	5.5	2.0
Parquet, polished wood	2.3	1.5	2.0	2.3	0.8	1.9
Vinyl, asphalt strips	11.9	8.4	10.8	12.1	9.9	11.5
Ceramic tiles	39.3	2.2	27.3	37.6	1.9	27.1
Cement	38.9	72.9	50.0	43.1	74.2	52.3
Carpet	2.7	0.8	2.1	2.1	0.5	1.6
Other	0.2	1.4	0.6	0.1	1.2	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Rooms used for sleeping						
One	21.7	36.6	26.5	12.7	28.6	17.4
Two	35.0	31.5	33.9	31.4	31.9	31.6
Three or more	42.9	31.9	39.3	55.7	39.5	50.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
Place for cooking						
In the house	72.7	3.3	50.1	72.8	2.2	52.0
In a separate building	10.8	59.7	26.7	10.4	63.0	25.9
Outdoors	15.7	36.6	22.5	16.3	34.7	21.7
Other	0.4	0.0	0.3	0.3	0.0	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 2.6. (Continued)

Housing characteristic	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Cooking fuel						
Electricity	28.2	1.1	19.4	24.3	0.7	17.3
Propane gas	24.7	0.7	16.9	26.1	0.5	18.6
Solar energy	0.2	0.2	0.2	0.5	0.2	0.4
Kerosene	37.4	4.1	26.6	41.0	3.2	29.9
Charcoal	0.1	0.6	0.2	0.0	0.3	0.1
Wood	3.0	19.8	8.4	2.7	17.0	6.9
Coconut husks/shells	5.7	73.2	27.6	5.2	77.9	26.6
No food cooked in household	0.5	0.4	0.5	0.2	0.1	0.1
Other	0.2	0.0	0.1	0.1	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percentage using solid fuel for cooking[1]	8.8	93.6	36.3	7.9	95.2	33.6
Number of households/population	747	359	1,106	5,656	2,358	8,014
Type of fire/stove among households using solid fuels[1]						
Open fire/stove with chimney	5.7	1.1	1.8	6.3	0.7	1.6
Open fire/stove with hood	22.5	1.0	4.5	21.2	0.8	4.2
Open fire/stove without chimney or hood	71.8	97.9	93.7	72.5	98.5	94.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households/population using solid fuel	66	336	402	447	2,245	2,693

LPG = liquid petroleum gas

Note: Total includes cases with missing information on the type of flooring material, number of rooms used for sleeping, and place used for cooking, which are not shown separately.

[1] Includes coal/lignite, charcoal, wood/straw/shrubs/grass, agricultural crops, and animal dung.

Findings in Table 2.6 also show that coconut husk/shell fuels serve as the fuel used for cooking in 28 percent of all households, while kerosene is used in 27 percent of households in RMI. Electricity is used by 19 percent of all households while propane gas is used by 17 percent of all households. Use of coconut husk/shell fuel in rural areas is almost universal, with over 7 out of 10 households using it, while in urban areas only 6 percent of households use this type of fuel. Meanwhile, wood and charcoal are used by about 9 percent of all Marshallese households, with about one-fifth (20.4 percent) of rural households using them as fuel for cooking.

Chimneys help to reduce the exposure of household members to the smoke from cooking fires. Results show that 94 percent of households use open fires/stoves without chimneys for cooking, which waste energy and expose household members to harmful smoke.

2.5. HOUSEHOLD ASSETS

The 2007 RMIDHS collected information on households' ownership of selected assets that are in themselves believed to have a strong association with poverty levels. Some of these can be used to measure household welfare when combined with other indicators to generate a wealth index. Information was collected on household ownership of radios and televisions as a measure of access to mass media; telephones (both mobile and non-mobile) as an indicator of access to an efficient means of communication; refrigerators as an indication of the capacity for hygienic storage of foods; and means of transportation (bicycle, motorcycle, boat with or without a motor, private car, or truck) as a sign of the level of access to public services and markets as well as exposure to developments in other areas. In addition, ownership of agricultural land shows the household's access to means of production. Ownership of farm animals such as local cattle, exotic/cross cattle, horses/donkeys/mules, goats, sheep, pigs, or chickens indicates the level of assets households possess that could be used to meet household demands.

Table 2.7 shows that 70 percent of the households in RMI own a radio; urban households are more likely than rural households to own a radio (78 percent compared with 52 percent). Overall, 66 percent of all households own a television set, and as expected urban households are more likely than rural households to own a television set (81 percent and 34 percent respectively). Thirty-seven percent of households own a mobile telephone while 32 percent own a non-mobile telephone; almost all these telephones are likely to be owned by urban households. Regarding transport, 35 percent of households own bicycles and these are more likely to be found in rural households than urban households (48 percent compared to 29 percent). Meanwhile 33 percent of urban households own cars or trucks compared to less than 8 percent of rural households. In contrast, 14 percent of rural households own boats with a motor compared to 9 percent of urban households. About 83 percent of rural households own fishing gear compared to 55 percent of urban households.

Table 2.7. Household durable goods

Percentage of households and de jure population possessing various household effects, means of transportation, agricultural land, and livestock/farm animals by residence, Marshall Islands 2007

	Households			Population		
Possession	Urban	Rural	Total	Urban	Rural	Total
Household effects						
Radio	77.8	52.0	69.4	79.7	54.2	72.2
Television	81.4	34.2	66.1	84.2	35.5	69.9
Mobile telephone	54.8	0.2	37.1	57.4	0.2	40.6
Non-mobile telephone	47.9	0.2	32.4	48.6	0.2	34.4
Refrigerator	61.7	6.6	43.8	60.6	6.0	44.5
Microwave oven	33.8	0.9	23.2	30.6	0.8	21.8
Dryer	14.0	1.3	9.8	13.8	0.9	10.0
Solar panel/equipment	1.5	60.1	20.5	0.5	63.6	19.1
Dryer	14.0	1.3	9.8	13.8	0.9	10.0
Communication antenna	8.1	21.5	12.5	10.3	23.8	14.3
Table	88.1	76.8	84.4	86.9	77.9	84.2
Chair	88.9	73.1	83.8	87.5	73.2	83.3
Sofa	37.4	8.1	27.9	34.4	7.0	26.3
Bed	87.0	52.5	75.8	87.8	52.1	77.3
Cupboard or cabinet	80.4	56.2	72.5	82.6	58.1	75.4
CB or VHF radio	12.7	24.2	16.4	12.8	26.4	16.8
CD/cassette player	69.5	36.7	58.9	72.2	38.7	62.4
Video or DVD player	76.6	34.1	62.8	79.5	35.1	66.5
Walkie-talkie	9.7	7.0	8.8	10.4	6.8	9.4
Deep freezer	54.1	4.6	38.0	59.0	4.6	43.0
Gas or electric stove	60.7	7.8	43.5	60.9	7.7	45.3
Desk/laptop computer	23.0	1.0	15.8	20.1	0.8	14.4
Internet connection	9.7	0.3	6.7	6.7	0.4	4.8
Washing machine	67.0	18.0	51.1	70.4	18.9	55.2
Sewing machine	31.4	21.0	28.0	34.4	22.4	30.9
Means of transport						
Bicycle	29.2	48.2	35.4	31.1	51.1	37.0
Motorcycle/scooter	1.0	3.2	1.7	0.6	2.7	1.2
Car/truck	33.3	7.5	24.9	30.5	7.9	23.8
Boat with a motor	8.8	14.3	10.6	9.3	15.8	11.2
Fishing gear	55.1	82.6	64.0	58.6	85.1	66.4
Sailing canoe	1.2	6.4	2.9	0.8	6.6	2.5
Paddling canoe	1.4	13.0	5.1	0.9	12.9	4.4
Rear cart	4.5	17.1	8.6	3.4	18.4	7.8
Ownership of agricultural land	29.1	86.0	47.6	29.8	85.6	46.3
Agricultural/farm equipment	25.9	57.3	36.1	26.9	59.1	36.3
Ownership of farm animals[1]	32.8	92.5	52.2	34.1	95.0	52.0
Number	747	359	1,106	5,656	2,358	8,014

[1] Pigs, ducks, chickens

Almost half of all households (47.6 percent) own agricultural land, with 36 percent of households owning agricultural or farming equipment. Pigs and chickens are the most commonly owned types of livestock, each owned by 52 percent of all Marshallese households. As expected, rural households are more likely to own land, agricultural/farm equipment, and livestock than urban households.

2.6. WEALTH QUINTILES

The RMIDHS did not collect information on household income or consumption. However, information on household assets was used to create an index representing the wealth of the households interviewed. The wealth index is a proxy for long-term standard of living of the household. Household assets used to calculate the wealth index include consumer items such as refrigerators, televisions, and cars; dwelling characteristics such as floor material, type of drinking water source, and toilet facilities; and other characteristics that are related to wealth status.

To construct the wealth index, each household asset for which information was collected is assigned a weight or factor score generated through principal components analysis. The resulting asset scores are standardized in relation to a standard normal distribution with a mean of zero and a standard deviation of one.

Each household is assigned a standardized score for each asset, where the score differs depending on whether or not the household owns that asset (or, in the case of sleeping arrangements, the number of people per room). These scores are summed by household, and individuals are ranked according to the total score of the household in which they reside. The sample is then divided into population quintiles, i.e. five groups with the same number of individuals in each. The 20 percent of the population with the lowest total asset scores become the individuals in the lowest wealth quintile, the next 20 percent become the members of the second wealth quintile, and so forth. At the national level, approximately 20 percent of the household population is in each wealth quintile.

In other words, the wealth index measures the standard of living of a household relative to other households in RMI. It indicates that an individual living in a household in the second wealth quintile has better socioeconomic status than someone in the lowest wealth quintile and worse socioeconomic status than someone in the middle wealth quintile.

In defining the wealth quintiles, a single asset index is developed on the basis of data from the entire country sample and used in all the tabulations presented. Separate asset indices are not prepared for rural and urban population groups on the basis of rural or urban data respectively.

Wealth quintiles are expressed in terms of quintiles of individuals in the population, rather than quintiles of individuals at risk for any one health or population indicator. Thus, for example, the quintile rates for infant mortality refer to the infant mortality rates per 1,000 live births among all people in the population quintile concerned, as distinct from quintiles of live births or newly born infants, who constitute the only members of the population at risk of mortality during infancy.

The assets index has been found to be highly comparable to both poverty rates and GDP per capita for India, and against expenditure data from household surveys in Nepal, Pakistan, and Indonesia (Filmer and Pritchett 1998) and Guatemala (Rutstein 1999).

Table 2.8. Wealth quintiles

Percent distribution of the de jure population by wealth quintiles, and the Gini coefficient[1] according to residence and region, Marshall Islands 2007

	Wealth quintile						
Residence/region	Lowest	Second	Middle	Fourth	Highest	Total	Number of population
Residence							
Urban	3.0	13.0	27.3	28.5	28.2	100.0	5,656
Rural	60.6	36.8	2.3	0.3	0.0	100.0	2,358
Total	20.0	20.0	20.0	20.2	19.9	100.0	8,014

[1] a measure of inequality of wealth distribution

Table 2.8 shows the distribution of the de jure household population into five wealth levels (quintiles) based on the wealth index by residence. These distributions indicate the degree to which wealth is evenly (or unevenly) distributed by geographic areas. The findings indicate that wealth is concentrated in urban areas. Among the population in urban areas, 28 percent is in the highest wealth quintile, compared with 0.0 percent of the household population in rural areas. About 57 percent of the urban population is in the top two (fourth and highest) household wealth quintiles compared to over 9 in 10 rural persons likely to be found in the second and lowest household wealth quintiles. These results further confirm other findings that poverty is more concentrated in rural areas than urban areas.

2.7. BIRTH REGISTRATION

It is a human right for a child to know who its parents are and to have a nationality through registration. The registration system in RMI is good but needs a lot of quality control checks to improve recording and maintenance. The coverage is good is some atolls but in others more efforts are necessary to improve the capture of vital demographic processes. The registration of births is being undertaken in all atolls countrywide. Apart from being the first legal acknowledgment of a child's existence, the registration of births is fundamental to the realization of a number of rights and practical needs, including but not limited to provision of access to health care and provision of access to immunization. Birth registration in a well-established and functioning system ensures that the country has an up-to-date and reliable database for planning. This is as useful for national-level planning as it is for local government bodies that are responsible for maintaining education, health, and other social services for the community.

Table 2.9 shows that almost all (96 percent) children are registered in RMI. There is very little difference in the proportion of children registered in urban areas and those registered in rural areas (96.1 percent compared with 95.5 percent). Similarly, there is not much variation in birth registration within the household wealth quintiles, ranging from 92 percent in the lowest to 98 percent in the highest quintile.

Table 2.9. Birth registration of children under age five

Percentage of de jure children under five years of age whose births are registered with the civil authorities, according to background characteristics, Marshall Islands 2007

Background characteristic	Percentage of children whose births are registered: Had a birth certificate	Did not have a birth certificate	Total registered	Number of children
Age				
<2	91.8	2.8	94.6	554
2–4	95.4	1.5	97.0	723
Sex				
Male	93.9	1.9	95.8	645
Female	93.8	2.2	96.0	631
Residence				
Urban	94.0	2.1	96.1	870
Rural	93.6	2.0	95.5	408
Wealth quintile				
Lowest	91.4	1.0	92.4	173
Second	92.9	1.8	94.7	195
Middle	94.5	3.4	97.8	237
Fourth	92.7	2.6	95.3	387
Highest	97.0	1.1	98.1	285
Total	93.8	2.1	95.9	1,277

Note: Total includes one child with missing information on sex, who is not shown separately.

2.8. EDUCATIONAL LEVEL OF HOUSEHOLD POPULATION

Education affects many aspects of life, including individual demographic and health behavior. Studies have shown that educational level is strongly associated with contraceptive use, fertility, and the general health status, morbidity, and mortality of children. In each household, for all persons aged five years or older, data were collected on the highest level of education attained and the highest grade completed at that level. Tables 2.10.1 and 2.10.2 respectively show the distribution of female and male household members aged six years and older by the highest level of education attained and the median number of years of education completed, according to background characteristics.

As shown in the two tables, the vast majority of Marshallese have attended school, although many do not complete primary school (about 30 percent of each sex). Among those who never attended school, slightly more females than males never attended – 5.2 percent of females aged six years or older in RMI have never been to school, compared with 5.0 percent of males. According to the results, the gender gaps in educational attainment are narrow in all categories except for those with more than secondary education, where more males than females are likely to have completed secondary education (12.1 percent compared to 8.4 percent). Males aged 20 and older are less likely to have no education and to have attained some secondary education than females aged 20 and older. In contrast, the proportion of individuals aged 6–19 with no education and with at least some secondary education is similar for males and females.

Overall, levels of educational attainment are higher in urban areas than in rural areas, especially for completed secondary and more than secondary; below these levels, there is little variation between urban and rural areas. Similarly, the median number of years of schooling is higher in urban areas than in rural areas.

Table 2.10.1. Educational attainment of the female household population

Percent distribution of the de facto female household population aged six and over by highest level of schooling attended or completed and median grade completed, according to background characteristics, Marshall Islands 2007

Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Don't know/ missing	Total	Number	Median years completed
Age										
6–9	24.3	75.0	0.3	0.3	0.0	0.0	0.1	100.0	452	0.2
10–14	3.8	90.4	1.0	4.1	0.2	0.0	0.5	100.0	473	4.5
15–19	2.4	16.7	13.1	55.5	7.4	4.9	0.0	100.0	360	8.5
20–24	0.9	6.6	15.7	38.2	24.8	13.8	0.0	100.0	379	10.1
25–29	1.2	5.6	17.6	37.3	25.7	12.6	0.0	100.0	325	10.1
30–34	1.6	6.1	16.5	34.7	23.9	17.2	0.0	100.0	237	10.5
35–39	1.6	4.7	26.8	38.2	18.3	10.4	0.0	100.0	237	9.3
40–44	0.4	4.7	23.6	34.1	27.4	9.7	0.0	100.0	166	10.0
45–49	1.6	9.5	26.3	29.3	17.7	15.6	0.0	100.0	132	9.5
50–54	0.0	11.2	22.2	23.1	26.7	16.7	0.0	100.0	173	10.2
55–59	5.8	10.6	31.9	18.0	16.2	16.1	1.4	100.0	98	8.2
60–64	1.0	32.8	35.5	14.7	9.0	7.0	0.0	100.0	68	7.4
65+	5.4	31.1	35.4	9.4	12.3	6.4	0.0	100.0	90	7.4
Residence										
Urban	5.5	27.9	11.9	26.8	16.7	11.1	0.2	100.0	2,266	8.3
Rural	4.7	39.3	21.8	24.2	8.0	1.9	0.1	100.0	925	7.3
Wealth quintile										
Lowest	4.4	39.9	25.6	24.1	5.1	0.8	0.2	100.0	370	7.2
Second	5.1	37.4	22.0	23.9	9.9	1.6	0.0	100.0	404	7.3
Middle	7.1	33.6	15.2	28.9	10.5	4.4	0.3	100.0	554	7.5
Fourth	5.5	29.1	13.7	29.6	14.3	7.8	0.0	100.0	957	7.9
Highest	4.2	25.6	8.0	22.3	22.1	17.6	0.3	100.0	906	9.7
Total	5.2	31.2	14.8	26.0	14.2	8.4	0.1	100.0	3,192	7.8

Note: Total includes two persons with missing information on education, who are not shown separately.

[1] Completed 8th grade at the primary level

[2] Completed 4th grade at the secondary level

As a result of free and compulsory education in RMI, little variation is observed among the different levels of educational attainment with the exception of secondary and higher. The likelihood of completing secondary and 'more than secondary' level education increases as household wealth quintile increases. For example, among females, just 5 percent of those from the poorest households have completed secondary education while 22 percent from the wealthiest households have completed secondary education. Similar differences by wealth are also large among males; 8 percent of males from the poorest households have completed secondary education compared with 21 percent from the wealthiest households.

The likelihood of reaching 'more than secondary' level of education is much greater among the wealthiest Marshallese than those from poorer households. Twenty-two percent of males from the wealthiest households have 'more than secondary' level of education compared with 5–11 percent of males from the remaining wealth quintiles. A similar pattern is observed for women, with 18 percent of females from the wealthiest households and just 1–8 percent of those from less wealthy households having attained 'more than secondary' level of education.

Table 2.10.2. Educational attainment of the male household population

Percent distribution of the de facto male household population aged six and over by highest level of schooling attended or completed and median grade completed, according to background characteristics, Marshall Islands 2007

Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Don't know/ missing	Total	Number	Median years completed
Age										
6–9	24.3	75.7	0.0	0.0	0.0	0.0	0.0	100.0	442	0.2
10–14	2.4	93.8	1.1	2.4	0.0	0.2	0.0	100.0	478	4.1
15–19	2.7	25.3	15.4	50.0	4.4	2.2	0.0	100.0	437	7.8
20–24	3.8	12.1	18.4	29.5	21.0	15.1	0.0	100.0	410	9.8
25–29	3.0	9.3	17.5	34.2	20.4	15.1	0.5	100.0	311	9.8
30–34	0.9	6.3	19.7	30.9	21.0	21.1	0.0	100.0	265	10.2
35–39	0.2	5.1	17.5	23.3	36.0	17.9	0.0	100.0	233	11.1
40–44	0.5	7.3	19.0	26.8	25.6	20.2	0.6	100.0	183	10.4
45–49	0.5	8.6	19.5	23.8	23.1	24.4	0.0	100.0	165	10.6
50–54	0.0	5.6	20.5	21.9	29.2	22.9	0.0	100.0	144	11.1
55–59	0.0	6.2	15.7	19.2	30.8	28.1	0.0	100.0	115	11.3
60–64	1.1	10.9	17.2	14.8	22.5	33.5	0.0	100.0	62	11.3
65+	3.4	17.1	20.1	10.4	17.4	31.5	0.0	100.0	67	10.5
Residence										
Urban	4.9	28.9	11.1	23.3	17.0	14.7	0.1	100.0	2,369	8.3
Rural	5.2	39.9	18.2	21.2	9.8	5.7	0.0	100.0	944	7.2
Wealth quintile										
Lowest	6.6	41.3	22.1	17.2	7.9	4.8	0.0	100.0	376	7.1
Second	5.2	38.2	16.2	24.8	11.1	4.6	0.0	100.0	413	7.4
Middle	6.2	34.5	13.9	26.0	11.3	8.0	0.0	100.0	570	7.5
Fourth	4.5	29.8	14.0	24.9	15.6	10.9	0.3	100.0	1,013	7.9
Highest	4.0	26.6	6.6	19.5	21.1	22.2	0.0	100.0	940	9.9
Total	5.0	32.0	13.1	22.7	15.0	12.1	0.1	100.0	3,312	7.8

Note: Total includes one person with missing information on education, who is not shown separately.

[1] Completed 8th grade at the primary level

[2] Completed 4th grade at the secondary level

2.8.1. Primary school attendance ratios

RMI uses an 8-4-4 formal education system: namely, eight years of primary, four years of secondary, and four years of post-secondary/university/tertiary. The official age ranges for these levels are 6–12 years, 13–18 years, and 19–24 years respectively.

The net attendance ratio (NAR) for primary level is the percentage of the primary-school-age population (ages 6–12) that is attending primary school. Overall, the primary school NAR is 83 percent in RMI (see Table 2.11). In urban areas, 81 percent of children aged 6–12 attend primary school compared with 87 percent in rural areas. There is virtually no difference in the primary NAR by sex: it is 84 percent for females and 83 percent for males.

There is very little variation in the NAR by wealth quintiles. The NAR is lowest among school-age children in the middle wealth quintile households (78 percent) and the highest NAR is observed for children in the highest wealth quintile (88 percent). Net attendance ratios for children for all other wealth quintiles fall between 78 and 88 percent. Given that primary education is free and compulsory, it is not surprising that NAR does not increase with increasing wealth quintiles – from poorest to wealthiest households.

The gross attendance ratio (GAR) measures attendance irrespective of the official age at each level. The GAR for primary school is the total number of primary school students (age 5–24) expressed as a percentage of the official primary-school-age population (age 6–12). A major contributing factor to high GAR is children starting primary school later than the recommended age of six years. Overall, the primary school GAR is 97, with the highest GAR in the second wealth quintile (104), which is followed by 103 in rural areas; there are no notable differences by sex.

The gender parity index (GPI) is a measure of the ratio of females to males attending school, regardless of age. For primary school, the GPI is 0.98, indicating that the number of female and male students is almost the same, with males slightly outnumbering females. There is not much variation in the GPI for the primary school GAR by background characteristics; however, the ratios are below the national average for urban areas and for the middle through to the highest wealth quintiles.

2.8.2. Secondary school attendance ratios

The concept of the NAR at the secondary level is similar to that at the primary level, being the percentage of the secondary-school-age population (13–18 years) that is attending secondary school. Overall, only 42 out of 100 children of secondary school age in RMI attend secondary school. The secondary NARs for males and females are 40 percent and 46 percent respectively.

The secondary school net attendance ratio is better in urban areas than in rural areas (52 percent versus 10 percent). This pattern is the same for boys and girls. As regards wealth quintile, the secondary school NAR rises with wealth from about 10 percent in the lowest wealth quintile to 64 percent in the wealthiest quintile. This finding suggests that poverty and factors related to poverty play an important role in whether children are sent to secondary school.

The secondary GAR is 59 for the nation as a whole and is substantially higher in urban than in rural parts of the country (73 versus 12). This same pattern is observed for males and females. Similar to the NAR, the secondary GAR increases sharply as wealth increases: it is 86 among youth in the wealthiest households and only 10 among youth in the poorest households.

The GPI for the secondary school GAR is 1.09, indicating that, among students of all ages, for every five male students in secondary schools there are 5–6 female students. This ratio is higher than the GPI for the primary school GAR, and varies by background characteristics. Male students are outnumbered by female students in urban areas, and in the lowest and fourth wealth quintiles. The GPI for the secondary school GAR is especially low in the second wealth quintile households, indicating an extreme gender gap in favor of males. Perfect gender balance in secondary school GAR is observed for rural areas, which is the same as the GPI for the primary school GAR.

Table 2.11. School attendance ratios

Net attendance ratios (NAR) and gross attendance ratios (GAR) for the de facto household population by sex and level of schooling; and the gender parity index (GPI), according to background characteristics, Marshall Islands 2007

	Net attendance ratio[1]				Gross attendance ratio[2]			
Background characteristic	Male	Female	Total	GPI[3]	Male	Female	Total	GPI[3]
				PRIMARY SCHOOL				
Residence								
Urban	80.3	81.8	81.1	1.02	95.9	92.8	94.3	0.97
Rural	86.5	87.7	87.1	1.01	103.1	102.6	102.9	1.00
Wealth quintile								
Lowest	85.0	85.9	85.4	1.01	101.7	100.9	101.4	0.99
Second	85.7	83.8	84.8	0.98	101.7	107.3	104.4	1.06
Middle	76.0	79.9	78.0	1.05	92.3	89.6	90.9	0.97
Fourth	78.8	81.7	80.3	1.04	97.1	91.4	94.2	0.94
Highest	88.0	88.0	88.0	1.00	100.6	97.9	99.2	0.97
Total	82.5	83.8	83.2	1.02	98.5	96.1	97.3	0.98
				SECONDARY SCHOOL				
Residence								
Urban	47.9	56.8	51.7	1.19	69.8	78.2	73.4	1.12
Rural	10.5	10.3	10.4	0.98	11.5	11.5	11.5	1.00
Wealth quintile								
Lowest	3.9	16.9	10.0	4.32	3.9	16.9	10.0	4.32
Second	17.9	5.4	10.9	0.30	20.7	8.8	14.0	0.43
Middle	30.6	35.9	32.8	1.17	48.9	46.3	47.8	0.95
Fourth	37.0	58.0	45.9	1.57	56.2	84.4	68.1	1.50
Highest	63.5	65.0	64.1	1.02	86.8	85.2	86.1	0.98
Total	39.7	45.6	42.2	1.15	57.0	62.1	59.2	1.09

[1] The NAR for primary school is the percentage of the primary-school-age (6–13 years) population that is attending primary school. The NAR for secondary school is the percentage of the secondary-school-age (14–17 years) population that is attending secondary school. By definition the NAR cannot exceed 100 percent.

[2] The GAR for primary school is the total number of primary school students expressed as a percentage of the official primary-school-age population. The GAR for secondary school is the total number of secondary school students expressed as a percentage of the official secondary-school-age population. If there are significant numbers of over-age and under-age students at a given level of schooling, the GAR can exceed 100 percent.

[3] The GPI for primary school is the ratio of the primary school NAR(GAR) for females to the NAR(GAR) for males. The GPI for secondary school is the ratio of the secondary school NAR(GAR) for females to the NAR(GAR) for males.

2.8.3. Age-specific attendance rates

Figure 2.2 presents information on school attendance among youth aged 5–24, by age. The figure includes students who attended primary school, secondary school, or higher education during the 2007 school year.

As Figure 2.2 shows, by age seven the vast majority of children in RMI attend school (over 80 percent). Rates of attendance range from 80–95 percent among males and females aged 7–13. Starting at age 14, attendance rates decline noticeably for all children. For instance, the attendance rate is 46 percent among males aged 18 and just 33 percent among females the same age. By age 21, only 14 percent of males attend school, compared with only 1 percent of their female counterparts.

Figure 2.2 also shows that approximately half (48 percent) of children aged six attend school, and attendance rates among children aged seven and eight are around 75 percent and 86 percent respectively. It should be noted that children aged six at the time the household was interviewed may not yet have turned six at the beginning of the school year. It is therefore to be expected that not all six-year-olds attend school. However, all children aged seven and eight should have attended primary school during the 2007 school year. For about 15 percent of the children aged seven and about 7 percent of the children aged eight, this was not the case – that is, they were not attending primary school (this is particularly important, as education is free in RMI).

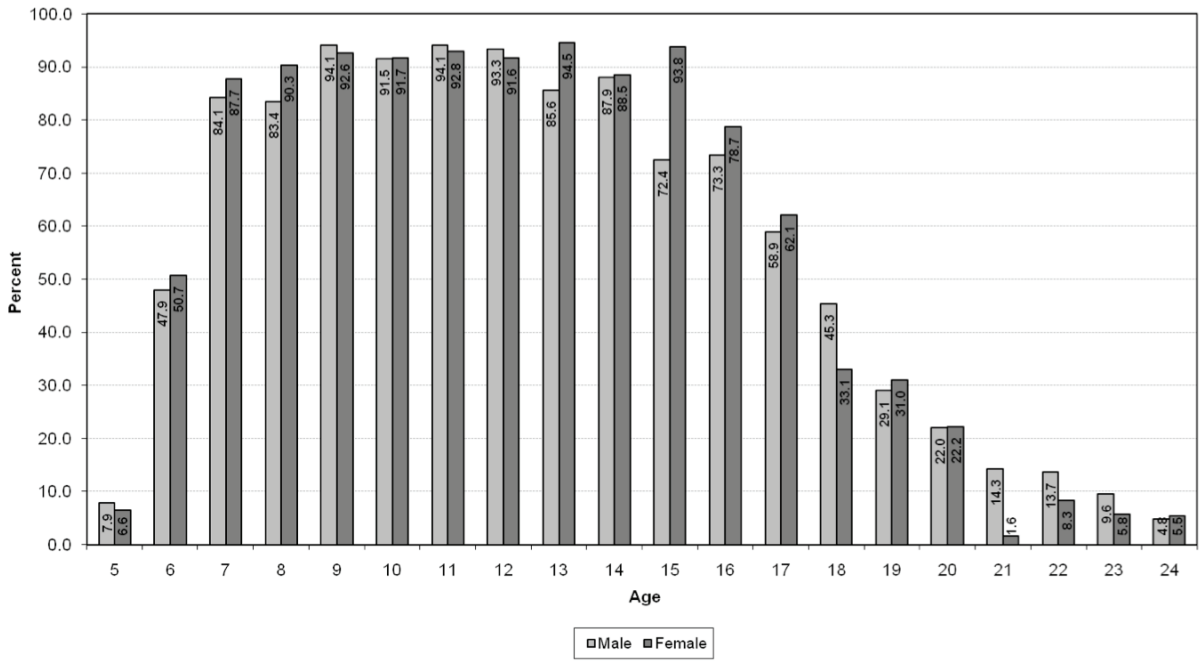


Figure 2.2. Age specific attendance rates of the de-facto population 5 to 24 years

2.9. MENTAL ILLNESS

This section presents the results of household questions on mental illness, particularly on how schizophrenic and suicidal persons are helped to recover from illness. Family support and care for these people are essential for both the physical and mental well-being of the mentally ill. Questions sought to collect, among other information, the characteristics of care providers and how care is given regardless of whether or not the mentally ill person lives in the household all the time. In addition, suicides and related information are summarized and presented.

Table 2.12 shows the results of the questions on support for mentally ill persons – that is, the percentage of respondents to the household questionnaire who think that mental illness can be cured and how care should be provided to mentally ill persons. Overall, 94 percent of respondents think that mentally ill persons

should be cared for by relatives, which is a common view held by all household questionnaire respondents. Furthermore, 87 percent of respondents suggested that mentally ill persons should be looked after in a mental home by professional or trained care-givers – again, this is another commonly perceived view of all respondents regardless of background characteristics. Similarly, 91 percent of the same respondents agree that responsible guardians should be appointed to care for mentally ill persons as well as the provision of social security support to these ill persons, which is again a view agreed to by all Marshallese household questionnaire respondents, regardless of their background. Meanwhile, 38 percent of these respondents think that mental illness is curable, hence suggesting that these ill persons can be treated. Only one out every five respondents suggested that mentally ill persons should be locked up in prison so that prison authorities provide care, while 10 percent suggested that mentally ill persons should be left to fend for themselves.

Table 2.12. Support for mentally ill persons

Percentage of respondents to the household questionnaire who think that mental illness can be cured and how mentally ill persons should be taken care of, according to background characteristics, Marshall Islands 2007

Background characteristic	Percentage of respondents who think that mentally ill persons can be treated	Percentage of respondents who think that mentally ill persons should be:					Number of respondents to the Household Questionnaire
		Looked after in a mental home	Looked after by relatives	Left alone to look after themselves	Have appointed responsible guardians and social security support	Locked up in prison	
Age							
<20	24.2	88.0	95.3	10.0	85.3	18.8	38
20–24	32.9	80.1	91.4	11.7	86.3	18.2	91
25–29	30.0	88.0	95.9	10.1	91.3	20.7	133
30–34	33.3	85.2	91.6	13.1	86.0	20.1	144
35–39	36.1	87.4	96.9	9.1	92.6	19.6	161
40–44	39.0	91.7	94.5	12.3	90.4	22.6	123
45–49	39.0	86.9	89.0	11.0	97.8	18.4	112
50–54	45.6	82.8	95.3	9.2	91.6	27.3	130
55–59	46.8	94.0	96.1	6.7	95.0	13.4	86
60–64	61.8	88.7	93.9	4.9	89.6	12.8	47
65+	41.3	83.9	98.0	3.6	90.4	16.8	41
Residence							
Urban	36.8	89.3	93.4	9.7	90.7	16.9	747
Rural	41.0	82.0	95.9	10.6	91.4	26.0	359
Education							
No education/primary	40.5	89.9	95.5	12.9	91.4	23.8	316
Secondary	33.9	84.6	95.1	10.1	90.5	19.9	619
More than secondary	49.5	89.9	88.6	4.1	91.8	12.8	170
Wealth quintile							
Lowest	32.5	85.8	96.6	7.7	90.7	28.2	148
Second	40.6	82.4	97.0	11.8	91.4	26.6	160
Middle	39.7	84.4	94.1	17.0	89.0	24.0	203
Fourth	35.5	87.0	93.2	10.4	93.5	16.0	290
Highest	41.2	91.4	92.6	5.0	89.8	13.3	305
Total	38.2	86.9	94.2	10.0	91.0	19.9	1,106

Table 2.13 shows the percentage of respondents to the household questionnaire who knew somebody who had committed suicide, and among those who knew somebody who had committed suicide, the percentage of perceived reasons for committing suicide. Over 4 in 10 (44 percent) respondents knew somebody who had committed suicide and there is very little variation by background characteristics. Among the cases of reported suicide, the main perception of reason for the suicide is ‘drugs/alcohol’, which represents over half of the reported cases (54 percent). As regards the distribution by background characteristics of those who knew the 54 percent of cases, they are almost equally distributed by sex, and are more likely to be urban residents (59 percent compared to 46 percent) and more likely to be found in the fourth and the highest wealth quintile households (63 percent and 58 percent respectively).

The second main perception of reason for suicide is ‘problems at home’, which are observed for another half of the reported cases (52 percent). Those who knew the suicide related to problems at home are most likely to be male, more likely to be rural residents (61 percent compared to 48 percent) and more likely to be found in the lowest to the middle wealth quintile households (in respective order, 59 percent, 65 percent and 65 percent).

The third perception of reason for suicide from Table 2.13 is ‘problems with girlfriend or boyfriend’, which are observed for 42 percent of the reported cases. And those who knew the suicide related to problems with girlfriend or boyfriend are almost equally distributed by all background characteristics.

Table 2.13. Mental illness

Percentage of respondents to the household questionnaire who knew somebody who committed suicide and among those who knew somebody who committed suicide the percentage of perceived reason for committing suicide, by background characteristics, Marshall Islands 2007

Background characteristic of respondent	Percentage who knew somebody who committed suicide	Number of respondents to the Household Questionnaire	Among cases of reported suicide, the perception of reason for suicide:						Number of respondents who knew someone who committed suicide
			Problems at home	Drugs/ alcohol	Work-related no job	Problems with girlfriend/ boyfriend	Incurable disease	Other	
Sex									
Male	49.8	327	56.3	53.1	7.3	38.4	2.9	8.6	163
Female	41.9	779	49.7	54.7	6.7	43.8	2.7	11.4	326
Residence									
Urban	43.6	747	47.6	58.5	9.4	43.2	3.3	11.9	325
Rural	45.6	359	60.5	45.5	2.0	39.6	1.7	7.6	164
Wealth quintile									
Lowest	43.7	148	58.7	41.6	1.0	38.1	2.1	10.8	65
Second	43.5	160	64.5	49.2	7.2	49.8	1.0	6.0	70
Middle	46.9	203	64.5	49.9	7.5	40.2	5.2	9.7	95
Fourth	43.2	290	42.3	63.0	5.3	44.4	2.4	12.9	125
Highest	44.0	305	42.0	57.7	10.7	38.8	2.7	10.9	134
Total	44.2	1,106	51.9	54.2	6.9	42.0	2.8	10.5	489

Note: Please note that although 2007 RMIDHS Q. 326, on which column 1 of Table 2.13 is based, asks about 'a person' who had committed suicide, the respondent may know one or more persons who committed suicide. Therefore, responses to Qs. 328 to 331 shown in columns 3–7 may not be necessarily specific to one person.

Table 2.14 shows the percentage of perceived reasons for committing suicide by sex of the person who committed suicide. Of the 52 percent of suicides because of problems at home, 53 percent were males compared to 43 percent females. There was very little difference in the sex distribution of persons who committed suicide because of drugs or alcohol. Meanwhile, more males were likely to commit suicide as a result of problems with their girlfriend than females committing suicide because of problems with their boyfriend (43 percent compared to 32 percent).

Table 2.14. Perceived reason for suicide by sex of person who committed suicide

Percentage of perceived reason for committing suicide by sex of person who committed suicide, Marshall Islands 2007

	Among cases of reported suicide, the perception of reason for suicide:						
Sex of person who committed suicide	Problems at home	Drugs/alcohol	Work-related/ no job	Problems with girlfriend/ boyfriend	Incurable disease	Other	Number of respondents who knew someone who committed suicide
Male	52.5	54.2	7.4	42.7	2.7	10.2	458
Female	42.7	53.3	0.0	31.7	3.5	14.3	31
Total	51.9	54.2	6.9	42.0	2.8	10.5	489

Table 2.15 shows the percentage of persons who committed suicide who had pre-suicidal attempts and the percentage of those with pre-suicidal attempts who talked to or were offered counseling after the attempt by any household member. The results show that 23 percent of persons who committed suicide had pre-suicidal attempts and 67 percent of them were offered counseling as a result.

Table 2.15. Pre-suicidal attempts

Of persons who committed suicide, the percentage who had pre-suicidal attempts and of those with pre-suicidal attempts, the percentage who talked to or were offered counseling after the attempt by any household member, Marshall Islands 2007

	Sex of person who committed suicide		
Pre-suicidal attempts/counseling	Male	Female	Total
Had pre-suicidal attempts	24.4	*	23.2
Was talked to or offered counseling	67.5	*	67.1
Number of respondents who knew someone who committed suicide	458	31	489

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

CHAPTER 3. CHARACTERISTICS OF RESPONDENTS

This chapter provides a description of the situation of men and women of reproductive age in the Republic of the Marshall Islands. This information is useful for understanding the context of the reproductive and health status of men and women. The description is presented in terms of the following variables: age at the time of the survey, marital status, residence, education, literacy, and media access. In addition, this chapter explores factors that enhance women's empowerment, including employment, occupation, earnings, and continuity of employment. An analysis of these variables provides the socioeconomic context in which demographic and reproductive health issues are examined in the subsequent chapters.

3.1. CHARACTERISTICS OF SURVEY RESPONDENTS

Table 3.1 presents background characteristics of the 1,625 women aged 15–49 and 1,055 men aged 15–54 interviewed in the 2007 RMIDHS. The distribution of the respondents according to age shows a generally similar pattern for males and females. As expected of RMI's age structure, the proportion of respondents in each age group declines with increasing age for both sexes. Thirty-nine percent of women and 40 percent of men are in the 15–24 age group, 31 percent of women and 28 percent of men are aged 25–34, and the remaining respondents are aged 35–49 and 35–54 for women and men respectively.

Less than half of the respondents (30 percent female and 24 percent male) are formally married. Male respondents are much more likely than female respondents to have never married (36 percent for males and 24 percent for females). It is interesting to note that 41 percent of females declared themselves to be living with a man or in a consensual union, which is more than the corresponding percentage of 35 for males. Almost an equal proportion of women and men are divorced/separated and widowed (6 percent and 5.5 percent respectively).

The distribution of male and female respondents by residence is biased toward urban because a larger proportion of the RMI population lives in urban areas; thus, about 68 percent of female respondents are found in urban areas while 32 percent of female respondents are distributed around rural areas.

Data in Table 3.1 also show that women and men are almost equal at all levels of educational attainment – that is, there is not much variation in the educational attainment of respondents. Whereas 26.3 percent of women have completed no school or primary school, the corresponding proportion for men is 26.8 percent. Furthermore, whereas 73.2 percent of men have secondary or higher education, 73.7 percent of women have attained this level of education.

Considering wealth quintiles, females are almost evenly distributed across quintiles except for the lowest two quintiles, which have higher percentage distributions. Males do not display any systematic pattern but have the highest percentage in the second-lowest quintile.

Table 3.1. Background characteristics of respondents

Percent distribution of women and men aged 15–49 by selected background characteristics, Marshall Islands 2007

	Women			Men		
Background characteristic	Weighted percent	Weighted	Unweighted	Weighted percent	Weighted	Unweighted
Age						
15–19	18.8	306	297	22.9	209	209
20–24	20.5	334	346	20.8	190	197
25–29	18.0	293	295	15.0	137	134
30–34	13.1	213	215	12.6	115	109
35–39	12.6	205	201	11.6	106	100
40–44	9.6	155	152	9.1	83	72
45–49	7.3	119	119	8.0	73	80
Marital status						
Never married	23.6	383	383	36.1	329	325
Married	29.6	481	476	23.7	217	212
Living together	40.9	665	661	34.7	317	315
Divorced/separated	4.8	77	87	5.2	47	45
Widowed	1.2	19	18	0.3	3	4
Residence						
Urban	68.0	1,106	884	69.1	631	489
Rural	32.0	519	741	30.9	283	412
Education						
No education/primary	26.3	427	459	26.8	245	257
Secondary	62.5	1,016	1,003	57.4	524	508
More than secondary	11.2	182	163	15.8	145	136
Wealth quintile						
Lowest	21.5	350	473	19.9	182	251
Second	21.7	353	391	24.1	220	247
Middle	19.6	319	258	20.6	188	140
Fourth	18.8	306	260	17.4	159	126
Highest	18.3	298	243	18.0	164	137
Total 15–49	100.0	1,625	1,625	100.0	913	901
50+	na	na	na	na	93	99
Total men 15+	na	na	na	na	1,055	1,055

Note: Education categories refer to the highest level of education attended, whether or not that level was completed.

na = not applicable

3.2. EDUCATIONAL ATTAINMENT BY BACKGROUND CHARACTERISTICS

Tables 3.2.1 and 3.2.2 show the distribution of respondents according to the highest level of schooling attended. As mentioned before, the data show little variation between women and men in terms of educational attainment. Generally, younger people are more likely to be better educated and to reach higher levels of education than older people; however, older people are more likely to attain more than secondary-level education. For women, the percentage without formal education is 0.4 percent compared to 0.6 percent for men. Most respondents have some secondary education: 42 percent for women compared to 39 percent for men. Completion of primary and secondary are two other common attainments by respondents.

As expected, people in rural areas are less educated than their urban counterparts. The median years completed at school are likely to be higher in urban than in rural areas. Urban women are also more likely to attain more than secondary-level education than rural women. For instance, only 3 percent of rural

women have attended more than secondary-level education compared to 15 percent of urban women. The corresponding figures for men are 9 percent and 20 percent.

Table 3.2.1. Educational attainment: Women

Percent distribution of women aged 15–49 by highest level of schooling attended or completed, and median grade completed, according to background characteristics, Marshall Islands 2007

Background characteristic	Highest level of schooling						Total	Median years completed	Number of women
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Age									
15–24	0.3	9.0	15.8	49.0	17.9	8.0	100.0	9.4	640
..15–19	0.7	13.2	17.1	56.8	7.0	5.2	100.0	8.8	306
..20–24	0.0	5.1	14.6	41.8	28.0	10.5	100.0	10.1	334
25–29	0.5	7.0	14.9	41.3	20.3	16.1	100.0	10.0	293
30–34	0.0	5.3	16.7	38.6	23.7	15.7	100.0	10.3	213
35–39	1.0	2.4	27.0	39.7	19.4	10.5	100.0	9.6	205
40–44	0.0	3.5	26.4	34.6	25.6	10.0	100.0	9.7	155
45–49	0.0	10.1	27.8	30.7	20.0	11.3	100.0	9.7	119
Residence									
Urban	0.5	6.0	13.2	41.8	23.2	15.3	100.0	10.2	1,106
Rural	0.0	8.8	31.6	43.5	13.7	2.5	100.0	8.6	519
Wealth quintile									
Lowest	0.0	11.3	35.8	41.4	9.9	1.6	100.0	8.2	350
Second	0.6	7.4	22.3	46.4	17.4	5.9	100.0	9.3	353
Middle	0.8	7.6	13.1	45.7	25.0	7.8	100.0	9.6	319
Fourth	0.0	5.0	13.3	45.3	20.8	15.6	100.0	10.3	306
Highest	0.4	2.2	7.8	31.9	29.7	27.9	100.0	11.3	298
Total	0.4	6.9	19.1	42.3	20.2	11.2	100.0	9.7	1,625

[1] Completed 8th grade at the primary level

[2] Completed 4th grade at the secondary level

The second last column in tables 3.2.1 and 3.2.2 shows the median number of years of schooling. The figures show that older persons, those living in urban areas, and those in the two highest wealth quintile households have had more years of schooling than others. The results also confirm that Marshallese men and women have equal access to education.

Table 3.2.2. Educational attainment: Men

Percent distribution of men aged 15–49 by highest level of schooling attended or completed, and median grade completed, according to background characteristics, Marshall Islands 2007

Background characteristic	Highest level of schooling						Total	Median years completed	Number of men
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Age									
15–24	0.7	16.0	16.9	42.1	13.4	10.8	100.0	8.9	400
15–19	0.4	22.5	16.8	52.6	3.4	4.3	100.0	8.1	209
20–24	1.0	8.8	17.1	30.6	24.5	18.0	100.0	10.4	190
25–29	1.3	9.7	18.2	38.2	12.8	19.8	100.0	9.8	137
30–34	0.7	4.8	12.5	38.3	19.9	23.8	100.0	10.6	115
35–39	0.0	6.2	12.7	31.8	30.0	19.2	100.0	10.9	106
40–44	0.0	4.7	10.3	35.7	30.3	19.0	100.0	10.9	83
45–49	0.0	10.1	13.6	39.1	22.4	14.7	100.0	10.0	73
Residence									
Urban	0.6	9.3	12.7	37.4	20.4	19.5	100.0	10.2	631
Rural	0.5	14.8	20.7	42.6	13.6	7.8	100.0	8.6	283
Wealth quintile									
Lowest	1.2	14.0	22.6	38.6	13.9	9.8	100.0	8.6	182
Second	1.5	15.1	17.2	43.7	16.5	5.9	100.0	9.0	220
Middle	0.0	10.9	21.4	38.8	16.3	12.6	100.0	9.1	188
Fourth	0.0	8.7	4.7	44.2	19.6	22.8	100.0	10.4	159
Highest	0.0	4.6	7.3	28.4	26.7	32.9	100.0	11.3	164
Total 15–49	0.6	11.0	15.2	39.0	18.3	15.8	100.0	9.7	913
50+	0.0	4.5	13.2	23.6	26.4	32.3	100.0	11.3	93
Total men 15+	0.5	10.8	15.0	36.6	18.8	18.1	100.0	9.9	1,055

[1] Completed 8th grade at the primary level

[2] Completed 4th grade at the secondary level

3.3. LITERACY ACHIEVEMENT

The level of literacy is an individual's ability to read all, part or none of a sentence in the language he/she is able to read. Questions assessing literacy are asked of each respondent who has not attended any school or who has attended primary only. An additional approach to provide more information on respondents' level of literacy is to get respondents read out a simple sentence. In the 2007 RMIDHS, this method was applied to all respondents who had not attended school or had attended primary level only. The interviewer asked the respondents to read out from a card a simple sentence written in the Marshallese language, and then recorded whether the respondents could read all of the sentence, only parts of it or none of it.

3.3.1. Literacy achievement: Women and men

Data in tables 3.3.1 and 3.3.2 reveal that 5 percent of Marshallese women and 5 percent of men aged 15–49 cannot read at all. Literacy levels decrease with increasing age among women, from 96 percent among women aged 15–19 to 93 percent in the 40–44 age group. Similarly, over 90 percent of men in almost all age groups are literate, which shows almost universal access to education over the years in RMI.

Table 3.3.1. Literacy: Women

Percent distribution of women aged 15–49 by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Marshall Islands 2007

Background characteristic	Secondary school or higher	No schooling or primary school				Missing	Total	Percentage literate[1]	Number
		Can read a whole sentence	Can read part of a sentence	Cannot read at all	Blind/ visually impaired				
Age									
15–19	69.0	19.5	7.2	4.3	0.0	0.0	100.0	95.7	306
20–24	80.3	9.6	6.6	3.6	0.0	0.0	100.0	96.4	334
25–29	77.6	9.6	7.2	5.2	0.4	0.0	100.0	94.4	293
30–34	78.0	11.0	6.4	4.5	0.0	0.0	100.0	95.5	213
35–39	69.6	18.3	8.7	3.1	0.3	0.0	100.0	96.6	205
40–44	70.1	13.2	9.4	7.3	0.0	0.0	100.0	92.7	155
45–49	62.1	18.5	13.2	4.2	1.1	1.0	100.0	93.8	119
Residence									
Urban	80.3	11.2	4.7	3.4	0.2	0.1	100.0	96.3	1,106
Rural	59.7	19.1	14.4	6.7	0.1	0.0	100.0	93.2	519
Wealth quintile									
Lowest	52.9	21.9	14.7	10.4	0.2	0.0	100.0	89.4	350
Second	69.7	14.5	11.2	4.6	0.0	0.0	100.0	95.4	353
Middle	78.5	12.6	5.5	2.7	0.7	0.0	100.0	96.6	319
Fourth	81.7	11.1	4.4	2.4	0.0	0.4	100.0	97.2	306
Highest	89.6	7.3	1.7	1.4	0.0	0.0	100.0	98.6	298
Total	73.7	13.8	7.8	4.5	0.2	0.1	100.0	95.3	1,625

[1] Refers to women who have attended secondary school or higher and women who can read a whole sentence or part of a sentence

For Marshallese women and men there is not much variation in literacy levels, but there are some interesting patterns. For example, the literacy level for women in urban areas is slightly higher than for those in rural areas. In contrast, literacy level is likely to be higher for rural than urban males. The gap between men and women is not very wide in either urban or rural areas.

As with wealth quintiles, literacy levels are likely to be higher among respondents from the wealthiest households than other respondents.

Table 3.3.2. Literacy: Men

Percent distribution of men aged 15–49 by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Marshall Islands 2007

Background characteristic	Secondary school or higher	No schooling or primary school				Total	Percentage literate[1]	Number
		Can read a whole sentence	Can read part of a sentence	Cannot read at all	Blind/ visually impaired			
Age								
15–19	60.3	18.5	15.9	5.2	0.0	100.0	94.8	209
20–24	73.0	6.7	12.7	7.6	0.0	100.0	92.4	190
25–29	70.8	8.2	11.3	9.7	0.0	100.0	90.3	137
30–34	82.0	5.3	8.9	3.2	0.6	100.0	96.2	115
35–39	81.1	6.9	9.0	3.0	0.0	100.0	97.0	106
40–44	85.0	4.2	8.7	2.0	0.0	100.0	98.0	83
45–49	76.3	7.2	11.7	3.5	1.3	100.0	95.2	73
Residence								
Urban	77.3	8.6	8.0	5.9	0.1	100.0	93.9	631
Rural	64.0	10.8	20.5	4.4	0.3	100.0	95.3	283
Wealth quintile								
Lowest	62.3	8.1	24.2	4.9	0.4	100.0	94.6	182
Second	66.2	12.2	15.2	6.4	0.0	100.0	93.6	220
Middle	67.7	15.3	8.5	8.5	0.0	100.0	91.5	188
Fourth	86.7	4.0	3.8	5.5	0.0	100.0	94.5	159
Highest	88.0	4.9	5.4	1.2	0.5	100.0	98.3	164
Total 15–49	73.2	9.3	11.9	5.4	0.2	100.0	94.4	913
50+	82.3	11.9	4.5	0.7	0.6	100.0	98.7	93
Total men 15+	73.6	10.1	11.3	4.8	0.2	100.0	95.0	1,055

[1] Refers to men who have attended secondary school or higher and men who can read a whole sentence or part of a sentence

3.4. ACCESS TO MASS MEDIA

Information access is essential in increasing people's knowledge and awareness of what is taking place around them, which may eventually affect their perceptions and behavior. In the survey, exposure to the media was assessed by asking how often a respondent read a newspaper, watched television, or listened to a radio.

Most of the population is exposed to some form of media. In general, men are more likely than women to have access to mass media; this is true for all types of media. Tables 3.4.1 and 3.4.2 show that radio is the most popular medium. Around 6 in 10 women and 7 in 10 men listen to a radio broadcast at least once a week. Forty-eight percent of men read a newspaper at least once a week, compared with 40 percent of women.

Reflecting the availability of television broadcast coverage in the country, the percentage of women and men who watch television is about the same (61 percent of women and 65 percent of men). The proportion that has access to all three media (radio, newspaper, and television) at least once a week is generally lower for women than men (24 percent compared to 33 percent). Eighteen percent of women and 14 percent of men have no exposure to any mass media, which poses a challenge in the provision of information to the population, including health information.

Table 3.4.1. Exposure to mass media: Women

Percentage of women aged 15–49 who are exposed to specific media on a weekly basis, by background characteristics, Marshall Islands 2007

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	All three media at least once a week	No media at least once a week	Number of women
Age						
15–19	37.8	66.5	73.4	29.7	14.7	306
20–24	35.4	61.6	65.3	23.1	18.6	334
25–29	42.9	57.5	58.6	24.3	19.8	293
30–34	45.1	64.5	54.6	25.5	16.1	213
35–39	44.3	61.1	52.8	25.9	19.0	205
40–44	39.2	53.4	44.8	17.0	24.8	155
45–49	29.1	53.6	61.9	16.5	18.6	119
Residence						
Urban	46.3	69.0	62.2	29.3	13.6	1,106
Rural	25.1	43.2	56.7	13.1	28.7	519
Education						
No education/primary	20.8	46.5	54.9	9.0	26.4	427
Secondary	43.0	65.4	62.3	27.7	16.6	1,016
More than secondary	63.7	68.1	63.0	39.7	9.7	182
Wealth quintile						
Lowest	17.8	31.1	49.0	6.0	35.9	350
Second	35.3	50.9	61.9	18.2	22.7	353
Middle	39.6	71.7	65.5	26.8	13.2	319
Fourth	45.0	73.5	60.6	30.3	12.1	306
Highest	64.2	82.5	66.5	43.4	4.7	298
Total	39.5	60.7	60.4	24.2	18.4	1,625

Tables 3.4.1 and 3.4.2 also show the variation in media exposure by background characteristics of respondents. The results for women indicate that the proportion who are exposed to any media at least once a week generally declines gradually with age. Obviously, urban women are more likely to have access to mass media than rural residents. Only 13 percent of women in rural areas read a newspaper at least once a week, while the percentage for urban women is 29. In terms of watching television at least once a week, 43 percent of rural women watch as compared with 69 percent of women in urban areas. For those women listening to the radio, 57 percent of rural women listen compared with 62 percent of their urban counterparts. The findings for men also show a gap in media access between urban and rural areas. For example, 62 percent of men in urban areas read a newspaper at least once a week, compared with only 18 percent of those in rural areas.

The data further reveal that exposure to media is positively associated with educational attainment. For example, 40 percent of women with more than secondary-level education are exposed to at least one form of media each week, compared with only 9 percent of women with no or primary education. A similar pattern exists for men, where 54 percent of men with more than secondary-level education compared to 12 percent with no or primary education are exposed to at least one form of media each week.

The data also show that media exposure is limited among Marshallese women and men in the lower household wealth quintiles. For instance, 6 percent of women from the poorest homes are exposed to at least one form of media each week, compared with 43 percent from the richest homes. Similarly, 8 percent of men from the poorest homes are exposed to at least one form of media each week, compared with 60 percent from the richest homes.

Table 3.4.2. Exposure to mass media: Men

Percentage of men aged 15–49 who are exposed to specific media on a weekly basis, by background characteristics, Marshall Islands 2007

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	All three media at least once a week	No media at least once a week	Number of men
Age						
15–19	49.0	68.9	70.3	37.8	13.7	209
20–24	39.7	63.9	75.7	31.4	14.5	190
25–29	41.2	63.6	70.8	26.3	15.5	137
30–34	52.7	65.7	66.8	32.9	12.7	115
35–39	56.7	67.2	58.1	34.8	14.3	106
40–44	58.4	70.6	58.6	33.9	14.4	83
45–49	52.9	53.4	75.3	32.2	14.2	73
Residence						
Urban	62.1	81.0	74.9	44.9	5.3	631
Rural	17.7	30.4	55.9	6.4	34.1	283
Education						
No education/Primary	18.5	56.7	63.4	12.2	21.6	245
Secondary	53.9	65.1	70.7	36.9	12.9	524
More than secondary	78.9	81.2	72.3	54.0	6.6	145
Wealth quintile						
Lowest	21.6	25.4	56.0	8.2	36.1	182
Second	35.3	51.3	65.9	20.3	19.2	220
Middle	46.6	81.0	75.2	32.8	6.0	188
Fourth	69.4	83.8	70.3	51.3	5.7	159
Highest	77.3	93.0	79.3	59.9	0.8	164
Total 15–49	48.4	65.4	69.0	33.0	14.2	913
50+	70.8	49.9	66.6	36.6	10.7	93
Total men 15+	51.1	63.5	68.3	33.3	13.8	1,055

3.5. EMPLOYMENT STATUS

Like education, employment can be a source of empowerment of women, especially when leading them into a decision-making position and control of income. The measurement of women's empowerment is a difficult task and is most often under-reported – especially women's work that deals with family work or home duties, which is always referred to as 'informal work/home duties'.

To ensure complete coverage of women's empowerment, the 2007 RMIDHS provided questions about women's employment status in both informal and formal sectors. Employed women were classified as currently working for the last seven days and the last 12 months prior to the survey. Additional questions were included to ask about any kind of payment the respondents received in return for service provided.

Tables 3.5.1 and 3.5.2 show that 28 percent of women and 54 percent of men are classified as currently employed. The proportion currently employed increases with age and number of living children among women. The data for men show similar variation in employment status by age and number of children. Women who are divorced, separated, or widowed are the most likely to be employed (34 percent), followed by those who are married (32 percent). Never-married women and men are the least likely to be employed (16 percent and 25 percent respectively). Almost three in four (72 percent) married men are currently employed.

The current employment level for women is higher in rural areas (33 percent) than in urban areas (25 percent), and a similar difference is observed for men (63 percent in rural areas compared to 50 percent in urban areas).

It is worth noting that for both women and men, current employment levels are positively associated with educational attainment. Meanwhile, the pattern is not clear in relation to current employment status and household wealth quintiles for either women or men.

Table 3.5.1. Employment status: Women

Percent distribution of women aged 15–49 by employment status, according to background characteristics, Marshall Islands 2007

Background characteristic	Employed in the 12 months preceding the survey		Not employed in the 12 months preceding the survey	Total	Number of women
	Currently employed[1]	Not currently employed			
Age					
15–19	7.5	1.7	90.8	100.0	306
20–24	17.9	5.0	77.2	100.0	334
25–29	31.9	3.3	64.7	100.0	293
30–34	41.3	2.9	55.8	100.0	213
35–39	37.2	4.5	58.3	100.0	205
40–44	46.7	2.4	50.9	100.0	155
45–49	34.1	3.7	62.2	100.0	119
Marital status					
Never married	15.7	2.2	82.1	100.0	383
Married or living together	31.5	3.6	64.9	100.0	1,145
Divorced/separated/widowed	34.0	5.6	60.4	100.0	97
Number of living children					
0	17.4	3.5	79.2	100.0	419
1–2	28.5	3.8	67.7	100.0	496
3–4	37.0	2.7	60.3	100.0	370
5+	30.1	3.5	66.4	100.0	340
Residence					
Urban	25.3	2.8	71.9	100.0	1,106
Rural	33.4	4.6	61.9	100.0	519
Education					
No education/primary	20.7	3.6	75.7	100.0	427
Secondary	24.5	3.6	71.9	100.0	1,016
More than secondary	63.8	1.7	34.5	100.0	182
Wealth quintile					
Lowest	31.8	5.3	62.8	100.0	350
Second	24.0	2.3	73.6	100.0	353
Middle	17.1	1.7	81.2	100.0	319
Fourth	26.2	4.5	69.3	100.0	306
Highest	41.2	3.1	55.8	100.0	298
Total	27.9	3.4	68.7	100.0	1,625

[1] 'Currently employed' is defined as having done work in the past seven days. Includes persons who did not work in the past seven days but who are regularly employed and were absent from work due to leave, illness, vacation, or any other such reason.

Table 3.5.2. Employment status: Men

Percent distribution of men aged 15–49 by employment status, according to background characteristics, Marshall Islands 2007

Background characteristic	Employed in the 12 months preceding the survey		Not employed in the 12 months preceding the survey	Total	Number of men
	Currently employed[1]	Not currently employed			
Age					
15–19	16.3	3.8	79.9	100.0	209
20–24	42.6	7.1	50.3	100.0	190
25–29	65.3	8.5	26.2	100.0	137
30–34	71.2	9.3	19.5	100.0	115
35–39	74.6	9.9	15.5	100.0	106
40–44	88.6	7.0	4.4	100.0	83
45–49	70.3	6.0	23.7	100.0	73
Marital status					
Never married	25.0	4.5	70.5	100.0	329
Married or living together	71.5	8.1	20.3	100.0	534
Divorced/separated/widowed	(52.0)	(12.2)	(35.8)	100.0	50
Number of living children					
0	28.1	5.0	66.9	100.0	362
1–2	62.9	8.8	28.3	100.0	252
3–4	80.5	6.2	13.3	100.0	154
5+	72.7	10.2	17.1	100.0	145
Residence					
Urban	49.7	6.5	43.9	100.0	631
Rural	62.6	8.3	29.1	100.0	283
Education					
No education/primary	51.8	6.7	41.5	100.0	245
Secondary	49.5	8.0	42.5	100.0	524
More than secondary	72.0	4.3	23.8	100.0	145
Wealth quintile					
Lowest	60.8	9.5	29.7	100.0	182
Second	58.0	7.9	34.1	100.0	220
Middle	51.0	7.8	41.2	100.0	188
Fourth	38.7	4.4	56.9	100.0	159
Highest	57.5	4.9	37.7	100.0	164
Total 15–49	53.7	7.1	39.3	100.0	913
50+	76.3	7.0	16.7	100.0	93
Total men 15+	55.8	7.1	37.1	100.0	1,055

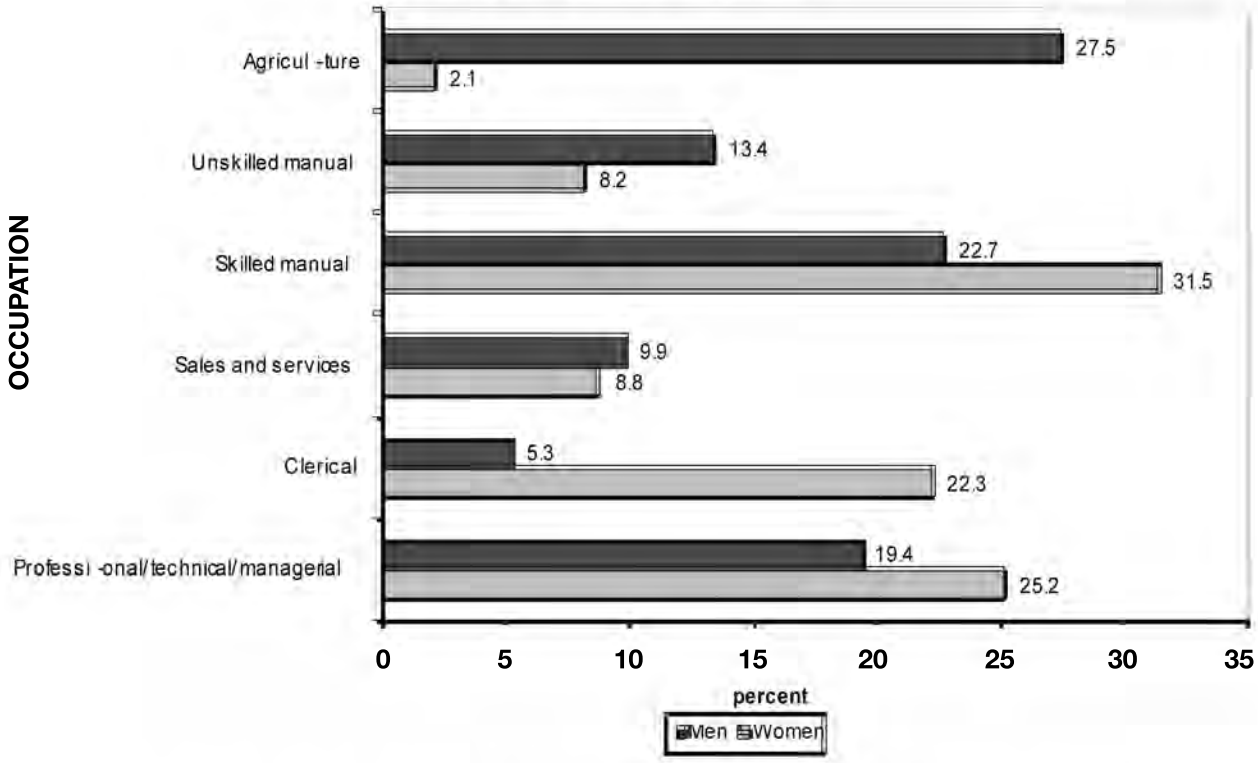
Note: Figures in parentheses are based on 25–49 unweighted cases.

[1] 'Currently employed' is defined as having done work in the past seven days. Includes persons who did not work in the past seven days but who are regularly employed and were absent from work due to leave, illness, vacation, or any other such reason.

3.6. OCCUPATION

Respondents who were currently employed were asked to state their occupation, and the results are presented in Figure 3.1, Table 3.6.1 and Table 3.6.2. Among women who are currently employed, 31 percent are engaged in an occupation called 'skilled manual' and 25 percent are involved in professional, technical, and managerial occupations. The percentages for men are 23 percent and 19 percent respectively. The strong involvement of men in agriculture reflects the heavy manual-labor-intensive agricultural sector in the Marshallese economy.

Figure 3.1. Occupation by sex



Most women and men who are engaged in non-agricultural activities work in unskilled manual labor or sales and services occupations, or skilled manual labor or clerical occupations. The professional, technical, and managerial occupations, which require more skill and have higher income-earning potential, employ one in four working women and about one in five (19.4 percent) working men.

Table 3.6.1 shows the distribution of women employed in the 12 months preceding the survey by type of occupation according to their background characteristics. Generally, women are likely to work in a skilled manual occupation unless they are urban residents, have more than secondary-level education, or are from the richest homes.

Women in the age group of 20–24, who are married or 'living together', live in rural areas, have a low level of education, and are in less wealthy households are more likely to be in skilled manual occupations, while women in older age groups, with higher levels of education, and in the wealthiest households are more likely to be in professional, technical, or managerial occupations.

Table 3.6.1. Occupation: Women

Percent distribution of women aged 15–49 employed in the 12 months preceding the survey by occupation, according to background characteristics, Marshall Islands 2007

Background characteristic	Professional/ technical/ managerial	Clerical	Sales and service	Skilled manual	Unskilled manual	Agricul-ture	Missing	Total	Number of women
Age									
15–19	(7.4)	(24.4)	(0.0)	(41.7)	(15.8)	(6.4)	(4.2)	100.0	28
20–24	14.5	27.4	8.2	43.7	2.3	0.9	3.1	100.0	76
25–29	22.9	25.5	11.5	27.3	6.1	5.4	1.3	100.0	103
30–34	26.7	28.2	5.5	27.7	8.7	1.9	1.3	100.0	94
35–39	31.4	16.2	10.4	32.7	7.3	0.8	1.2	100.0	85
40–44	30.4	22.6	13.1	21.3	11.5	0.0	1.1	100.0	76
45–49	(35.8)	(3.5)	(5.5)	(37.1)	(13.7)	(0.0)	(4.4)	100.0	45
Marital status									
Never married	21.4	32.9	5.7	23.8	9.3	3.1	3.7	100.0	69
Married or living together	26.3	20.3	9.3	33.0	7.5	1.6	1.9	100.0	402
Divorced/separated/widowed	(20.6)	(23.7)	(8.2)	(29.3)	(13.6)	(4.7)	(0.0)	100.0	38
Number of living children									
0	30.3	22.3	11.4	21.5	5.1	3.0	6.3	100.0	87
1–2	28.7	25.0	7.3	30.6	4.9	2.9	0.5	100.0	160
3–4	19.3	23.8	9.3	35.3	9.3	1.2	1.8	100.0	147
5+	23.7	16.6	8.2	35.5	14.0	1.2	0.9	100.0	114
Residence									
Urban	32.3	35.6	11.9	4.7	12.0	1.0	2.6	100.0	311
Rural	14.0	1.5	3.8	73.6	2.4	3.7	1.0	100.0	198
Education									
No education/primary	5.0	5.1	9.4	70.0	7.1	3.5	0.0	100.0	104
Secondary	19.0	24.8	10.5	29.9	11.6	1.9	2.3	100.0	285
More than secondary	57.5	31.4	4.2	1.8	1.1	1.2	2.8	100.0	119
Wealth quintile									
Lowest	5.9	2.5	2.9	79.4	2.8	5.7	0.8	100.0	130
Second	18.9	12.5	5.8	48.6	12.4	0.7	1.1	100.0	93
Middle	29.5	32.3	14.7	7.9	13.9	1.6	0.0	100.0	60
Fourth	26.4	44.6	8.5	4.9	15.6	0.0	0.0	100.0	94
Highest	45.7	28.3	14.1	1.9	2.8	1.1	6.0	100.0	132
Total	25.2	22.3	8.8	31.5	8.2	2.1	2.0	100.0	508

Note: Figures in parentheses are based on 25–49 unweighted cases.

Marshallese men in the age group of 35–39, who have ever married or been in a 'living together' status, live in urban areas, have a low level of education, and are in less wealthy households are more likely to be in skilled manual occupations, while men in older age groups, with higher levels of education, and in the wealthiest households are more likely to be in professional, technical, or managerial occupations.

Table 3.6.2. Occupation: Men

Percent distribution of men aged 15–49 employed in the 12 months preceding the survey by occupation, according to background characteristics, Marshall Islands 2007

Background characteristic	Professional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Agricul-ture	Missing	Total	Number of men
Age									
15–19	(14.0)	(3.1)	(3.1)	(11.9)	(26.5)	(39.6)	(1.9)	100.0	42
20–24	15.6	4.1	4.1	16.4	18.0	39.1	2.6	100.0	94
25–29	18.2	2.1	4.9	24.7	13.5	35.4	1.2	100.0	101
30–34	21.2	10.4	6.1	22.8	8.9	28.3	2.2	100.0	92
35–39	16.2	8.4	14.7	35.5	4.4	20.7	0.0	100.0	90
40–44	26.8	3.1	18.3	23.9	12.5	11.4	4.0	100.0	79
45–49	23.3	5.0	20.9	15.7	18.5	16.6	0.0	100.0	56
Marital status									
Never married	24.1	2.4	3.9	11.2	20.1	35.0	3.3	100.0	97
Married or living together	19.2	6.0	11.6	24.6	11.7	25.4	1.5	100.0	425
Divorced/separated/widowed	(7.7)	(6.0)	(5.8)	(33.2)	(15.2)	(32.2)	(0.0)	100.0	32
Number of living children									
0	22.7	2.2	2.9	17.4	17.8	34.3	2.7	100.0	120
1–2	22.4	5.5	8.1	17.0	15.1	31.3	0.7	100.0	181
3–4	18.2	4.5	11.3	27.3	9.7	27.5	1.5	100.0	134
5+	12.8	9.3	18.1	31.7	10.5	14.9	2.6	100.0	120
Residence									
Urban	23.2	7.7	10.6	32.8	15.8	7.2	2.7	100.0	354
Rural	12.7	1.2	8.8	5.0	9.1	63.3	0.0	100.0	200
Education									
No education/primary	4.5	0.0	6.4	20.0	23.4	45.8	0.0	100.0	143
Secondary	9.6	6.7	14.1	26.9	12.8	27.3	2.5	100.0	301
More than secondary	65.4	8.6	3.1	14.9	1.9	4.4	1.8	100.0	110
Wealth quintile									
Lowest	9.5	0.3	8.1	4.4	6.0	70.2	1.6	100.0	128
Second	10.9	4.1	13.9	19.1	19.3	32.6	0.0	100.0	145
Middle	12.6	5.7	8.0	46.6	15.3	8.9	2.9	100.0	111
Fourth	36.8	8.7	11.7	29.7	11.2	1.9	0.0	100.0	68
Highest	39.4	10.8	7.6	20.4	13.6	3.9	4.3	100.0	102
Total 15–49	19.4	5.3	9.9	22.7	13.4	27.5	1.7	100.0	554
50+	33.8	6.3	14.1	21.5	9.3	13.5	1.6	100.0	77
Total men 15+	22.0	5.3	10.1	21.9	13.2	25.5	2.0	100.0	664

Note: Figures in parentheses are based on 25–49 unweighted cases.

3.7. EARNINGS, TYPE OF EMPLOYER, AND CONTINUITY OF EMPLOYMENT: WOMEN

Table 3.7 shows the distribution of women by their employment status. The data indicate that 85 percent of employed women receive payment in cash only, 9 percent are paid both in cash and in kind, 2 percent receive only payment in kind, and 4 percent receive no payment for their work.

The data on type of employer indicate that, while 52 percent of women are employed by a non-family member, 37 percent are self-employed, and 11 percent are employed by a family member.

The table further presents the distribution of women by the continuity of their employment. Over 8 in 10 women work all year, 13 percent work seasonally, and 7 percent work occasionally.

Table 3.7. Type of employment: Women

Percent distribution of women aged 15–49 employed in the 12 months preceding the survey by type of earnings, type of employer, and continuity of employment, Marshall Islands 2007

Employment characteristic	Non-agricultural work	Total
Type of earnings		
Cash only	85.3	85.2
Cash and in-kind	8.9	9.0
In-kind only	1.4	1.6
Not paid	4.3	4.2
Total	100.0	100.0
Type of employer		
Employed by family member	11.0	10.5
Employed by non-family member	51.8	51.9
Self-employed	36.8	37.1
Total	100.0	100.0
Continuity of employment		
All year	80.1	79.7
Seasonal	12.1	12.8
Occasional	7.5	7.2
Total	100.0	100.0
Number of women employed during the last 12 months	488	508

Note: Total includes 12 women who do agricultural work and 10 women with missing information on type of employment, type of employer, and continuity of employment, who are not shown separately. The number of women who work in agriculture is too small to be presented by employment characteristic.

3.8. HEALTH INSURANCE COVERAGE

The 2007 RMIDHS asked respondents if they were covered by specific types of insurance schemes. The insurance schemes were categorized as: (1) government-run schemes, such as the Social Security Scheme; (2) employer-based schemes; (3) supplement insurance; (4) voluntary health insurance schemes or private for-profit schemes; (5) Health Plan 177; and (6) other insurance arrangement. The distribution of respondents aged 15–49 with type of insurance coverage according to the respondent's background characteristics is presented in Table 3.8.1 for women and Table 3.8.2 for men.

The tables show the percentage of women and men respondents covered by a health scheme or health insurance, by type of health insurance coverage. Overall, 79 percent of women and 73 percent of men are not covered by any health plan or insurance scheme. This means that less than 1 in 10 respondents is covered by a health plan or insurance scheme in the Marshall Islands. For example, social security covers only 6 percent of women and 3 percent of men. Similarly, other employer-based insurance covers a low 7 percent of women and 12 percent of men. Supplement insurance covers only 4 percent of women, while privately purchased commercial insurance covers a low 2 percent of women and 5 percent of men. Health Plan 177 covers a low 3 percent of women and 9 percent of men.

By background characteristics, for both women and men health plan and insurance coverage are more likely to increase as age, education level attained and wealth of household increases. While the coverage of social security is almost equal among women and men in urban and rural areas, other employer-based insurance coverage is more common in urban than rural areas, whereas Health Plan 177 coverage is likely to be less common in urban than rural areas. The 2007 RMIDHS data clearly highlight the poor health insurance coverage in the country – a situation urgently requiring remedial steps.

Table 3.8.1. Health insurance coverage: Women

Percentage of women aged 15–49 with specific types of health insurance coverage, according to background characteristics, Marshall Islands 2007

Background characteristic	Social security	Other employer-based insurance	Supplement insurance	Privately purchased commercial insurance	Health Plan 177	Other	None	Number of women
Age								
15–19	2.4	1.9	4.5	0.9	2.8	0.0	88.3	306
20–24	5.3	2.6	3.1	0.2	4.3	0.5	84.3	334
25–29	4.7	7.8	3.1	1.3	3.9	0.8	81.1	293
30–34	7.9	9.9	6.0	3.6	3.5	0.8	72.5	213
35–39	8.6	11.4	4.8	3.5	2.1	0.0	72.3	205
40–44	9.1	11.2	2.9	3.0	1.3	1.1	73.8	155
45–49	11.9	7.5	8.1	2.7	3.1	0.0	71.2	119
Residence								
Urban	6.6	7.9	5.1	2.2	0.5	0.6	79.2	1,106
Rural	5.5	4.0	2.6	1.2	8.9	0.1	79.9	519
Education								
No education/primary	3.4	1.3	2.5	0.5	3.8	0.7	88.9	427
Secondary	7.2	5.9	3.7	2.2	3.5	0.3	79.6	1,016
More than secondary	7.9	23.4	11.9	3.2	0.0	0.9	56.7	182
Wealth quintile								
Lowest	3.4	1.6	2.1	0.2	5.0	0.2	88.1	350
Second	6.9	4.0	2.3	2.2	6.4	0.0	80.2	353
Middle	5.4	3.9	2.1	2.4	2.9	0.0	85.0	319
Fourth	5.5	7.5	7.7	1.2	0.9	1.7	79.7	306
Highest	10.5	17.7	8.1	3.5	0.0	0.6	62.2	298
Total	6.3	6.7	4.3	1.9	3.2	0.5	79.4	1,625

Table 3.8.2. Health insurance coverage: Men

Percentage of men aged 15–49 with specific types of health insurance coverage, according to background characteristics, Marshall Islands 2007

Background characteristic	Social security	Other employer-based insurance	Privately purchased commercial insurance	Health Plan 177	Other	None	Number
Age							
15–19	0.5	2.9	1.2	7.5	0.0	88.4	209
20–24	1.7	4.4	3.7	10.9	1.2	79.0	190
25–29	2.8	11.0	4.0	9.2	2.2	72.3	137
30–34	1.8	12.1	7.5	6.7	0.1	72.6	115
35–39	5.0	28.1	3.9	8.9	3.1	57.3	106
40–44	3.1	26.4	15.7	4.2	1.0	55.5	83
45–49	6.7	17.8	9.3	11.8	1.8	54.5	73
Residence							
Urban	2.3	14.1	7.0	1.8	1.6	74.8	631
Rural	3.0	6.8	1.2	23.7	0.3	68.1	283
Education							
No education/primary	0.8	5.0	3.7	6.2	0.3	84.0	245
Secondary	2.5	8.5	4.0	11.3	1.0	74.9	524
More than secondary	5.4	35.6	12.0	2.7	3.3	45.8	145
Wealth quintile							
Lowest	3.1	6.0	2.0	14.5	0.4	76.6	182
Second	2.7	8.1	2.5	18.7	0.4	70.1	220
Middle	1.8	13.1	2.7	4.8	2.2	76.3	188
Fourth	0.0	16.6	7.1	0.3	1.6	74.8	159
Highest	4.9	17.2	13.3	0.7	1.5	65.9	164
Total 15–49	2.5	11.8	5.2	8.6	1.2	72.7	913
50+	18.3	26.0	5.7	13.2	3.3	43.4	93
Total men 15+	5.0	13.4	5.6	9.0	1.5	68.5	1,055

3.9. KNOWLEDGE AND ATTITUDES TOWARD TUBERCULOSIS

Tuberculosis (TB) is one of the main killers of women, men and children at all ages and in all societies. The knowledge about tuberculosis in a society is critical in order to understand how people deal with the disease. The 2007 RMIDHS asked questions about knowledge and attitudes toward the disease. Tables 3.9.1 and 3.9.2 show several indicators relating to respondents' knowledge and attitudes concerning TB, including the percentages who have heard of the disease, know that TB is spread through the air by coughing, believe that TB can be cured, and would want to keep it a secret that a family member had TB.

Knowledge of tuberculosis for both women and men is almost universal (94 and 96 percent respectively). An equal proportion (82 percent) of Marshallese women and men who have heard about tuberculosis report that it is spread through the air. Substantial differences are observed in the level of knowledge of the mode of TB transmission by residence, particularly for men. For example, 85 percent of urban women report that TB is spread through the air by coughing compared with 76 percent of rural women. Similarly, 91 percent of urban men report that TB is spread through the air by coughing compared with 63 percent of rural men.

About 85 percent of women who have heard of TB believe it can be cured, while for men the percentage is lower (76 percent). Although some differences are evident in this indicator by background characteristics, the general pattern is the same for women and men. For example, the proportion of women and men who believe that TB can be cured generally increases with age, educational attainment, and household wealth quintile. In contrast, both women and men respondents in urban areas are more likely to believe that TB can be cured than rural respondents.

Table 3.9.1. Knowledge and attitudes concerning tuberculosis: Women

Percentage of women aged 15–49 who have heard of TB, and among women who have heard of TB, the percentages who know that TB is spread through the air by coughing, believe that TB can be cured, and would want to keep secret that a family member has TB, by background characteristics, Marshall Islands 2007

	Among all women		Among women who have heard of TB, the percentage who:			
Background characteristic	Percentage who have heard of TB	Number of women	Report that TB is spread through the air by coughing	Believe that TB can be cured	Would want a family member's TB kept secret	Number of women who have heard of TB
Age						
15–19	87.7	306	80.2	76.5	16.8	268
20–24	93.3	334	82.9	83.7	17.3	311
25–29	93.8	293	83.0	87.8	11.9	275
30–34	97.0	213	82.4	88.1	14.1	207
35–39	94.4	205	85.8	90.8	12.5	194
40–44	96.8	155	82.5	89.6	17.6	150
45–49	98.0	119	78.5	85.4	12.8	117
Residence						
Urban	95.0	1,106	85.3	88.4	12.1	1,050
Rural	90.8	519	75.7	78.7	21.0	472
Education						
No education/primary	88.6	427	79.4	80.3	18.5	378
Secondary	94.9	1,016	83.1	85.5	15.0	964
More than secondary	98.6	182	84.4	95.9	6.4	180
Wealth quintile						
Lowest	91.2	350	76.3	75.0	20.6	319
Second	92.1	353	78.0	86.5	18.1	325
Middle	93.1	319	85.9	88.9	12.3	297
Fourth	95.1	306	80.9	84.5	10.1	291
Highest	97.3	298	91.8	93.0	12.4	290
Total	93.6	1,625	82.4	85.4	14.9	1,522

Only 15 percent of women who have heard about TB would want a family member's TB status kept a secret, while the percentage for men is even lower at 12 percent. Among women, the proportion expressing a desire to keep secret that a family member has TB is higher among rural respondents than urban respondents (21 percent compared to 12 percent). Among men, the opposite is observed, with urban respondents more likely than rural respondents to keep secret that a family member has TB (13 percent compared to 9 percent). For both women and men, the proportion expressing a desire to keep secret that a family member has TB reduces as their level of educational attainment increases.

Overall observation is that Marshallese women have a clear understanding about the disease, its cause and the extent to which it can be cured compared to their male counterparts. However, these same women who believe that TB can be cured are also more likely to keep secret that a family member has TB than Marshallese men.

Table 3.9.2. Knowledge and attitudes concerning tuberculosis: Men

Percentage of men age 15–49 who have heard of TB, and among men who have heard of TB, the percentages who know that TB is spread through the air by coughing, believe that TB can be cured, and would want to keep secret that a family member had TB, by background characteristics, Marshall Islands 2007

	Among all men		Among men who have heard of TB, the percentage who:			
Background characteristic	Percentage who have heard of TB	Number of men	Report that TB is spread through the air by coughing	Believe that TB can be cured	Would want a family member's TB kept secret	Number of men who have heard of TB
Age						
15–19	93.0	209	78.5	61.5	10.1	195
20–24	94.5	190	79.8	73.8	15.7	180
25–29	98.3	137	82.3	75.4	15.2	135
30–34	97.4	115	85.8	78.0	11.9	112
35–39	98.8	106	89.5	83.5	10.8	105
40–44	96.9	83	88.0	92.0	4.2	80
45–49	96.8	73	73.4	85.1	12.0	71
Residence						
Urban	96.0	631	90.5	82.1	13.2	606
Rural	95.9	283	63.2	61.0	9.1	271
Education						
No education/primary	93.8	245	78.3	65.5	15.5	230
Secondary	96.3	524	79.9	75.9	11.2	504
More than secondary	98.6	145	95.9	90.6	9.1	143
Wealth quintile						
Lowest	96.2	182	68.3	66.3	11.5	175
Second	94.1	220	74.3	69.6	9.4	207
Middle	94.9	188	86.0	71.4	14.0	179
Fourth	97.2	159	90.9	84.4	13.8	154
Highest	98.4	164	94.2	89.6	11.8	161
Total 15–49	96.0	913	82.1	75.6	12.0	876
50+	100.0	93	84.2	85.0	5.2	93
Total men 15+	96.5	1,055	83.0	77.2	10.9	1,018

CHAPTER 4. FERTILITY

Fertility analysis is of central importance in demographic analysis as births are a vital component of population growth. The study of fertility also provides important information about women's reproductive behavior and attitudes. Many studies have been carried out to look at fertility variations across countries and explore further to understand factors and indicators influencing fertility level. The findings in this chapter will contribute to policy-makers', program managers' and all users' understanding of changes in the fertility level in RMI.

The 2007 RMIDHS collected information on fertility by asking questions of women of childbearing age (15–49). In order to obtain reliable and accurate fertility data, the questions were carefully developed and standardized to enable fertility-level comparisons between countries. All women in this category were asked about their pregnancy history and whether pregnancy resulted in live births, miscarriage, or stillbirth. Similarly, they were asked to report about their birth history, including the names, dates of birth and sex of their children, and whether the children were alive or dead. For those births who were alive, questions were asked about whether the child was living with the mother or staying elsewhere, and those who had died. This information obtained from every woman enabled calculations of some of the fertility measures that are presented in this chapter.

The chapter first discusses and presents the current fertility level and trend, with a description of differentials in fertility level by background characteristics. An examination of children ever born is carried out to reflect changes in fertility level by looking at women's completed fertility. The timing of women's births is discussed and examined through birth intervals and age at first birth. Finally, adolescent fertility is presented to highlight early pregnancy and childbearing.

4.1. CURRENT FERTILITY

The current level of fertility is important as it presents the prevailing situation and relates to population policies and programs. Current fertility can be measured using the age-specific fertility rate (ASFR), total fertility rate (TFR), general fertility rate (GFR), and crude birth rate (CBR). The ASFR provides the age pattern of fertility, while the TFR refers to the number of live births that a woman would have had if she were subject to the current ASFR throughout her reproductive ages (15–49 years). More generalized indicators of fertility include the GFR, expressed as the number of live births per 1,000 women of reproductive age, and the CBR, expressed as the number of live births per 1,000 population. The measures of fertility presented in this chapter refer to the period of three years prior to the survey. This generates a sufficient number of births to provide robust and current estimates. Table 4.1 provides estimate of current fertility in RMI for the three years preceding the survey for urban and rural areas and for the country as a whole. The three-year period is used in this analysis in order to provide the most current fertility rates, reduce sampling errors, and avoid problems of birth replacements common occurred from the 5 to 6 years.

4.1.1. Age-specific fertility rate (ASFR) and total fertility rate (TFR)

TFR is a summary measure of fertility, referring to the average number of births a woman would have by the end of her childbearing if she experienced the current ASFRs. TFR is determined by summing up the ASFRs and multiplying by five to account for the five-year age groups. Fertility rates can also be calculated for different age groups' ASFRs to highlight differences in fertility behavior at different ages. ASFRs are computed by taking the total number of births of women at five-year age groups at a given time period and dividing by the total number of women in each five-year age group.

Table 4.1. Current fertility

Age-specific and total rate, general fertility rate, and crude birth rate for the three years preceding the survey, by residence, Marshall Islands 2007

	Residence		
Age group	Urban	Rural	Total
15–19	116	191	138
20–24	243	248	245
25–29	217	286	240
30–34	144	202	163
35–39	85	(85)	85
40–44	19	(15)	18
45–49	0	(7)	(3)
TFR	4.1	5.2	4.5
GFR	151	196	165
CBR	33.4	38.4	35.3

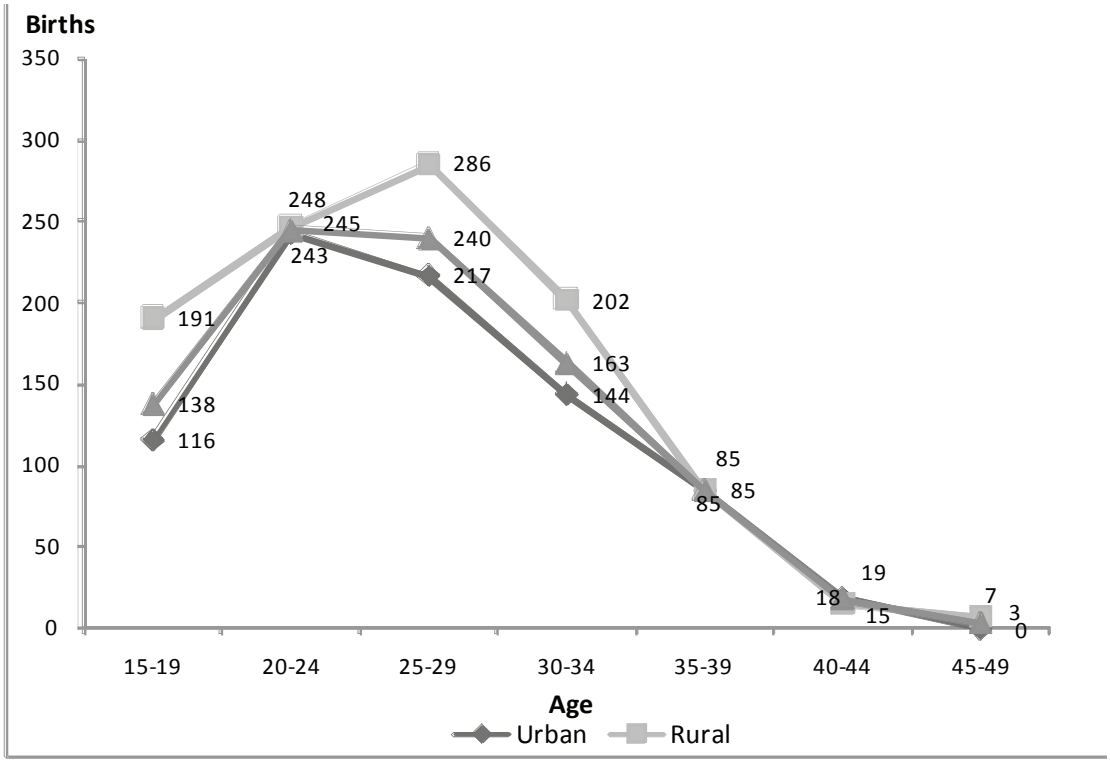
Notes: Age-specific fertility rates are per 1,000 women. Rates for age group 45–49 may be slightly biased due to truncation. Rates are for the period 1–36 months prior to interview. Parentheses are used when based on 125–249 person-years of exposure.

TFR: Total fertility rate expressed per woman

GFR: General fertility rate expressed per 1,000 women

CBR: Crude birth rate expressed per 1,000 population

Figure 4.1. Age-specific fertility rates by residence



As noted above, the most commonly used measure of current fertility is the TFR. The DHS results in Table 4.1 shows that on average, a Marshallese woman would have 4.5 children by the end of her reproductive years if the current fertility pattern (ASFR) were to prevail. Table 4.1 also presents the general fertility rate (165 live births per 1,000 women) and the crude birth rate (35.3 live births per 1,000 population).

As observed in census-based reports, the 2007 DHS found that the TFR in urban areas is much lower than the TFR in rural areas (4.1 and 5.2 children respectively). Because of the larger proportion of the population living in urban areas (about 65 percent), the low urban fertility has more impact on the level of fertility for the country as a whole. As for the ASFRs, the age group of 20–34 is the most reproductive age group as it yields higher numbers of births for both rural and urban areas. In urban areas, the highest peak occurs at the age group of 20–24, whereas in rural areas it peaks at the age group of 25–29 years. The RMI ASFR shows a declining trend with increasing age, as is common in many countries.

4.1.2. General fertility rate (GFR)

The GFR is the number of live births per 1,000 women aged 15–49 in a given year. To calculate the GFR from the 2007 RMIDHS, the total number of births for women aged 15–49 in the three-year period before the survey is divided by the total number of women in the same age group during the same period. As shown, the GFR is estimated to be 165 births per 1,000 women in the childbearing age groups for the whole RMI. Rural areas yield a higher GFR of 196 births per 1,000 women than urban areas.

4.1.3. Crude birth rate (CBR)

Another basic measure of fertility that is commonly used is the CBR, indicating the estimated total average births per 1,000 total population. The rate is considered crude since the population not at risk of giving birth (that is, all men and women outside the childbearing ages) is included in the calculation as denominator. In RMI the CBR is estimated at 35 births per 1,000 population over the last three years. The rural area again shows the highest CBR, of 38 per 1,000 population.

4.2. FERTILITY BY BACKGROUND CHARACTERISTICS

Fertility level is directly affected by many socioeconomic factors; therefore, it is crucial to study the relationship between these factors and fertility. Table 4.2 provides summary results of current and cumulative fertility by background characteristics, such as residence, education, and economic status, among women in RMI. It also provides the basis for comparing the current TFR with the completed fertility for women aged 40–49 (mean children ever born, or CEB) – an approach that is subject to errors due to the under-reporting of parity for older women. However, it is the best indication of fertility changes in the country. The percentages of women aged 15–49 who are currently pregnant are also presented for a rough validation of the level of fertility in RMI.

Table 4.2 shows variation by women's background, with women in rural areas, those with secondary-level education, and those in the poorest households more likely to have higher fertility than other women. Obviously, there is a strong correlation between fertility and the proportion of women aged 15–49 years who are pregnant, as Table 4.2 also shows that, as for fertility, rural women, those with secondary-level education, and those in poor households are more likely to be pregnant than other women.

When assessing the relationship between education and fertility, it is evident that education has a negative impact on fertility level. Generally, levels for both TFR and mean CEB for women aged 40–49 decline as the level of women's education increases (Table 4.2). Women with higher education levels are more likely to have fewer children than women with lower education levels. With this evidence, it is safe to suggest that education plays an important role in minimizing fertility.

Table 4.2. Fertility by background characteristics

Total fertility rate for the three years preceding the survey, percentage of women aged 15–49 currently pregnant, and mean number of children ever born to women aged 40–49 years, by background characteristics, Marshall Islands 2007

Background characteristic	Total fertility rate	Percentage of women aged 15–49 currently pregnant	Mean number of children ever born to women aged 40–49
Residence			
Urban	4.1	4.0	4.9
Rural	5.2	6.4	5.8
Education			
No education/primary	4.4	3.9	5.8
Secondary	4.7	5.2	5.1
More than secondary	3.2	4.3	(3.2)
Wealth quintile			
Lowest	5.1	6.0	(6.0)
Second	5.1	7.6	5.2
Middle	4.8	1.4	4.9
Fourth	3.8	3.8	5.4
Highest	3.4	4.6	4.1
Total	4.5	4.8	5.2

Note: Total fertility rates are for the period 1–36 months prior to interview.

4.3. FERTILITY TRENDS

The trends in age-specific fertility rates reflect changes in fertility rates for each specific age group at the given time period. The 2007 RMIDHS derived the mother's estimated age at birth from the birth history for each specific age group to observe fertility changes for the past 20 years prior to the survey. The findings are presented in Table 4.3. Overall, the fertility rate for each specific age group shows a declining trend for the past 20 years. For example, a declining trend for women in the age group of 20–24 years is observed, from a high of 310 children 15–19 years before the survey to 246 children during the current period (0–4 years before the survey). Fluctuations can be observed in other age groups, which could be due to misreporting of birth dates and mother's age at birth during the survey. In general, the level of adolescent fertility in RMI similarly fluctuated over the period from 1987 to 2007 but showed an increasing trend in the 15 years preceding the survey. Fertility data recorded by the survey are consistent with the findings of the Own Children Method (OCM), based on 1999 census data.

Table 4.3. Trends in age-specific fertility rates

Age-specific fertility rates for five-year periods preceding the survey, by mother's age at time of birth, Marshall Islands 2007

	Number of years preceding survey			
	0–4	5–9	10–14	15–19
Mother's age at birth				
15–19	127	116	105	136
20–24	246	272	285	310
25–29	235	251	227	289
30–34	166	156	144	[189]
35–39	94	88	[55]	
40–44	17	[56]		
45–49	[2]			

Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated. Rates exclude the month of interview.

4.4. CHILDREN EVER BORN AND LIVING

The 2007 RMIDHS included questions related to the total number of children a woman has ever given birth to (CEB) in her lifetime. The examination of CEB reflects changes in women's fertility behavior from the early stage of their reproductive age (15–19) to their completed fertility stage (40–49). In order to capture all live births, including early infants born who later died, subsequent questions were asked to help maximize the woman's recall of all births. Table 4.4 shows the total number of children ever born, the mean number of children ever born, and the estimated mean number of living children for all women and also for all currently married women.

For all women aged 15–49, the mean number of CEB is estimated at 2.7, while an estimate of 3.4 is observed for currently married women. Generally, Marshallese women begin childbearing early in life. As expected, the mean number of children ever born increases with women's age, where for all women aged 15–19 a mean CEB of 0.3 is observed that increases to 5.5 at 45–49. Similarly, currently married women aged 15–19 have a mean CEB of 0.8 children compared to 5.5 children for those aged 45–49. A similar pattern and numbers are observed for mean number of living children.

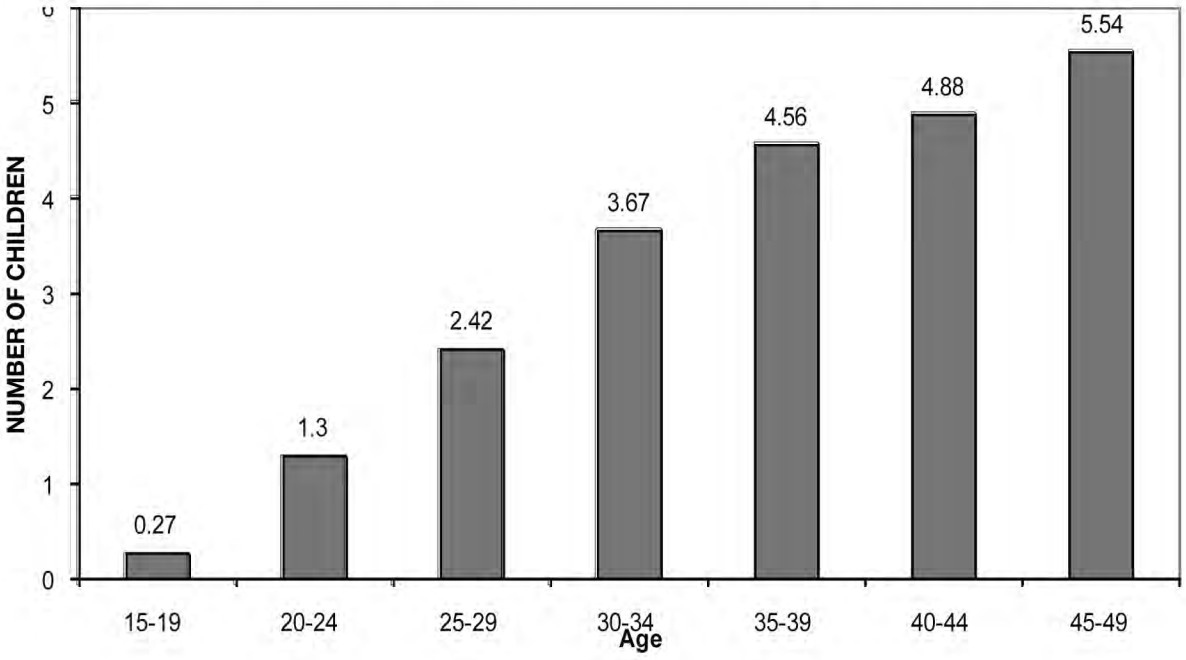
Additionally, Table 4.4 shows the distribution of CEB or parity across women's age groups, which can be used to determine the rates of primary sterility, especially for women over the age of 30 years. Figure 4.4 shows an increasing pattern of mean CEB, and by the age of 40 a woman has on average about six children. These findings conclude that primary sterility is low given that most Marshallese women at the age of 30 and above have given birth to at least one child. For example, by age 45–49 only 4 percent of all women and 5 percent of currently married women have reported giving birth to zero children.

Table 4.4. Children ever born and living

Percent distribution of all women and currently married women by number of children ever born, mean number of children ever born, and mean number of living children, according to age group, Marshall Islands 2007

	Number of children ever born														
Age	0	1	2	3	4	5	6	7	8	9	10+	Total	Number of women	Mean number of children ever born	Mean number of living children
							ALL WOMEN								
15–19	78.2	16.2	5.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.00	306	0.27	0.25
20–24	27.9	30.9	29.5	6.9	4.5	0.3	0.0	0.0	0.0	0.0	0.0	100.00	334	1.30	1.23
25–29	12.5	17.9	24.0	21.6	13.3	6.4	3.9	0.4	0.0	0.0	0.0	100.00	293	2.42	2.32
30–34	4.2	6.9	12.4	21.0	25.2	19.9	4.5	2.9	2.7	0.3	0.0	100.00	213	3.67	3.58
35–39	5.5	5.1	7.2	10.0	20.5	18.1	15.9	8.0	4.9	3.6	1.1	100.00	205	4.56	4.35
40–44	4.8	6.4	9.5	13.5	11.2	13.8	13.7	11.2	6.6	5.1	4.2	100.00	155	4.88	4.61
45–49	4.2	3.0	5.7	4.9	10.8	21.6	13.6	14.7	12.6	4.9	4.0	100.00	119	5.54	5.21
Total	24.7	15.0	15.2	11.0	11.1	9.0	5.6	3.6	2.5	1.3	0.8	100.00	1,625	2.68	2.56
							CURRENTLY MARRIED WOMEN								
15–19	41.0	41.7	16.3	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.00	65	0.77	0.68
20–24	15.0	32.5	37.2	9.8	5.0	0.5	0.0	0.0	0.0	0.0	0.0	100.00	217	1.59	1.50
25–29	7.5	16.6	24.1	24.0	15.8	7.6	3.9	0.5	0.0	0.0	0.0	100.00	240	2.65	2.53
30–34	3.7	7.1	12.8	20.1	24.5	20.6	4.8	3.2	2.9	0.3	0.0	100.00	196	3.71	3.62
35–39	4.8	4.9	7.2	10.3	21.5	18.0	15.8	8.5	5.4	2.3	1.3	100.00	185	4.57	4.35
40–44	4.5	7.1	8.2	14.1	10.4	14.7	14.1	11.2	6.6	4.6	4.5	100.00	141	4.91	4.64
45–49	4.7	2.6	5.5	4.5	12.6	24.2	11.9	10.1	14.7	4.5	4.7	100.00	102	5.51	5.22
Total	9.1	15.1	17.9	14.2	14.3	12.1	7.0	4.3	3.5	1.4	1.2	100.00	1,145	3.37	3.21

Figure 4.2. Mean number of children ever born among all women 15–49 years



4.5. BIRTH INTERVALS

Generally a birth interval refers to the length of time between successive live births for cohorts of women, usually measured in months. The analysis of birth intervals is important because it shows changes in the average length of birth spacing, which provides useful information about changes in fertility and particularly about changes in family formation. Birth intervals are also of interest because of their implications for child survival and maternal health. Very close birth intervals have been found to have a high risk of death for both child and mother. Also, birth intervals show the effectiveness of family planning programs in which women can delay getting pregnant by applying family planning methods.

Table 4.5 shows the percent distribution of non-first births in the five years preceding the survey by number of months since the preceding birth, and median number of months since the preceding birth. The results are for non-first births only – meaning they exclude the first birth and account only for the second and third births, and so on. The results show that for a total number of 853 non-first births, the median length of months since preceding birth in the Marshall Islands is estimated to be 30 months – or, in other words, the average birth interval for women in RMI is estimated to be 2.6 years. Of the 853 Marshallese non-first births in the five years before the DHS, 15 percent were born 7–17 months after the preceding birth while another 17 percent were born 18–23 months after the preceding birth. The largest proportion (almost one-third or 30 percent) were born 24–35 months after the preceding birth. A further 14 percent of non-first births had a birth interval of over 60 months.

Close observation of birth intervals across women's age groups shows that the median number of months since the last non-first birth increases with age. For instance, non-first-birth interval for women aged 15–19 and 20–29 is around two years, which obviously indicates that these women have a short time period in which to recover from their last birth before getting pregnant again. In contrast, women older than 29 years have comparatively longer non-first birth intervals, which could imply the move toward menopause or the use of family planning methods to delay getting pregnant.

The 2007 RMIDHS results show that sex of child and survival status of the preceding birth are likely to have a positive effect on the duration of births. For example, a male child and death of the preceding birth are likely to result in short non-first-birth intervals (29 months and 28 months respectively). Meanwhile,

there is little variation in non-first-birth interval by preceding birth order; however, the non-first birth after the preceding birth of order seven or over is likely to be of a slightly longer interval than lower-order births.

Non-first-birth intervals are least likely to be long among births to women in urban areas, women who have secondary-level education, and women who are found in the lowest and fourth wealth quintile households.

Table 4.5. Birth intervals

Percent distribution of non-first births in the five years preceding the survey by number of months since preceding birth, and median number of months since preceding birth, according to background characteristics, Marshall Islands 2007

Background characteristic	Months since preceding birth							Number of non-first births	Median number of months since preceding birth
	7–17	18–23	24–35	36–47	48–59	60+	Total		
Age									
15–19	*	*	*	*	*	*	100.0	17	21.2
20–29	17.9	24.4	31.8	11.5	7.5	7.0	100.0	461	26.2
30–39	10.2	6.4	29.6	16.0	14.2	23.6	100.0	330	39.0
40–49	(14.7)	(5.0)	(25.6)	(21.6)	(5.3)	(27.8)	100.0	45	37.1
Birth order									
2–3	16.5	18.5	27.0	10.1	12.2	15.7	100.0	446	30.1
4–6	13.6	16.6	32.0	17.3	7.3	13.3	100.0	324	30.0
7+	14.4	6.4	41.3	17.1	9.2	11.6	100.0	83	32.2
Sex of preceding birth									
Male	16.8	15.4	32.2	11.9	10.5	13.3	100.0	445	28.9
Female	13.4	17.9	28.2	15.3	9.6	15.5	100.0	408	31.3
Survival of preceding birth									
Living	14.7	16.9	30.1	13.7	10.1	14.5	100.0	821	30.3
Dead	(27.8)	(10.2)	(34.0)	(9.6)	(9.0)	(9.4)	100.0	31	28.3
Residence									
Urban	15.6	18.0	27.9	12.5	10.8	15.2	100.0	543	29.3
Rural	14.5	14.2	34.4	15.3	8.8	12.9	100.0	310	31.0
Education									
No education/ primary	16.7	11.4	31.8	14.6	8.0	17.4	100.0	203	30.6
Secondary	14.5	18.8	30.9	13.2	9.6	13.0	100.0	579	29.4
More than secondary	16.5	13.4	20.6	12.7	19.8	16.9	100.0	71	34.6
Wealth quintile									
Lowest	13.4	17.4	33.6	15.6	8.2	11.7	100.0	213	29.9
Second	16.0	17.2	26.7	14.3	9.7	16.2	100.0	214	31.7
Middle	19.6	17.8	28.2	14.5	6.5	13.5	100.0	170	27.9
Fourth	9.7	17.0	37.6	12.7	7.4	15.6	100.0	133	29.7
Highest	16.6	12.2	25.7	8.3	21.2	16.1	100.0	122	33.8
Total	15.2	16.6	30.3	13.5	10.1	14.4	100.0	853	30.2

Notes: First-order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth. Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

4.6. AGE AT FIRST BIRTH

Among other factors that influence fertility is the age of a woman at the time of her first birth. Time of first childbearing also contributes to fertility changes when childbearing ages shift from early to late stages. Early childbearing contributes to increasing fertility while delaying having children reduces fertility level. Table 4.6 summarizes the percentage of women aged 15–49 who gave birth by exact ages, the percentage who have never given birth, and median age at first birth according to current age. It shows that the median age at first birth for Marshallese women is estimated at 20 years. The median age at first birth for women in the younger cohorts of 15–24 cannot be calculated, as less than 50 percent of women gave birth before reaching the beginning of the age group.

The median age at first birth is estimated to be 20.7 among women in the age category of 25–29. The results show a slight increase in age at first birth, being later for younger women as compared to older women. However, caution should be exercised when interpreting these results as such information may be affected by misreporting the correct age at first birth, especially for older women.

Overall, about 2 percent of women aged 15–19 become mothers at exact age 15 while 20 percent have their first birth experience at age 18 years and almost half (47 percent) have their first birth at age 20 years. At age 25–49, almost three in four Marshallese women (70 percent) have their first birth experience by age 22 years and over 8 in 10 women are mothers for the first time by exact age 25 years.

This is a good example of age at first birth as a strong determinant of fertility level. Since fertility levels in the Marshall Islands are declining, the analysis indicates that one of the determinants of this fertility decline is increasing age at first birth.

Table 4.6. Age at first birth

Percentage of women aged 15–49 who gave birth by exact ages, percentage who have never given birth, and median age at first birth, according to current age, Marshall Islands 2007

	Percentage who gave birth by exact age					Percentage who have never given birth	Number of women	Median age at first birth
Age	15	18	20	22	25			
15–19	1.7	na	na	na	na	78.2	306	a
20–24	1.7	21.4	46.2	na	na	27.9	334	a
25–29	1.1	14.0	40.7	61.9	79.2	12.5	293	20.7
30–34	1.9	18.1	47.7	76.0	89.1	4.2	213	20.2
35–39	3.1	27.0	52.0	70.3	84.7	5.5	205	19.8
40–44	1.3	23.1	52.3	73.3	88.5	4.8	155	19.9
45–49	1.5	20.5	52.7	75.7	90.2	4.2	119	19.9
20–49	1.7	20.2	47.4	na	na	12.3	1,319	20.2
25–49	1.8	19.8	47.8	70.2	85.3	7.0	985	20.2

na = not applicable

a = omitted because less than 50 percent of women had a birth before reaching the beginning of the age group

4.7. MEDIAN AGE AT FIRST BIRTH

Table 4.7 presents the median age at first birth among Marshallese women aged 25–49 years, according to their background characteristics. The information shown in the table also enables comparison of age at first entry to parenthood between cohorts of women in the Marshall Islands. The median age for cohorts less than 25 is excluded since the proportion of women with first births in these cohorts is too small. In other words, most women in these cohorts have not given birth by the age of 20 years.

Overall, the median age at first birth for all women in age cohort 25–49 in RMI is estimated at 20 years. When analysis is done by background characteristics, there are obvious variations. For instance, women in rural areas, who have no or primary-level education, and are in the lowest to the middle wealth quintile

households are least likely to have high median age at first motherhood. This evidence supports the earlier assessment of early age of pregnancy among Marshallese women.

Table 4.7. Median age at first birth

Median age at first birth among women aged 25–49 years, according to background characteristics, Marshall Islands 2007

Background characteristic	Age 25–29	30–34	35–39	40–44	45–49	Women age 25–49
Residence						
Urban	21.1	20.5	20.1	20.4	20.2	20.5
Rural	19.6	19.7	19.0	18.0	19.2	19.3
Education						
No education/primary	19.0	19.5	17.5	18.5	18.7	18.6
Secondary	20.5	19.9	20.5	19.9	20.3	20.3
More than secondary	a	21.6	22.2	24.1	24.3	22.3
Wealth quintile						
Lowest	19.3	19.4	18.7	19.7	19.7	19.5
Second	20.3	20.1	19.5	18.9	19.4	19.5
Middle	21.2	21.1	20.1	19.4	20.0	19.7
Fourth	20.9	20.4	20.3	20.7	19.9	20.4
Highest	23.0	20.6	20.8	20.5	22.3	20.9
Total	20.7	20.2	19.8	19.9	19.9	20.2

a = omitted because less than 50 percent of the women had a birth before reaching the beginning of the age group

4.8. ADOLESCENT FERTILITY

Adolescent fertility describes the proportion of young women within the age group of 15–19 who have begun childbearing. The analysis is done on the cohort of women who have had a live birth or are pregnant at the time of the DHS, regardless of their marital status. Teenage pregnancy and motherhood have raised a lot of concern in the Pacific as they pose health challenges to young women. In this analysis, it is most important to observe fertility behavior at young ages in order to obtain a clear understanding and explanation of fertility level in the country.

Table 4.8 presents the percentage of women aged 15–19 who have had a live birth or who are pregnant with their first child and the percentage who have begun childbearing, by background characteristics. The results show evidence of childbearing at an earliest age of 15 years and increasing to almost half (49 percent) of 19-year-old women becoming mothers. This is an important piece of evidence concerning early sexual activity among Marshallese teenage women. It supports related results in other areas of the 2007 RMIDHS.

Overall, over a quarter of Marshallese women aged 15–19 years were childbearing at the time of the 2007 DHS, with 22 percent having had a live birth and 5 percent pregnant with their first child at the time of the survey.

There are obvious differentials by the background characteristics of these teenagers. For instance, in relative terms, women from rural areas, those with no or primary-level education, and those in the lowest to the middle wealth quintile households are more likely to begin childbearing in their teenage years than other women. However, in absolute terms, women in urban areas and those in fourth wealth quintile households are more likely to be beginning childbearing than other women.

It is important to note that since 65 percent of the Marshallese population live in urban areas and most of these people are likely to be found in fourth quintile households, and since Table 4.8 shows that there are

comparatively more women in urban areas and in the fourth wealth quintile, it is safe to assume that more (in absolute terms) of these teenage women are likely to begin childbearing than other women.

Table 4.8. Teenage pregnancy and motherhood

Percentage of women aged 15–19 who have had a live birth or who are pregnant with their first child and percentage who have begun childbearing, by background characteristics, Marshall Islands 2007

Background characteristic	Percentage who: Have had a live birth	Percentage who: Are pregnant with first child	Percentage who have begun childbearing	Number of women
Age				
15	(2.3)	(0.0)	(2.3)	51
16	4.3	4.8	9.1	49
17	12.5	10.0	22.5	64
18	33.1	1.6	34.7	64
19	43.3	5.2	48.5	79
Residence				
Urban	16.7	3.4	20.1	222
Rural	35.3	7.5	42.8	84
Education				
No education/primary	26.2	3.9	30.1	95
Secondary	20.6	4.6	25.1	195
More than secondary	*	*	*	16
Wealth quintile				
Lowest	43.3	5.7	49.0	59
Second	29.2	9.9	39.1	60
Middle	15.3	2.4	17.7	69
Fourth	11.3	2.5	13.7	68
Highest	(10.5)	(2.6)	(13.0)	50
Total	21.8	4.5	26.3	306

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

CHAPTER 5. FAMILY PLANNING

This chapter presents results from the 2007 RMIDHS regarding aspects of contraceptive use, knowledge, attitudes, and behavior. Although the focus is on women, some results from the male survey are discussed, since men play an important role in the realization of reproduction goals. Data on inter-spousal communication and husbands' knowledge about their wives' contraceptive use are also presented. The results presented in this chapter include contraceptive prevalence and unmet need for contraception, which have important implications for program managers to assess to what extent family planning services are reaching users and how effectively the methods are being adopted. One of the important indicators resulting from the survey is the percentage of married women aged 15–49 who are currently using any method of contraception. It is important to note that the study of contraception prevalence in the country is vital because contraception plays an important role in determining fertility levels and trends.

5.1. KNOWLEDGE OF CONTRACEPTIVE METHODS

One major objective of the 2007 RMIDHS was to assess the level of knowledge of contraceptive methods among Marshallese women and men. Individuals who have adequate information about available methods of contraception are better able to develop a rational approach to planning their family. Information on knowledge of contraception was collected in the survey by asking female and male respondents to name ways or methods by which a couple could delay or avoid pregnancy. If the respondent failed to mention a particular method spontaneously, the interviewer described the method and asked whether the respondent had heard of it. Contraceptive methods are grouped into two types in the table: modern methods, which include female sterilization, male sterilization, the Pill, IUDs, injectables, implants, and the male condom[2]; and traditional methods, which include the rhythm method (periodic abstinence), withdrawal, and folk methods. Provision was made in the questionnaire to record any other methods, including folk methods named spontaneously by respondents.

Knowledge of contraceptive methods is presented in Table 5.1 for all Marshallese women and men within the age group of 15–49 who are currently married or sexually active and unmarried. Sexually active is defined as respondents who have been sexually active within the last months at the time of the survey. According to the 2007 RMIDHS, over 9 in 10 women and men (97 percent and 99 percent respectively) have knowledge of any contraceptive methods, whether modern or traditional. The results show that there is almost universal knowledge of any method of contraception by women and men. About 98 percent of currently married women say that they are aware of any methods of contraception, which is only 2 percent lower than for all men's report of universal knowledge of the methods listed in the men's questionnaire. In addition, there is universal knowledge among unmarried and sexually active women and men of any method of contraception (99 percent compared to 100 percent).

Table 5.1 also shows the results of respondents' knowledge of modern contraception. The levels of knowledge and distribution are the same as reported above for all methods: about the same for all women and men, currently married or unmarried. About 8 in 10 women and men know about any traditional method (79 percent compared to 81 percent).

The least-known modern methods are IUD and male sterilization, which less than 65 percent of women and men know about. The least-known traditional method is folk method, which is known by only 7 percent of women and 2 percent of men.

In comparing the level of knowledge of modern and traditional contraceptive methods, it can be noted that both women and men are likely to know more about modern methods than traditional methods. However, the level of knowledge varies by different marital status of women and men.

[2] Female condom information was not collected in the survey.

The mean number of known contraceptive methods varies by marital status of women and men, with the lowest of four methods estimated for unmarried men and the highest of seven methods observed for married women.

Table 5.1. Knowledge of contraceptive methods

Percentage of all respondents, currently married respondents and sexually active unmarried respondents aged 15–49 who know any contraceptive method, by specific method, Marshall Islands 2007

	Women			Men		
Method	All women	Currently married women	Sexually active unmarried women[1]	All men	Currently married men	Sexually active unmarried men[1]
Any method	96.7	98.4	99.4	99.2	100.0	99.6
Any modern method	96.5	98.2	99.4	99.2	100.0	99.6
Female sterilization	81.4	86.3	78.5	72.9	85.4	65.9
Male sterilization	58.4	63.3	57.8	53.2	65.8	43.6
Pill	80.3	85.7	77.4	59.0	73.9	42.6
IUD	52.1	57.1	44.8	33.9	44.9	19.2
Injectables	85.4	90.8	83.3	61.0	78.1	42.3
Implants	80.7	86.3	79.5	48.3	64.1	28.3
Male condom	92.3	93.9	95.4	98.6	99.6	99.6
Any traditional method	78.5	84.5	75.8	80.5	91.4	76.4
Rhythm	71.9	78.4	62.5	39.5	54.7	20.9
Withdrawal	71.8	77.7	71.4	78.0	88.4	75.2
Folk method	7.0	8.0	4.6	1.7	1.9	2.2
Mean number of methods known by respondents 15–49	6.8	7.3	6.6	5.5	6.6	4.4
Number of respondents	1,625	1,145	114	913	534	183
Mean number of methods known by respondents 15+	na	na	na	5.7	6.7	4.5
Number of respondents	na	na	na	1,055	654	189

na = not applicable

[1] Had last sexual intercourse within 30 days preceding the survey

5.2. KNOWLEDGE OF CONTRACEPTIVE METHODS BY BACKGROUND CHARACTERISTICS

Table 5.2 explores the level of knowledge about contraceptive methods for currently married women and men aged 15–49 who have heard of at least one contraceptive method or who have heard of at least one modern method, by their background characteristics. Modern methods of family planning are the most important to examine because of their greater relevance to fertility planning and reproductive health advocacy. The analysis is restricted to currently married women and men to allow comparison between different age groups within the same category.

Table 5.2. Knowledge of contraceptive methods by background characteristics

Percentage of currently married women and currently married men aged 15–49 who have heard of at least one contraceptive method and who have heard of at least one modern method by background characteristics, Marshall Islands 2007

	Women			Men		
Background characteristic	Heard of any method	Heard of any modern method[1]	Number	Heard of any method	Heard of any modern method[1]	Number
Age						
15–19	96.5	96.5	65	*	*	11
20–24	98.3	98.3	217	100.0	100.0	97
25–29	97.4	97.4	240	100.0	100.0	96
30–34	98.2	97.5	196	100.0	100.0	97
35–39	100.0	100.0	185	100.0	100.0	95
40–44	97.8	97.8	141	100.0	100.0	76
45–49	100.0	100.0	102	100.0	100.0	62
Residence						
Urban	97.7	97.6	762	100.0	100.0	348
Rural	99.6	99.6	383	100.0	100.0	186
Education						
No education/ primary	99.0	99.0	293	100.0	100.0	122
Secondary	98.5	98.3	721	100.0	100.0	309
More than secondary	96.1	96.1	131	100.0	100.0	103
Wealth quintile						
Lowest	99.6	99.6	148	100.0	100.0	69
Second	99.4	99.4	181	100.0	100.0	91
Middle	97.6	97.6	220	100.0	100.0	124
Fourth	97.8	97.4	313	100.0	100.0	115
Highest	98.2	98.2	284	100.0	100.0	135
Total 15–49	98.4	98.2	1,145	100.0	100.0	534
50+	na	na	na	98.0	98.0	82
Total men 15+	na	na	na	99.6	99.2	654

na = not applicable

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Female sterilization, male sterilization, Pill, IUD, injectables, implants, male condom, female condom, diaphragm, foam or jelly, lactational amenorrhea method (LAM), and emergency contraception

The results in Table 5.2 show consistency in the level of knowledge by age and sex, but particularly for men there is universality in the knowledge by all backgrounds compared to women. That is not to say that women's knowledge is low: on the contrary, their knowledge is almost universal as well.

5.3. EVER USED CONTRACEPTION: WOMEN AND MEN

The 2007 RMIDHS asked questions about any methods women have used in the past to try avoiding or delaying getting pregnant, particularly for those women and men who have heard of any family planning methods. Table 5.3.1 show the proportion of all women, currently married women, and sexually active unmarried women aged 15–49 who report that they have ever tried any methods, while Table 5.3.2 presents the same information for men. A descriptive discussion of the results will help determine the level of use of contraceptive methods by women and men. The discussion also examines the differences between age groups in order to reflect some effects of lifetime changes in the use of contraception by Marshallese women and men.

Contrary to the discussion in Table 5.2 related to the level of knowledge of contraceptives, which was universal among men and almost universal among women in the reproductive age groups, Table 5.3.1

shows a somewhat low level of about 54 percent of all women while Table 5.3.2 shows that three in four men (78 percent) have ever used any method of family planning. Similarly, the proportion of currently married women aged 15–49 who have ever used any method is almost two-thirds (63 percent) compared to over 8 in 10 men (86 percent). Meanwhile, those women who are categorized as sexually active and unmarried have a lower proportion of 45 percent who have ever used any method of family planning compared to 83 percent of men in the same category. Caution should be taken when interpreting this category of respondents because of the very small numbers of cases involved.

In comparing modern methods and traditional methods, most respondents, male or female, married or unmarried, are more likely to have ever used modern methods. For instance, one in two (50 percent) of all women have ever used any modern method compared to only a little over 1 in 10 (13 percent) who have ever used any traditional method. Similarly, over three in four (76 percent) active unmarried men have ever used any modern method of family planning compared to over half (57 percent) who have ever used any traditional method.

In terms of individual methods, the most commonly ever-used modern methods among all women, women who are currently married, and women who are sexually active and unmarried are female sterilization and injectables, while the most commonly ever-used modern method among men in all categories is the male condom. The most commonly ever-used traditional methods among women in all categories were withdrawal and rhythm (almost equal), compared to a high level of use of the withdrawal method among men in all categories.

Table 5.3.1. Ever used contraception: Women

Percentage of all women, currently married women, and sexually active unmarried women aged 15–49 who have ever used any contraceptive method by method, according to age, Marshall Islands 2007

			Modern method								Traditional method			
Age	Any method	Any modern method	Female sterilization	Male sterilization	Pill	IUD	Injectables	Implants	Male condom	Any traditional method	Rhythm	With-drawal	Folk method	Number of women
ALL WOMEN														
15–19	18.0	16.2	0.0	0.0	2.0	0.0	5.0	1.0	9.2	5.3	1.9	3.8	0.5	306
20–24	41.8	37.3	0.8	0.0	6.2	0.3	21.7	6.1	8.4	12.7	5.8	8.5	2.5	334
25–29	61.3	58.7	10.4	0.0	15.3	0.3	28.3	9.2	11.7	13.8	5.6	11.1	2.6	293
30–34	68.2	63.3	26.3	0.3	15.0	0.2	29.5	9.3	9.8	20.0	14.1	11.7	1.5	213
35–39	75.6	71.1	42.9	1.1	13.7	1.4	26.3	8.7	8.7	15.1	9.3	9.4	4.5	205
40–44	70.8	67.8	48.8	0.4	9.8	0.8	13.8	10.3	7.1	14.9	9.4	8.1	3.0	155
45–49	73.2	71.9	53.0	0.3	8.7	0.0	7.4	7.8	2.4	10.6	7.1	4.5	1.6	119
Total	53.6	50.3	19.5	0.2	9.6	0.4	19.6	7.0	8.8	12.8	7.0	8.3	2.2	1,625
CURRENTLY MARRIED WOMEN														
15–19	32.0	27.8	0.0	0.0	1.0	0.0	13.7	4.8	10.0	5.8	3.9	2.7	0.0	65
20–24	46.2	41.9	0.5	0.0	7.8	0.0	24.1	7.8	9.1	13.9	6.1	10.6	2.0	217
25–29	61.3	58.5	10.9	0.0	13.9	0.4	29.6	9.8	9.7	12.4	5.3	9.2	3.2	240
30–34	67.7	62.6	27.6	0.3	14.1	0.2	29.2	8.4	10.2	19.9	13.9	11.1	1.7	196
35–39	75.9	72.3	45.1	1.2	13.9	1.5	25.1	8.4	9.6	14.5	9.6	8.6	4.4	185
40–44	73.0	70.3	49.2	0.5	10.8	0.9	14.4	10.6	6.9	15.8	9.7	8.8	3.3	141
45–49	72.3	70.8	50.6	0.4	10.2	0.0	8.6	7.7	2.5	11.8	7.7	4.7	1.9	102
Total	62.7	59.1	25.0	0.3	11.3	0.5	23.1	8.6	8.7	14.3	8.3	8.9	2.6	1,145
SEXUALLY ACTIVE UNMARRIED WOMEN[1]														
15–19	(28.3)	(26.9)	(0.0)	(0.0)	(1.7)	(0.0)	(2.8)	(0.0)	(24.1)	(9.1)	(2.2)	(7.7)	(0.0)	47
20–24	(42.1)	(37.6)	(3.2)	(0.0)	(4.7)	(0.0)	(24.7)	(5.0)	(10.5)	(14.1)	(4.7)	(6.2)	(3.9)	30
25–49	(69.6)	(64.4)	(17.3)	(0.0)	(16.2)	(0.0)	(29.7)	(22.7)	(15.6)	(24.0)	(3.8)	(24.0)	(2.8)	37
Total	45.3	41.9	6.4	0.0	7.2	0.0	17.3	8.7	17.7	15.3	3.4	12.6	1.9	114

Note: Figures in parentheses are based on 25–49 unweighted cases.

[1] Women who had sexual intercourse within 30 days preceding the survey

Table 5.3.2. Ever used contraception: Men

Percentage of all men, currently married men, and sexually active unmarried men aged 15–49 who have ever used any contraceptive method by method, according to age, Marshall Islands 2007

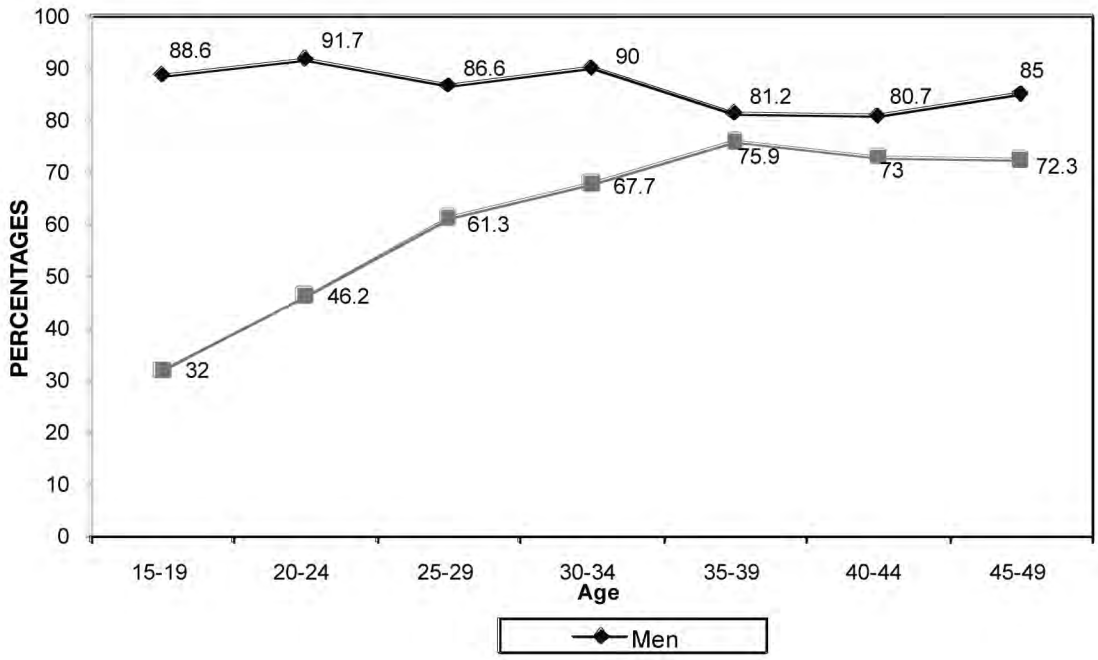
Age	Any method	Modern method			Traditional method			Number of men
		Any modern method	Male steriliz-ation	Male condom	Any tradi-tional method	Rhythm	With-drawal	
ALL MEN								
15–19	57.0	49.0	0.0	49.0	32.6	1.9	32.3	209
20–24	84.7	77.1	0.0	77.1	59.4	11.9	58.9	190
25–29	84.4	74.0	0.1	74.0	63.6	19.4	61.9	137
30–34	85.9	75.3	0.0	75.3	72.3	26.0	66.1	115
35–39	82.2	72.9	1.4	72.2	70.7	28.6	68.2	106
40–44	78.6	67.8	4.3	65.9	53.8	23.9	49.9	83
45–49	84.9	53.8	4.1	52.4	68.1	31.4	51.3	73
Total 15–49	77.6	66.8	0.9	66.4	57.0	17.1	53.8	913
50+	68.4	45.0	4.0	45.0	54.6	23.3	48.9	93
Total men 15+	75.8	63.4	1.3	63.0	56.2	18.0	52.4	1,055
CURRENTLY MARRIED MEN								
15–19	88.6	85.7	0.0	85.7	55.8	12.9	52.8	11
20–24	91.7	80.4	0.0	80.4	65.6	16.4	64.6	97
25–29	86.6	76.8	0.1	76.8	65.3	18.3	64.5	96
30–34	90.0	78.2	0.0	78.2	77.5	29.2	70.1	97
35–39	81.2	70.9	1.5	70.0	71.6	31.1	68.8	95
40–44	80.7	69.0	4.7	66.9	54.6	26.1	50.3	76
45–49	85.0	51.5	4.8	49.9	71.2	34.3	52.7	62
Total 15–49	86.2	72.8	1.5	72.1	67.6	25.1	62.7	534
50+	69.5	47.3	4.5	47.3	54.8	26.2	48.5	82
Total men 15+	82.0	67.2	1.9	66.6	64.5	25.2	59.0	654
SEXUALLY ACTIVE UNMARRIED MEN[1]								
15–19	82.1	72.8	0.0	72.8	47.8	2.1	47.5	84
20–24	80.4	75.8	0.0	75.8	56.1	9.2	56.1	62
25–49	(87.2)	(82.8)	(0.0)	(82.8)	(76.1)	(27.2)	(74.3)	38
Total 15–49	82.6	75.9	0.0	75.9	56.5	9.7	55.9	183
Total men 15+	82.2	75.4	0.0	75.4	57.0	10.3	56.5	189

[1] Men who had sexual intercourse within 30 days preceding the survey

Note: Figures in parentheses are based on 25–49 unweighted cases. The total for sexually active unmarried men 50+ is not shown due to the very small number of men in this category.

Figure 5.1 shows the proportion of currently married women and men who have ever used any method of family planning by age at the time of the 2007 DHS. The proportion of currently married men who have ever used contraception shows a stable pattern throughout all age groups. The low proportion of currently married women in the young age category is related to the smaller proportion of women in this age category. However, an increase pattern can be cited for women who have ever used contraception as their age increases to reach age 35–39, and then declines.

Figure 5.1. Proportion of currently married women and men who have ever used any methods of contraception by age



5.4. CURRENT USE OF CONTRACEPTION BY AGE

The analysis of the current level of contraception is an important and valuable measure to determine the success of family planning programs and activities within the country. The calculation of the current level of contraception use also provides a clear understanding and best assumption about the relationship between contraception and fertility. Furthermore, understanding the level of current contraception use and related background characteristics of users enables the development of strategies to reduce fertility level attributable to contraception. To collect information on current use of contraception among Marshallese women, respondents in the childbearing ages were asked whether they were currently using any methods, and if so which methods they were using. All current methods used reported from all women were then recorded during the 2007 RMIDHS.

The findings are presented in Table 5.4 for all women, currently married women, and women who are categorized as sexually active and unmarried, by age group. The discussion will focus more on the proportion of currently married women who are currently using any methods of family planning, as it yields more reliable results. These are the cohorts that are more likely to be exposed to the risk of getting pregnant compared to all women, which obviously includes women in the never married status, sterile women, currently pregnant women, and those women wanting to get pregnant.

As shown in Table 5.4, the contraceptive prevalence rate (the percentage of currently married women aged 15–49 who are using any method of family planning) is 45 percent. Forty-two percent of married women are using modern methods, while only 2 percent use a traditional method. Meanwhile, almost 3 in 10 (27 percent) sexually active unmarried women are currently using any method of contraception while one in four (25 percent) are using any modern method and only 2 percent are using traditional methods. Combining these two categories of women results in an overall estimate of contraceptive prevalence among Marshallese women, which is 37 percent for any method, 35 percent for any modern method and 2 percent for any traditional method.

By far the most commonly used method among married women is female sterilization, which is used by one in four women (25 percent). The next most commonly used methods are injectables (9 percent) and the implant method (4 percent), while pills are used by 3 percent of women and male condoms and the rhythm method are each used by 1 percent of married women. The mix of methods is not very different among sexually active unmarried women, for whom the male condom is the most commonly used method (4 percent) compared to only 1 percent among married women.

Use of any contraceptive method generally rises with age, from 25 percent among married women aged 15–19 to a peak of 58 percent at age 35–39, and then declining to 53 percent among women aged 45–49. The most popular methods among the youngest married women are injectables and male condoms, while married women in their twenties tend to use injectables, followed by implant, female sterilization and male condom. Older women aged 30 and over tend to apply injectables and are more likely to be sterilized.

As stated earlier in this chapter, it is interesting to note that the level of knowledge of any contraceptive methods is almost universal among Marshallese women and men of reproductive age. However, the above discussion shows that the level of use of these known contraceptives is disappointing. The factors contributing to this low use should be assessed and improvements introduced to increase the level of contraceptive use.

Table 5.4. Current use of contraception by age

Percent distribution of all women, currently married women, and sexually active unmarried women aged 15–49 by contraceptive method currently used, according to age, Marshall Islands 2007

			Modern method							Traditional method					
Age	Any method	Any modern method	Female sterili-zation	Male sterilz-ation	Pill	Injectables	Implants	Male condom	Any tradi-tional method	Rhythm	Withdrawal	Folk method	Not currently using	Total	Number of women
ALL WOMEN															
15–19	10.0	9.3	0.0	0.0	1.1	4.0	1.0	3.2	0.7	0.7	0.0	0.0	90.0	100.0	306
20–24	25.1	23.3	0.8	0.0	2.7	12.3	5.5	2.0	1.7	1.0	0.8	0.0	74.9	100.0	334
25–29	40.1	37.8	10.4	0.0	6.2	15.1	5.2	0.9	2.2	0.2	1.3	0.8	59.9	100.0	293
30–34	49.0	45.4	26.3	0.3	4.7	8.8	4.8	0.5	3.5	2.9	0.7	0.0	51.0	100.0	213
35–39	56.3	55.2	42.9	0.5	1.1	7.9	2.4	0.4	1.1	0.7	0.0	0.3	43.7	100.0	205
40–44	55.4	53.4	48.8	0.4	0.1	2.2	0.5	1.5	1.9	1.5	0.4	0.0	44.6	100.0	155
45–49	54.9	53.4	53.0	0.3	0.0	0.2	0.0	0.0	1.5	1.5	0.0	0.0	45.1	100.0	119
Total	37.1	35.3	19.5	0.2	2.6	8.4	3.2	1.4	1.8	1.1	0.5	0.2	62.9	100.0	1,625
CURRENTLY MARRIED WOMEN															
15–19	25.1	23.7	0.0	0.0	1.0	10.9	4.8	7.0	1.3	1.3	0.0	0.0	74.9	100.0	65
20–24	27.6	24.9	0.5	0.0	3.3	12.2	6.8	2.1	2.6	1.5	1.2	0.0	72.4	100.0	217
25–29	41.4	38.9	10.9	0.0	5.1	16.3	5.6	1.1	2.5	0.3	1.3	0.9	58.6	100.0	240
30–34	48.4	45.0	27.6	0.3	4.5	8.4	3.5	0.5	3.3	3.0	0.3	0.0	51.6	100.0	196
35–39	57.9	57.1	45.1	0.5	1.3	7.1	2.7	0.4	0.8	0.8	0.0	0.0	42.1	100.0	185
40–44	56.6	54.4	49.2	0.5	0.1	2.4	0.5	1.6	2.1	1.7	0.5	0.0	43.4	100.0	141
45–49	52.9	51.1	50.6	0.4	0.0	0.2	0.0	0.0	1.8	1.8	0.0	0.0	47.1	100.0	102
Total	44.6	42.4	25.0	0.2	2.7	9.2	3.8	1.4	2.2	1.4	0.6	0.2	55.4	100.0	1,145
SEXUALLY ACTIVE UNMARRIED WOMEN[1]															
15–19	(14.1)	(12.7)	(0.0)	(0.0)	(0.0)	(2.8)	(0.0)	(9.9)	(1.4)	(1.4)	(0.0)	(0.0)	(85.9)	100.0	47
20–24	(26.8)	(26.8)	(3.2)	(0.0)	(4.7)	(13.9)	(5.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(73.2)	100.0	30
25–49	(44.5)	(40.0)	(17.3)	(0.0)	(4.5)	(4.5)	(13.6)	(0.0)	(4.5)	(0.5)	(2.2)	(1.8)	(55.5)	100.0	37
Total	27.3	25.3	6.4	0.0	2.7	6.3	5.7	4.1	2.0	0.7	0.7	0.6	72.7	100.0	114

Note: If more than one method is used, only the most effective method is considered in this tabulation. Figures in parentheses are based on 25–49 unweighted cases.

[1] Women who have had sexual intercourse within 30 days preceding the survey

5.5. CURRENT USE OF CONTRACEPTION BY BACKGROUND CHARACTERISTICS

Table 5.5 allows comparisons of the level of current use of family planning methods for currently married women aged 15–49 according to their different background characteristics, such as residence, education, number of living children, and wealth. The results can also be examined to determine any differences among each subgroup. As already noted in previous discussions, the contraceptive prevalence rate is 45 percent.

As shown in Table 5.5, some married Marshallese women are more likely than others to use contraceptives. Married women in urban areas are less likely to use contraception (43 percent) than those in rural areas (48 percent). The level of current use is lower in urban areas for each of the specific methods except female sterilization, implants, the Pill, and male condoms, whose use is slightly lower among rural women.

In general, women do not begin to use contraception until they have had at least one child, thus the level of use increases as parity increases. Interestingly, the current use of modern methods decreases with educational attainment whereas current use of traditional methods show an increase for women with more than secondary education. Almost half of the married women with no or primary-level education (47 percent) use a modern method compared to over one-third (38 percent) of the women with more than secondary-level education. In contrast, 3 percent of the married women with no or primary-level education use a traditional method compared to 4 percent of the women with more than secondary-level education.

Meanwhile, little difference in the use of family planning methods is apparent by wealth category (Table 5.5). Contraceptive use ranges from 43 percent of married women in the lowest wealth quintile to 49 percent in the fourth wealth quintile. The gap is wider for modern contraceptive use, with 38 percent for the lowest quintile against 46 percent for the fourth quintile. It is also noticeable that women in the two bottom quintiles of wealth have a higher percentage of use of traditional methods than women in the higher wealth quintiles, which can be related to difficult access to modern contraceptives, cost, or sociocultural issues. However, lack of information does not appear to be a major factor as knowledge of contraception is very high for all women (Table 5.2).

Table 5.5. Current use of contraception by background characteristics

Percent distribution of currently married women aged 15–49 by contraceptive method currently used, according to background characteristics, Marshall Islands 2007

			Modern method							Traditional method					
Background characteristic	Any method	Any modern method	Female sterilization	Male sterilization	Pill	Injectables	Implants	Male condom	Any traditional method	Rhythm	Withdrawal	Folk method	Not currently using	Total	Number of women
Residence															
Urban	42.7	41.2	25.8	0.0	3.1	6.5	3.9	1.9	1.5	0.8	0.5	0.2	57.3	100.0	762
Rural	48.3	44.7	23.2	0.7	2.1	14.6	3.7	0.4	3.6	2.6	0.9	0.2	51.7	100.0	383
Education															
No education/ primary	50.1	47.2	30.5	0.3	0.6	10.6	3.4	1.7	2.9	1.6	0.6	0.8	49.9	100.0	293
Secondary	43.2	41.6	23.5	0.2	3.1	9.2	4.4	1.3	1.6	1.2	0.4	0.0	56.8	100.0	721
More than secondary	39.9	36.1	20.5	0.0	5.8	6.5	1.8	1.4	3.8	2.2	1.6	0.0	60.1	100.0	131
Number of living children															
0	7.1	6.6	1.3	0.0	1.3	0.0	1.5	2.6	0.6	0.6	0.0	0.0	92.9	100.0	119
1–2	32.5	29.8	7.9	0.0	3.6	10.8	5.0	2.4	2.7	1.5	1.0	0.2	67.5	100.0	384
3–4	55.4	53.1	30.7	0.0	4.2	13.0	4.5	0.6	2.3	1.3	0.5	0.5	44.6	100.0	333
5+	62.4	60.3	49.0	0.9	0.6	6.7	2.5	0.5	2.2	1.7	0.4	0.0	37.6	100.0	309
Wealth quintile															
Lowest	43.2	37.9	15.2	0.7	2.4	14.7	4.0	0.9	5.4	2.7	2.6	0.0	56.8	100.0	148
Second	44.6	41.7	25.1	0.9	1.2	11.9	2.4	0.2	2.8	2.5	0.0	0.4	55.4	100.0	181
Middle	43.8	42.0	25.5	0.0	0.5	11.0	4.0	1.1	1.7	1.0	0.0	0.7	56.2	100.0	220
Fourth	46.6	45.9	29.8	0.0	3.4	6.6	4.7	1.4	0.7	0.4	0.3	0.0	53.4	100.0	313
Highest	43.8	41.6	24.2	0.0	4.9	6.3	3.5	2.7	2.2	1.5	0.7	0.0	56.2	100.0	284
Total	44.6	42.4	25.0	0.2	2.7	9.2	3.8	1.4	2.2	1.4	0.6	0.2	55.4	100.0	1,145

Note: If more than one method is used, only the most effective method is considered in this tabulation.

5.6. TIMING OF FIRST USE OF CONTRACEPTION

The desire of women to have a certain number of children leads them to find ways to control their reproduction. The main purpose of Table 5.6 is to examine changes in the number of children (parity) for all women aged 15–49 at the time they first use any kind of contraception by their current age during the survey. It also allows an examination of the tendency of woman to adopt contraception at different ages, either younger or older. The 2007 RMIDHS asked questions on the number of children the woman had already had by the time she first used any method of contraception.

Table 5.6 shows the distribution of women aged 15–49 by age group and number of living children at the time of first use of contraception. The results indicate that Marshallese women are currently adopting family planning at lower parities (that is, when they have fewer children) than in the past. Among younger women (age 20–24), 9 percent used contraception before having any children and 16 percent first adopted contraception when they had only one child. Among older women (age 45–49), only 7 percent used contraception before having any children and 1 percent first used contraception when they had one child.

Table 5.6. Number of children at first use of contraception

Percent distribution of women aged 15–49 by number of living children at the time of first use of contraception, according to current age, Marshall Islands 2007

Current age	Never used	Number of living children at time of first use of contraception						Total	Number of women
		0	1	2	3	4+	Missing		
15–19	82.0	10.1	5.2	2.6	0.2	0.0	0.0	100.0	306
20–24	58.2	8.8	5.6	13.3	2.4	1.5	0.2	100.0	334
25–29	38.7	8.1	16.4	14.5	12.7	9.7	0.0	100.0	293
30–34	31.8	5.1	9.2	13.8	12.9	27.3	0.0	100.0	213
35–39	24.4	4.7	3.6	11.5	9.7	46.0	0.0	100.0	205
40–44	29.2	5.4	3.0	5.1	11.6	45.7	0.0	100.0	155
45–49	26.8	6.5	1.1	2.4	3.3	59.8	0.0	100.0	119
Total	46.4	7.4	9.1	9.7	7.1	20.2	0.0	100.0	1,625

5.7. TIMING OF STERILIZATION

The RMIDHS results from Table 5.5 show a prevalence rate of 25 percent for currently married Marshallese women who are sterilized. The timing of sterilization is important to understand, particularly the age of women, as it has implications for fertility level and family planning services in the country. The findings in Table 5.7 present the percentage distribution of sterilized women of childbearing age by age at the time of sterilization according to the number of years since the operation. The median age is presented only for those cohorts of women less than 40 years of age, to minimize the problem of censoring.

The majority of women (62.6 percent) are sterilized between the ages of 25 and 34. About 18 percent are sterilized at age less than 20 years. Sterilization is less common among older women. The results indicate early timing of sterilization among Marshallese women. The median age of sterilization shows a fluctuation pattern. However, it is noticeable that the median age is higher for women who were sterilized less than three years ago than for women who undertook the method more than 10 years ago.

Table 5.7. Timing of sterilization

Percent distribution of sterilized women aged 15–49 by age at the time of sterilization and median age at sterilization, according to the number of years since the operation, Marshall Islands 2007

	Age at time of sterilization								
Years since operation	<25	25–29	30–34	35–39	40–44	45–49	Total	Number of women	Median age[1]
<2	6.8	32.2	23.6	27.9	6.7	2.7	100.0	48	31.1
2–3	11.6	18.3	33.2	35.6	0.0	1.3	100.0	52	33.3
4–5	17.8	36.4	25.8	16.3	3.8	0.0	100.0	46	29.4
6–7	14.8	24.6	37.8	20.4	2.3	0.0	100.0	28	31.8
8–9	15.2	38.7	20.2	26.0	0.0	0.0	100.0	28	28.7
10+	26.7	46.1	25.3	1.8	0.0	0.0	100.0	115	27.7
Total	17.9	35.5	27.1	17.2	1.8	0.6	100.0	316	a

a = not calculated due to censoring

[1] Median age at sterilization is calculated only for women sterilized before age 40, to avoid problems of censoring.

5.8. SOURCE OF MODERN CONTRACEPTIVE METHODS

Information on where women obtain their contraceptives is useful for family planning program managers and implementers for logistical planning. In the 2007 RMIDHS, women who reported using a modern contraceptive method at the time of the survey were asked where they obtained the method the last time they acquired it. Since some women may not know in which category the source they use falls (e.g. government or private, health centre or clinic), interviewers were instructed to note the full name of the source or facility. Supervisors and field editors were told to verify that the name and source type were consistent, asking informants in the clusters for the names of local family planning outlets if necessary. This practice was designed to improve the accuracy of source reporting.

Table 5.8 presents the major sources of modern contraceptive methods for all users aged 15–49 by different methods used. Generally, the results show that Marshallese women are more likely to obtain their contraceptive supply from the public sector than the private sector. Overall, over 9 in 10 users (94 percent) obtain their supply from public sector sources, compared to less than 1 percent of users who obtain their modern contraceptive supply from private sources. Obviously, the single common source of contraceptives in the Marshall Islands is Majuro Hospital, where over half of the users who obtain their supply from public service sources do so; 21 percent obtain their supply through Ebeye Hospital. Since about 65 percent of the Marshallese population resides around these two hospitals and since these two hospitals are located in urban areas, it is highly likely that most of these users are urban residents. Meanwhile, 16 percent of users obtain their supplies from an Outer Islands Health Center/Dispensary.

Table 5.8. Source of modern contraceptive methods

Percent distribution of users of modern contraceptive methods aged 15–49 by most recent source of method, according to method, Marshall Islands 2007

Source	Female sterilization	Pill	Injectables	Implants	Male condom/male sterilization	Total
Public sector	92.2	(98.1)	98.3	100.0	(74.0)	94.0
Majuro Hospital	73.7	(47.0)	34.1	32.1	(45.6)	57.2
Ebeye Hospital	18.5	(30.5)	14.1	49.5	(19.5)	21.2
Outer Islands Health Center/Dispensary	0.0	(20.6)	50.1	18.4	(8.9)	15.5
Private medical facility	0.5	(0.0)	0.0	0.0	(5.2)	0.5
Other source	5.8	(0.0)	0.0	0.0	(17.3)	4.0
Shop	0.0	(0.0)	0.0	0.0	(7.2)	0.3
Friend/relative	0.0	(0.0)	0.0	0.0	(10.1)	0.5
Overseas	5.8	(0.0)	0.0	0.0	(0.0)	3.2
Other	1.5	(1.9)	1.7	0.0	(3.4)	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	316	43	136	52	26	574

Note: Figures in parentheses are based on 25–49 unweighted cases.

[1] Total includes other modern methods but excludes LAM.

In RMI public facilities undertake sterilization. Nevertheless, 6 percent of all women who are sterilized obtained the procedure from sources overseas. Similarly, the supply of other contraceptive methods is obtained through public sources. The contribution of private medical sources in the provision of family planning supply is very minimal.

5.9. COST OF MODERN CONTRACEPTIVE METHODS

Information on the cost of obtaining contraception is useful to family planning programs. In the 2007 RMIDHS, women who were using modern methods of contraception were asked how much they paid in total the last time they obtained the method, including the cost of the method and any consultation they may have had. Table 5.9 shows the percentage of women who obtained the method free and those who paid (if any). The Marshall Islands Government provides free family planning services for users; therefore, over 8 in 10 current users who obtained services/supplies from public sector sources did so at no cost. Overall, 79 percent of current users of modern contraception paid nothing for the services they received from both public and private sectors compared to only 16 percent of current users who did not know the cost of the modern contraceptive methods they obtained.

Table 5.9. Cost of modern contraceptive methods

Percentage of current users of modern contraception aged 15–49 who did not pay for the method and who did not know the cost of the method, according to source of current method, Marshall Islands 2007

Source of method/cost	Female sterilization	Pill	Injectables	Implants	Male condom/male sterilization	Total
Public sector						
Free	67.7	(97.5)	98.8	98.1	*	81.3
Do not know cost	23.1	(2.5)	1.2	1.9	*	13.7
Number of women	291	42	134	52	19	539
Private medical sector/other						
Free	*	*	*	*	*	(42.7)
Do not know cost	*	*	*	*	*	(51.3)
Number of women	25	1	2	0	7	35
Total						
Free	65.2	95.6	98.0	98.1	81.9	79.0
Do not know cost	26.0	2.5	2.0	1.9	18.1	16.0
Number of women	316	43	136	52	26	574

Note: Table excludes LAM. Costs are based on the last time current users obtained the method. Costs include consultation costs, if any. For condoms, costs are per package; for pills, per cycle. For sterilization, data are based on women who received the operation in the five years before the survey. Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

5.10. INFORMED CHOICE FOR CURRENT USERS OF MODERN METHODS

Current users of modern methods who are well informed about the side-effects and problems associated with methods and know of a range of method options are better placed to make an informed choice about the method they would like to use. Current users of various modern contraceptive methods were asked whether, at the time they adopted the particular method, they were informed about side-effects or problems they might have with the method.

Table 5.10 shows the percentage of current users of modern methods who were informed about side-effects or problems of the method used, informed of other methods they could use, and informed that sterilization is a permanent method; these are broken down by method type and source of the method. The objective of these questions is to determine whether health and family planning service providers supply adequate information for all users on side-effects of contraceptive methods and how to solve any problem users encounter in using current methods. The findings will assist health and family planning providers to improve in this area for the benefit of women in the Marshall Islands.

Table 5.10. Informed choice

Among current users of modern methods aged 15–49 who started the last episode of use within the five years preceding the survey, percentage who were informed about possible side-effects or problems of that method, percentage who were informed about what to do if they experienced side-effects, and percentage who were informed about other methods they could use, by method and source; and among sterilized women, percentage who were informed that the method is permanent, by initial source of method, Marshall Islands 2007

	Among women who started last episode of modern contraceptive method within five years preceding the survey:				Among women who were sterilized:	
Method/source	Percentage who were informed about side-effects or problems of method used	Percentage who were informed about what to do if they experienced side-effects	Percentage who were informed by a health or family planning worker of other methods that could be used	Number of women	Percentage who were informed that sterilization is permanent[1]	Number of women
Method						
Female sterilization	57.3	46.6	62.2	122	80.0	122
Pill	(74.8)	(75.1)	(87.1)	40	na	na
Injectables	69.5	55.6	70.6	128	na	na
Implants	96.2	81.7	91.4	48	na	na
Initial source of method[2]						
Public sector	69.4	57.9	72.5	327	79.8	114
Majuro Hospital	67.9	55.7	71.3	167	85.7	88
Ebeye Hospital	72.8	62.1	77.7	83	*	26
Outer Islands Health Center/ Dispensary	68.9	58.5	69.3	76	na	na
Other source: Overseas	*	*	*	12	*	9
Total	69.5	58.4	72.5	338	80.0	122

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Total includes one woman who stated that mobile clinic was her initial source of modern contraceptive method within five years preceding the survey, but excludes users who obtained their method from friends/relatives.

na = not applicable

[1] Among women who were sterilized in the five years preceding the survey

[2] Source at start of current episode of use

The vast majority of women (80 percent) who were sterilized during the five-year period preceding the survey reported that they were informed before the procedure that they would not be able to have any more children. Seventy-three percent of users of modern contraceptives were informed of other methods available, while 70 percent were informed about the side-effects or health problems of the method they were provided with, and 58 percent said they were told what to do if they experienced side-effects. The results indicate that those who were sterilized were less likely than those using other methods to be informed about side-effects or problems or told what to do if they experienced side-effects.

Users who obtained their methods from public sector sources were more likely to be informed about side-effects or problems associated with the method and about other methods that could be used than those who obtained methods from other sources.

5.11. FUTURE USE OF CONTRACEPTION

An important indicator of the changing demand for family planning is the extent to which non-users of contraception plan to use family planning in the future. It provides information for future forecasts of the need for contraceptive methods and services. The future intention of women to use contraceptive methods also indicates the level of their future birth control, which links to fertility level. Thus, in the survey, women who were not currently using a method of contraception were asked about their intention to use family planning in the future. The results are presented in Table 5.11.

Table 5.11. Future use of contraception

Percent distribution of currently married women aged 15–49 who are not using a contraceptive method by intention to use in the future, according to number of living children, Marshall Islands 2007

	Number of living children[1]					
Intention to use in the future	0	1	2	3	4+	Total
Intends to use	40.7	54.9	54.1	46.3	43.4	48.0
Unsure	2.3	3.4	2.6	8.7	4.8	4.2
Does not intend to use	57.0	41.7	43.3	45.1	51.4	47.7
Missing	0.0	0.0	0.0	0.0	0.4	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	95	134	130	84	191	634

[1] Includes current pregnancy

Equal proportions of currently married non-users say that they intend or do not intend to use family planning in the future (48 percent each), while 4 percent are unsure. The proportion of those intending to use varies with the number of living children, increasing from 41 percent for those with no children to a peak of 55 percent for those with only one child, then declining to 43 percent for those with four or more children. Those who do not intend to use contraception in the future are not only concentrated among those with no children but also observed among other parities, including those with four or more children.

5.12. REASONS FOR NOT INTENDING TO USE CONTRACEPTION IN THE FUTURE

Table 5.12 presents information about the reasons for not using contraception as reported by currently married non-users who say they do not intend to use a contraceptive method in the future. The reasons for not intending to use contraception in the future are categorized in four major groups: fertility-related reasons, opposition to using any methods, lack of knowledge of any methods, and method-related reasons. Method-related reasons (50 percent), fertility-related reasons (29 percent), and opposition to use (9 percent) were mainly cited. The most common single reasons for not intending to use are fear of side-effects (30 percent), wants as many children as possible (21 percent), and health concerns (11 percent).

Table 5.12. Reason for not intending to use contraception in the future

Percent distribution of currently married women aged 15–49 who are not using contraception and who do not intend to use in the future by main reason for not intending to use, Marshall Islands 2007

Reason	Percent distribution
Fertility-related reasons	
Infrequent sex/no sex	1.8
Menopausal/had hysterectomy	0.4
Subfecund/infecund	6.1
Wants as many children as possible	21.1
Opposition to use	
Respondent opposed	7.4
Husband/partner opposed	1.0
Others opposed	0.7
Lack of knowledge: Knows no method	0.4
Method-related reasons	
Health concerns	10.9
Fear of side-effects	30.0
Cost too much	0.1
Inconvenient to use	6.2
Interfere with body's normal process	2.4
Other	9.0
Don't know	1.3
Missing	1.2
Total	100.0
Number of women	303

5.13. PREFERRED METHOD OF CONTRACEPTION FOR FUTURE USE

The analysis of preferred method of future contraception focuses on currently married women who are non-users but intend to apply contraception in the future. The women in this category were asked about the preferred contraceptive methods they would use in the future; that is, the demand for specific methods can be assessed by asking non-users which method they intend to use in the future. Table 5.13 presents information on method preferences for married women who are not using contraception but say they intend to use it in the future. The largest percentage of prospective users reported injectables as their preferred method (30 percent), with 21 percent citing female sterilization, and 17 percent favoring implants.

Table 5.13. Preferred method of contraception for future use

Percent distribution of currently married women aged 15–49 who are not using a contraceptive method but intend to use in the future by preferred method, Marshall Islands 2007

Method	Percent distribution
Female sterilization	20.9
Pill	13.0
Injectables	29.5
Implants	16.6
Condom	11.9
Rhythm method, periodic abstinence	4.2
Withdrawal	1.2
Other	2.1
Unsure of method	0.6
Total	100.0
Number of women	305

5.14. EXPOSURE TO FAMILY PLANNING MESSAGES

Information on the level of public exposure to a particular type of media allows policy-makers to use the most effective media for various target groups in the population. To assess the effectiveness of such media on the dissemination of family planning information, all respondents in the 2007 RMIDHS were asked whether they had heard or read about family planning in the previous few months on the radio, on television, in a newspaper or magazine, or in a video or film.

Table 5.14 shows that a majority of respondents have been exposed to a family planning message through the media. Radio is by far the most common media source, with 74 percent of women and 65 percent of men saying they had heard a message on the radio. The next most common vehicle for family planning messages is newspapers and magazines, cited by 52 percent of women and 46 percent of men. Twenty percent of women and 10 percent of men said they had seen a family planning message on television in the previous few months before the survey. Overall, women are considerably more likely to have seen a family planning message than men.

Table 5.14. Exposure to family planning messages

Percentage of women and men aged 15–49 who heard or saw a family planning message on the radio or television or in a newspaper in the past few months, according to background characteristics, Marshall Islands 2007

	Women					Men				
Background characteristic	Radio	Television	Newspaper/ magazine	None of these 3 media sources	Number	Radio	Television	Newspaper/ magazine	None of these 3 media sources	Number
Age										
15–19	57.3	14.9	42.3	32.5	306	48.0	6.3	28.8	45.7	209
20–24	75.8	17.9	52.3	21.0	334	64.6	8.4	42.9	29.6	190
25–29	73.2	18.2	49.9	18.5	293	65.9	9.2	52.6	23.8	137
30–34	78.0	22.0	53.6	15.6	213	65.4	8.4	55.7	28.1	115
35–39	82.8	26.1	60.6	12.6	205	75.7	18.0	47.7	21.1	106
40–44	77.4	20.3	58.5	12.8	155	83.5	18.2	65.5	12.5	83
45–49	83.1	23.9	49.4	13.4	119	74.0	5.9	47.3	20.2	73
Residence										
Urban	70.4	22.4	54.7	20.6	1,106	64.6	12.1	55.3	27.4	631
Rural	80.8	13.7	45.0	17.5	519	65.5	4.9	24.1	32.3	283
Education										
No education/primary	70.7	13.6	38.0	25.6	427	56.9	4.3	27.1	41.2	245
Secondary	74.4	20.7	55.0	18.3	1,016	67.5	9.3	48.2	25.7	524
More than secondary	77.1	27.9	64.3	13.3	182	68.8	21.2	68.2	20.0	145
Wealth quintile										
Lowest	72.0	12.6	34.8	26.1	202	65.2	6.0	23.1	34.1	101
Second	84.4	10.7	44.7	13.6	240	64.9	7.6	26.7	31.8	131
Middle	76.4	17.6	48.0	19.3	300	66.1	4.4	34.7	30.1	202
Fourth	72.3	19.4	53.3	21.2	472	66.9	14.3	59.6	25.1	243
Highest	68.1	29.9	64.5	18.4	412	61.4	12.8	61.0	28.2	236
Total 15–49	73.7	19.6	51.6	19.6	1,625	64.8	9.8	45.7	29.0	913
50+	na	na	na	na	na	81.7	19.1	64.4	10.0	93
Total men 15+	na	na	na	na	na	66.1	11.0	47.8	27.1	1,055

na = not applicable

Looking at the column that shows the percentage who did not hear or see a family planning message on any of the designated media, it is surprising to note that women and men who live in urban areas are less exposed to these messages. Women and men who have no or primary-level education and those in the lower wealth quintiles are far more likely than more educated women and men, and women and men in higher quintiles, not to have heard or seen a family planning message on any of the listed media. Another interesting finding that has programming implications is that the groups not being well served with regular media messages include young people.

5.15. CONTACT OF NON-USERS WITH FAMILY PLANNING PROVIDERS

In the 2007 RMIDHS, women who were not using any family planning method were asked whether they had been visited by a health worker who talked with them about family planning in the 12 months preceding the survey. This information is especially useful for determining whether non-users of family planning are being reached by family planning outreach programs. Non-users were also asked if they had visited a health facility in the preceding 12 months for any reason other than family planning, and if so, whether any health worker at the facility spoke to them about family planning. These questions can assess the level of so-called ‘missed opportunities’ to inform women about contraception.

The results shown in Table 5.15 indicate that only one in four (24 percent) of non-users are being reached by fieldworkers to discuss family planning issues. Moreover, only 23 percent of non-users visited a health facility and were spoken to about family planning. Altogether, 68 percent of non-users were not contacted about family planning through either of these two mechanisms in the 12 months preceding the survey.

Differences in contact with non-users by background characteristics are not large. Women aged 15–19 are less likely than older women to visit health facilities and thus are also less likely to have discussed family planning there. Similarly, non-users in rural areas are less likely to be visited by a fieldworker who discussed family planning or to be contacted about family planning (19 percent), while 70 percent have neither been visited by a fieldworker nor discussed family planning at a health facility.

Table 5.15. Contact of non-users with family planning providers

Among women aged 15–49 who are not using contraception, the percentage who during the last 12 months were visited by a fieldworker who discussed family planning, the percentage who visited a health facility and discussed family planning, the percentage who visited a health facility but did not discuss family planning, and the percentage who discussed family planning neither with a fieldworker nor at a health facility, by background characteristics, Marshall Islands 2007

Background characteristic	Percentage of women who were visited by fieldworker who discussed family planning	Percentage of women who visited a health facility in the past 12 months and who:		Percentage of women who discussed family planning neither with fieldworker nor at a health facility	Number of women
		Discussed family planning	Did not discuss family planning		
Age					
15–19	18.6	9.8	10.2	76.2	276
20–24	26.5	27.5	12.6	64.5	250
25–29	32.4	30.6	12.4	58.2	175
30–34	22.5	29.5	8.3	60.8	109
35–39	28.3	31.2	11.6	60.7	90
40–44	16.2	20.3	21.5	73.0	69
45–49	13.1	11.9	18.2	85.0	54
Residence					
Urban	25.7	22.1	10.8	66.4	724
Rural	18.8	23.5	15.9	70.1	298
Education					
No education/primary	19.3	18.2	13.4	72.1	256
Secondary	24.5	23.6	12.1	65.8	652
More than secondary	28.9	26.0	10.5	66.8	115
Wealth quintile					
Lowest	19.6	24.8	9.4	69.2	121
Second	21.9	26.0	15.4	66.3	148
Middle	21.0	22.3	14.3	67.3	185
Fourth	24.7	20.1	7.8	69.0	301
Highest	27.3	22.4	15.4	65.7	268
Total	23.7	22.5	12.3	67.5	1,022

5.16. HUSBAND/PARTNER'S KNOWLEDGE OF WOMEN'S USE OF CONTRACEPTION

Use of family planning methods is facilitated when couples discuss and agree on the issue. To assess the extent to which women use contraception without telling their partners, the 2007 RMIDHS asked married women whether their husbands/partners knew that they were using a method of family planning.

Table 5.16 shows that the vast majority of women (95 percent) say their husbands know they are using contraception. Differences by background characteristics are not large – almost universal knowledge by husbands/partners.

Table 5.16. Husband/partner's knowledge of women's use of contraception

Among currently married women aged 15–49 who are using a method, percent distribution by whether they report that their husbands/partners know about their use, according to background characteristics, Marshall Islands 2007

Background characteristic	Knows[1]	Does not know	Unsure whether knows/ missing	Total	Number of women
Age					
15–19	*	*	*	100.0	16
20–24	91.7	8.3	0.0	100.0	60
25–29	95.4	2.9	1.7	100.0	99
30–34	91.0	7.4	1.5	100.0	95
35–39	98.6	1.2	0.2	100.0	107
40–44	96.8	0.0	3.2	100.0	80
45–49	98.1	1.9	0.0	100.0	54
Residence					
Urban	94.6	3.9	1.6	100.0	326
Rural	94.9	3.6	1.6	100.0	185
Education					
No education/primary	95.0	4.2	0.7	100.0	147
Secondary	95.0	2.8	2.2	100.0	312
More than secondary	91.9	8.1	0.0	100.0	52
Wealth quintile					
Lowest	96.1	3.9	0.0	100.0	64
Second	98.7	0.5	0.8	100.0	80
Middle	93.8	3.8	2.3	100.0	96
Fourth	95.1	2.4	2.5	100.0	146
Highest	91.4	7.4	1.2	100.0	124
Total	94.7	3.8	1.6	100.0	511

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Includes women who report use of male sterilization, male condoms or withdrawal

CHAPTER 6. OTHER PROXIMATE DETERMINANTS OF FERTILITY

This chapter explores the principal factors, other than contraception, that affect a woman's chances of becoming pregnant. These are referred to as other proximate (or direct) determinants of fertility and include marriage and sexual intercourse, postpartum amenorrhea and abstinence from sexual relations, and secondary infertility (menopause). These factors interact and influence each other and affect fertility levels and trends.

The principal interest of the DHS program in the subject of nuptiality is that marriage is the leading indicator of exposure of women to the risk of pregnancy and therefore is important for the understanding of fertility. 'Marriage' here refers to unions that are recognized by civil and religious laws as well as by the community. In most societies, marriage sanctions childbearing and married women are exposed to a greater risk of becoming pregnant than unmarried women. Thus, women in populations in which age at marriage is low tend to start childbearing early and have a high fertility level. For this reason, the chapter explores the trends in age at marriage. It also includes information on more direct measures of the beginning of exposure to pregnancy and the level of exposure – namely, age at first sexual intercourse and frequency of intercourse. Finally, measures of several other proximate determinants of fertility, which, like marriage and sexual intercourse, influence exposure to the risk of pregnancy, are presented. These are: duration of postpartum amenorrhea, postpartum abstinence, and secondary infertility (also known as menopause).

6.1. CURRENT MARITAL STATUS

Respondents' marital status at the time of the survey is presented in Table 6.1 and Figure 6.1. In Table 6.1, the term 'married' includes legal or formal marriage, while 'living together' designates an informal union. However, in tables in this report, these two categories are combined and referred to collectively as 'currently married' or 'currently in union – living together'. Respondents who are widowed, divorced, or not living together (separated) make up the remainder of the 'ever married' or 'ever in union' category.

Table 6.1 shows that in the 2007 RMIDHS, the proportion of women in union was 71 percent compared to 59 percent of men. For the percentage of women currently in union, 41 percent were living together while 30 percent were observed to be married. Of the 59 percent of men in union at the time of the DHS, 35 percent were living together compared to 24 percent who were married. The results generally show that in early years of their lives most Marshallese women and men opt not to get married but to live together; then, as they grow older, most decide to get married. For instance, the proportions of both married women and married men in the age range 15–34 years are lower than for those in living-together status. This distribution changes in the older ages as women and men most likely decide to get married.

The results from Table 6.1 show that comparatively less than 5 percent of young people aged between 15–19 are married than in a so-called living-together arrangement. For example, 2 in every 10 (20 percent) young women aged 15–19 years are in a living-together union compared to only 1 percent in married status. This number increases to 6 out of every 10 women in living-together status by age 20–24 years. In contrast, young Marshallese men (15–19 years) have a slow start to marital union, with only 5 percent entering into a living-together arrangement and none in married union. In the next five-year age group there is a massive eight-times increase, with almost half of the young men aged 20–24 years in a living-together arrangement and 2 percent in married union.

Divorce and separation information from the 2007 RMIDHS shows that about the same proportion (about 5 percent each) of females and males live in this marital status. For the Marshallese women living in this category of marital union, the 5 percent is almost equally distributed among all age groups (see Table 6.1 and Figure 6.1). In contrast, most men are observed to be divorced or separated between ages 25 and 39 and in the age group 45–49 years.

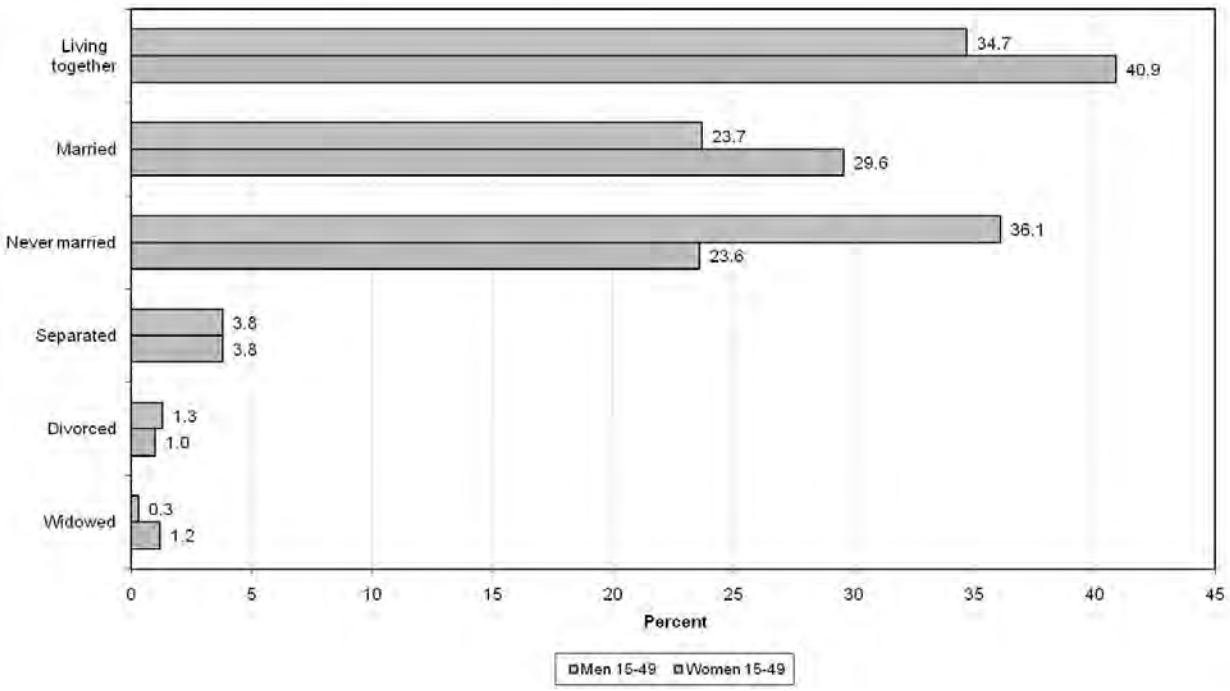
As for the marital status of 'widowhood' in the Marshall Islands, more women in the age range 35 and over are observed to be widowed than their male counterparts (Table 6.1). This is expected, as the average life expectancy of men is lower than that of women. An interesting observation from the information presented in Table 6.1 is that two out of every five teenage women aged 15–19 years is perceived to be widowed; however, this may not be the case – it could be a chance selection in the DHS sample.

Table 6.1. Current marital status

Percent distribution of women and men aged 15–49 by current marital status, according to age, Marshall Islands 2007

Age	Marital status						Total	Percentage of respondents currently in union	Number of respondents
	Never married	Married	Living together	Divorced	Separated	Widowed			
				WOMEN					
15–19	75.5	1.2	19.9	0.0	3.0	0.4	100.0	21.2	306
20–24	30.4	7.4	57.5	0.1	4.5	0.0	100.0	65.0	334
25–29	12.5	23.8	58.1	1.2	4.5	0.0	100.0	81.9	293
30–34	3.3	40.5	51.4	0.8	4.1	0.0	100.0	91.9	213
35–39	2.1	60.8	29.6	1.9	4.5	1.1	100.0	90.4	205
40–44	0.4	58.4	32.3	3.3	1.4	4.1	100.0	90.7	155
45–49	1.7	68.0	17.7	1.5	3.0	8.1	100.0	85.8	119
Total 15–49	23.6	29.6	40.9	1.0	3.8	1.2	100.0	70.5	1,625
				MEN					
15–19	93.8	0.0	5.4	0.0	0.9	0.0	100.0	5.4	209
20–24	46.1	2.1	49.0	0.0	2.7	0.0	100.0	51.1	190
25–29	19.9	17.7	52.2	0.0	10.1	0.0	100.0	70.0	137
30–34	7.0	35.2	49.0	2.0	6.7	0.0	100.0	84.2	115
35–39	4.2	48.4	40.9	3.5	2.9	0.0	100.0	89.4	106
40–44	5.3	60.6	31.1	0.8	1.3	0.8	100.0	91.7	83
45–49	1.4	63.5	21.8	7.6	2.9	2.8	100.0	85.3	73
Total 15–49	36.1	23.7	34.7	1.3	3.8	0.3	100.0	58.5	913
50+	2.5	76.2	12.5	1.4	1.7	5.5	100.0	88.8	93
Total men 15+	31.5	30.5	31.5	1.4	3.8	1.3	100.0	62.0	1,055

Figure 6.1. Current marital status of women and men



6.2. AGE AT FIRST MARRIAGE

Whether or not the start of marriage coincides with the initiation of sexual intercourse and thus the beginning of exposure to the risk of pregnancy, first marriage is an important social and demographic indicator and, in most societies, represents the point in a person's life when childbearing first becomes welcome. Note that in Table 6.2, 'married' includes 'living together'. In this table, the age at first marriage is defined as the age at which the respondent began living with her/his first spouse or partner.

Marriage is a leading social and demographic indicator of the exposure of women to the risk of pregnancy, especially in the case of low levels of contraceptive use, and, therefore, is important for an understanding of fertility. Populations in which age at marriage is low tend to be populations with early childbearing and high fertility. For this reason, there is an interest in trends in age at marriage. Early marriages in the RMI context, where the use of family planning is not widespread, leads to early childbearing and a longer period of exposure of women to reproductive risks, which lead to high cumulative fertility levels. Table 6.2 presents the percentage of women and men who were married by specific ages, and the median age at first marriage, according to age of respondent at the time of the survey.

Trends in age at marriage for persons of different age cohorts are described by comparing the cumulative distribution for successive younger age groups. In drawing conclusions concerning trends, the data for the oldest age cohorts are interpreted cautiously since respondents may not recall dates or ages at marriage with accuracy, particularly in RMI where living-together unions are common.

For each cohort, the accumulated percentages stop at the lower age boundary of the cohort to avoid censoring problems. For instance, for the cohort currently aged 20–24, accumulation stops with the percentage married by exact age 20.

As a measure of central tendency, the median age at marriage is used. The median is defined as the age by which half of the cohort has married, not the age by which half of those married have started living with their spouse. The median is preferred over the mean as a measure of central tendency because, unlike the mean, it can be estimated for all cohorts where at least half are ever-married at the time of survey.

Although the minimum legal age for a woman to get married is 18 years in RMI, marriage among young women is a common practice. Among women aged 20–49, 5 percent were married by age 15, 27 percent were married by age 18, and 54 percent were married by age 20. The median age at first marriage is 19.7 years and appears to have been fairly stable for the past 20 years, as evidence from censuses supports this age. However, the trend is shifting toward fewer women marrying at very young ages, as only 3 percent of women aged 15–19 were married before age 15 compared with 9 percent of women aged 40–44.

Table 6.2. Age at first marriage

Percentage of women and men aged 15–49 who were first married by specific exact ages and median age at first marriage, according to current age, Marshall Islands 2007

	Percentage first married by exact age:					Percentage never married		Median age at first marriage
Age	15	18	20	22	25		Number	
				WOMEN				
15–19	2.5	na	na	na	na	75.5	306	a
20–24	5.5	26.3	49.6	na	na	30.4	334	a
25–29	2.3	20.0	48.1	65.6	81.0	12.5	293	20.2
30–34	2.9	26.8	53.1	69.8	81.0	3.3	213	19.7
35–39	7.8	31.0	57.7	73.3	81.9	2.1	205	19.5
40–44	8.9	31.5	61.3	76.7	90.3	0.4	155	19.1
45–49	3.9	28.9	62.9	77.0	85.9	1.7	119	19.2
20–49	5.0	26.6	53.7	na	na	11.5	1,319	19.7
25–49	4.8	26.6	55.1	71.2	83.2	5.1	985	19.6
				MEN				
15–19	0.0	na	na	na	na	93.8	209	a
20–24	0.0	11.8	26.2	na	na	46.1	190	a
25–29	0.0	11.1	30.5	50.2	71.4	19.9	137	22.0
30–34	0.0	17.4	32.8	48.5	69.4	7.0	115	22.2
35–39	0.0	9.3	29.2	55.5	79.6	4.2	106	21.5
40–44	0.0	18.0	41.0	60.8	78.9	5.3	83	20.7
45–49	0.0	6.4	25.9	45.7	69.4	1.4	73	22.5
20–49	0.0	12.4	30.3	49.9	68.2	18.9	704	22.0
25–49	0.0	12.6	31.8	52.0	73.6	8.8	514	21.8
20+	0.0	11.7	28.1	na	na	16.0	846	na
25+	0.0	11.6	28.6	48.4	71.6	7.3	655	22.2

Note: The age at first marriage is defined as the age at which the respondent began living with her/his first spouse/partner.

na = not applicable due to censoring

a = omitted because less than 50 percent of the women married for the first time before reaching the beginning of the age group

Marriage among men, on the other hand, starts fairly late. Among men aged 20–49, none had married by age 15 and only 12 percent had married by age 18. By age 20, 30 percent of men had been married, compared with 54 percent of women. According to the 2007 RMIDHS, the median age at first marriage for men aged 20–49 is 22.0, about two years later than the median for women.

6.3. MEDIAN AGE AT FIRST MARRIAGE

The median ages at first marriage for women and men by current age and background characteristics are shown in Table 6.3.1 and Table 6.3.2 respectively. Overall, rural women aged 20–49 years marry a year earlier than their urban counterparts (18.9 and 20.0 years, respectively). The pattern of median age at first marriage by education levels and wealth index is not consistent.

Table 6.3.1. Median age at first marriage: Women

Median age at first marriage among women by five-year age groups, age 20–49 and age 25–49, according to background characteristics, Marshall Islands 2007

	Current age						Women age	Women age
Background characteristic	20–24	25–29	30–34	35–39	40–44	45–49	20–49	25–49
Residence								
Urban	a	20.5	19.9	19.7	19.5	19.8	20.0	19.9
Rural	19.5	19.0	19.2	18.8	17.3	18.2	18.9	18.7
Education								
No education/primary	19.8	19.7	19.1	17.5	18.2	18.1	18.7	18.5
Secondary	20.0	19.8	19.1	19.7	19.3	19.3	19.6	19.5
More than secondary	a	24.8	21.7	21.3	22.3	21.1	a	21.8
Wealth quintile								
Lowest	19.5	19.0	18.8	18.7	18.4	18.5	18.9	18.7
Second	19.2	18.8	18.9	19.3	17.8	17.4	18.7	18.5
Middle	a	19.8	19.9	19.1	18.9	20.2	19.8	19.6
Fourth	19.8	20.6	19.0	19.8	19.9	19.5	19.8	19.8
Highest	a	21.0	20.3	19.7	19.2	19.2	a	20.1
Total	a	20.2	19.7	19.5	19.1	19.2	19.7	19.6

Note: The age at first marriage is defined as the age at which the respondent began living with her first spouse/partner.
a = omitted because less than 50 percent of the women married for the first time before reaching the beginning of the age group

For men aged 25–54, as shown in Table 6.3.2, the urban–rural difference is only a year (22.1 years in urban areas compared with 21.2 years in rural areas). Across education characteristics, the median age at first marriage for men ranges from 21.5 years for those with no or primary education, to 21.9 for those with completed secondary education, and for those with more than secondary education, 23.3 years. The pattern by wealth index is not consistent.

Table 6.3.2. Median age at first marriage: Men

Median age at first marriage among men by five-year age groups, age 20+ and age 25+, according to background characteristics, Marshall Islands 2007

	Age						Men age	Men age
Background characteristic	25–29	30–34	35–39	40–44	45–49	50+	25–54	25+
Residence								
Urban	23.4	21.4	21.9	20.8	22.8	23.7	22.1	22.3
Rural	20.1	23.6	20.6	21.0	21.9	22.8	21.2	21.5
Education								
No education/primary	21.9	21.3	21.7	19.6	20.9	22.1	21.5	21.5
Secondary	21.8	21.7	20.8	21.1	22.1	24.3	21.6	21.9
More than secondary	23.4	23.3	23.1	21.2	24.8	23.3	23.3	23.3
Wealth quintile								
Lowest	20.9	24.4	20.8	21.8	22.8	25.2	22.8	23.3
Second	21.2	20.9	21.2	20.1	24.0	23.1	21.3	21.4
Middle	21.1	21.2	20.7	18.4	20.6	22.6	20.7	20.9
Fourth	22.9	21.0	21.6	21.2	28.2	23.9	22.2	22.2
Highest	22.6	23.4	22.6	22.2	22.6	23.2	22.6	22.7
Total	21.9	22.0	21.4	20.8	22.5	23.4	21.8	22.0

Note: The age at first marriage is defined as the age at which the respondent began living with his first spouse/partner.
a = omitted because less than 50 percent of the men married for the first time before reaching the beginning of the age group

6.4. AGE AT FIRST SEXUAL INTERCOURSE

The 2007 RMIDHS collected data on age at first sexual intercourse. By age 15, 12 percent of women aged 20–49 were sexually active, and 61 percent were active by age 18 (Table 6.4). The cumulative percentage of sexually active women increases steadily to reach 87 percent by age 20. The median age at first sex for women aged 20–49 is 17.3 years and there is no evidence of a trend toward later initiation of sexual activity for recent years.

Unlike the marriage discussions earlier, sexual activity among men starts earlier than among women. For instance, 22 percent of men aged 20–49 were sexually active by age 15 (compared to 12 percent of women). As was the case for women, this percentage rises steadily to reach a level of 89 percent by age 20 (2 percent more than the women's level). The median age at first sexual intercourse for men aged 20–49 years is 16.5 years, compared to women's 17.3 years. As was the case with women, the median age for men's first sex calculated from the 2007 RMIDHS shows no evidence of change over time.

Table 6.4. Age at first sexual intercourse

Percentage of women and men aged 15–49 who had first sexual intercourse by specific exact ages, percentage who have never had intercourse, and median age at first intercourse, according to current age, Marshall Islands 2007

Age	Percentage who had first sexual intercourse by exact age: 15	18	20	22	25	Percentage who have never had intercourse	Number of respondents	Median age at first intercourse
				WOMEN				
15–19	15.0	na	na	na	na	34.7	306	a
20–24	12.3	55.8	86.2	na	na	6.1	334	17.6
25–29	10.3	59.2	88.3	94.2	97.1	1.3	293	17.5
30–34	10.7	63.8	86.8	91.9	92.8	0.0	213	17.3
35–39	13.9	67.2	85.1	90.6	92.5	0.0	205	16.9
40–44	9.7	59.6	86.5	89.3	90.7	0.0	155	17.5
45–49	15.2	64.9	88.1	93.0	94.2	0.0	119	17.1
20–49	11.8	60.9	86.8	91.6	93.1	1.8	1,319	17.3
25–49	11.6	62.6	87.0	na	na	0.4	985	17.3
15–24	13.6	na	na	na	na	19.8	640	17.3
				MEN				
15–19	24.6	na	na	na	na	27.7	209	a
20–24	28.5	69.7	91.6	na	na	3.2	190	16.5
25–29	25.3	64.9	86.1	90.8	93.3	1.8	137	16.7
30–34	19.8	74.5	89.2	93.3	98.3	0.0	115	16.3
35–39	16.8	67.2	86.2	93.1	93.9	0.0	106	16.6
40–44	14.8	72.8	87.3	90.3	96.2	0.0	83	16.3
45–49	18.4	64.9	93.6	96.6	96.6	0.0	73	16.6
20–49	22.1	69.0	89.0	93.4	95.5	1.2	704	16.5
25–49	19.7	68.8	88.1	na	na	0.5	514	16.5
15–24	26.5	na	na	na	na	16.1	400	16.3
20+	21.4	67.1	87.6	na	na	1.0	846	16.6
25+	19.3	66.4	86.4	92.4	95.2	0.4	655	16.7

na = not applicable due to censoring

a = omitted because less than 50 percent of the respondents had intercourse for the first time before reaching the beginning of the age group

6.5. MEDIAN AGE AT FIRST SEXUAL INTERCOURSE

The median age at first sexual intercourse by current age and background characteristics is shown in tables 6.5.1 and 6.5.2 for women and men respectively. For women aged 20–49, the median age at first sexual intercourse in rural areas is a year lower than the median age at first sexual intercourse in urban areas in all age groups. For men, there is little urban/rural differential in the median age at initial sexual intercourse.

Examination by education levels reveals that women with no or primary education engage in sexual relations earliest (16.2 years), while their sisters with more than secondary education initiate sex two years later, at age 18.6 years. Women with secondary education start sexual relations almost a year later on average than those with less education. The impact of the level of wealth of the household on the initiation of sexual intercourse is very limited or minimal. For men aged 25–54, the differences in the median age at first sexual intercourse by background characteristics are minimal.

Table 6.5.1. Median age at first intercourse: Women

Median age at first sexual intercourse among women by five-year age groups, age 20–49 and age 25–49, according to background characteristics, Marshall Islands 2007

	Current age						Women aged	Women aged
Background characteristic	20–24	25–29	30–34	35–39	40–44	45–49	20–49	25–49
Residence								
Urban	18.1	17.8	17.7	17.3	18.0	17.8	17.8	17.7
Rural	16.6	16.9	16.2	15.8	15.9	16.3	16.4	16.3
Education								
No education/primary	16.9	16.4	15.9	15.9	16.3	16.4	16.3	16.2
Secondary	17.6	17.5	17.3	17.2	17.9	17.5	17.5	17.4
More than secondary	18.3	18.9	18.7	18.8	18.0	17.7	18.5	18.6
Wealth quintile								
Lowest	16.6	16.7	16.3	15.7	16.3	16.5	16.4	16.3
Second	16.5	16.6	16.3	15.9	15.9	15.9	16.3	16.2
Middle	18.2	17.9	17.2	17.3	17.5	16.5	17.6	17.4
Fourth	17.3	17.4	17.4	17.4	18.0	17.9	17.5	17.6
Highest	18.3	17.8	17.8	17.2	17.7	17.9	17.9	17.7
Total	17.6	17.5	17.3	16.9	17.5	17.1	17.3	17.3

Table 6.5.2. Median age at first intercourse: Men

Median age at first sexual intercourse among men by five-year age groups, age 20+ and age 25+, according to background characteristics, Marshall Islands 2007

	Current age							Men aged	Men aged
Background characteristic	20–24	25–29	30–34	35–39	40–44	45–49	50+	20+	25+
Residence									
Urban	16.7	17.0	16.5	16.8	16.6	16.7	17.9	16.9	16.9
Rural	16.2	16.3	16.0	16.3	15.6	16.5	16.1	16.2	16.2
Education									
No education/primary	17.0	17.1	16.4	17.3	15.7	17.7	18.1	17.0	17.0
Secondary	16.4	16.3	16.3	16.5	16.2	16.6	17.4	16.5	16.5
More than secondary	16.4	18.0	16.5	17.5	17.0	15.7	17.5	17.0	17.1
Wealth quintile									
Lowest	15.6	17.3	16.0	15.7	15.7	16.9	16.6	16.2	16.4
Second	16.4	17.1	16.5	16.1	15.6	16.3	16.0	16.4	16.4
Middle	17.4	16.1	16.0	17.2	16.7	16.7	15.8	16.7	16.5
Fourth	16.6	16.5	16.9	16.6	15.8	14.8	18.3	16.8	16.9
Highest	16.3	15.8	16.1	17.5	16.7	18.0	17.7	17.0	17.1
Total	16.5	16.7	16.3	16.6	16.3	16.6	17.5	16.6	16.7

Note that the median age in tables 6.5.1 and 6.5.2 is defined as the exact age by which 50 percent of an age cohort had sexual intercourse for the first time. The tables are used to describe differentials in age at first intercourse between RMI population subgroups and to examine trends within these subgroups.

6.6. RECENT SEXUAL ACTIVITY

In societies with low use of contraception, the probability of a woman becoming pregnant is closely related to the exposure to and frequency of sexual intercourse. Information on recent sexual activity is therefore useful as a measure of exposure to the risk of pregnancy. The 2007 RMIDHS asked women and men the timing of their last sexual intercourse. Tables 6.6.1 and 6.6.2 present the percent distribution of women and

men by the timing of last sexual intercourse, according to their background characteristics. Respondents are considered to be sexually active if they have had sexual intercourse at least once in the four weeks preceding the survey.

Table 6.6.1. Recent sexual activity: Women

Percent distribution of women aged 15–49 by timing of last sexual intercourse, according to background characteristics, Marshall Islands 2007

Background characteristic	Timing of last sexual intercourse: Within the last 4 weeks	Within 1 year[1]	One or more years	Missing	Never had sexual intercourse	Total	Number of women
Age							
15–19	29.3	23.3	11.9	0.8	34.7	100.0	306
20–24	56.4	25.6	11.6	0.3	6.1	100.0	334
25–29	72.9	12.6	11.3	1.8	1.3	100.0	293
30–34	77.2	15.2	6.4	1.3	0.0	100.0	213
35–39	80.4	11.6	5.9	2.0	0.0	100.0	205
40–44	77.5	15.1	6.0	1.4	0.0	100.0	155
45–49	71.3	14.2	11.1	3.4	0.0	100.0	119
Marital status							
Never married	23.0	23.8	19.2	0.3	33.7	100.0	383
Married or living together	79.6	14.5	4.5	1.5	0.0	100.0	1,145
Divorced/separated/widowed	26.9	34.6	33.0	4.1	1.4	100.0	97
Marital duration[2]							
0–4 years	69.2	21.6	8.5	0.8	0.0	100.0	246
5–9 years	83.1	12.1	4.4	0.4	0.0	100.0	222
10–14 years	79.8	10.3	6.7	3.2	0.0	100.0	109
15–19 years	86.5	9.0	3.2	1.3	0.0	100.0	120
20–24 years	81.7	11.1	1.2	6.0	0.0	100.0	89
25+ years	82.6	13.7	2.3	1.5	0.0	100.0	76
Married more than once	81.5	15.3	2.3	0.9	0.0	100.0	283
Residence							
Urban	61.0	17.1	10.0	1.7	10.2	100.0	1,106
Rural	67.7	19.5	8.8	0.5	3.4	100.0	519
Education							
No education/primary	62.0	17.7	9.6	0.9	9.8	100.0	427
Secondary	63.4	18.7	9.2	1.2	7.6	100.0	1,016
More than secondary	64.4	13.7	12.1	3.3	6.4	100.0	182
Wealth quintile							
Lowest	65.9	22.0	9.1	0.0	2.9	100.0	202
Second	67.9	18.6	7.8	1.3	4.4	100.0	240
Middle	58.0	24.9	9.5	1.7	5.9	100.0	300
Fourth	62.0	13.7	10.9	1.9	11.6	100.0	472
Highest	64.1	15.1	9.6	1.1	10.1	100.0	412
Total	63.1	17.9	9.6	1.3	8.0	100.0	1,625

[1] Excludes women who had sexual intercourse within the last four weeks

[2] Excludes women who are not currently married

Among women aged 15–49, well over half (63 percent) were sexually active in the four weeks prior to the survey, while 18 percent had had sex within the past year but not in the four weeks prior to the survey, and about 10 percent had had sex but were not sexually active in the past 12 months. The highest level of recent sexual activity was observed among women aged 25–49, of whom 71–80 percent were sexually active in the past month. The proportion of women who are sexually active does not appear to decline as age increases – in fact, women's level of sexual activity is maintained at over 70 percent as age increases, and most probably declines after age 50. Similarly, the proportion sexually active in the four weeks preceding the survey among women in marital union does not appear to decline – a consistently high

proportion (70–87 percent) of women at all marital durations had had recent sexual of activity in the four weeks before the 2007 RMIDHS. Women who have been married in the past or have never been married are quite likely to have had sex in the recent past, as the evidence in Table 6.6.1 suggests. There is a lot of sexual activity going on outside either married or living-together unions.

Women in rural areas are more likely to have had sex in the past four weeks than urban women; however, the difference is only about 6 percent (67.7 percent and 61.0 percent respectively). As for differentials by education, it appears that in the context of RMI, education is not a determinant of recent sexual experience.

Overall, men (15–49 years) are as likely as women to have had recent sexual intercourse (Table 6.6.2). Sixty-five percent of men had sexual intercourse in the four weeks before the survey, 16 percent had sexual intercourse in the past year but not in the previous four weeks, 8.3 percent had sex one or more years ago, and 7.3 percent had never had sexual intercourse. Men's sexual activity patterns are quite similar to those of women but at different levels – however, the percentage levels are similar, indicating very active and high sexual activity among Marshallese in the four weeks before the 2007 DHS.

As in the case with women, men who are currently married or living with a woman are most likely to have had recent sexual intercourse: 77.6 percent compared with 47.7 percent of never-married men. Not much variation in recent sexual activity is observed between urban residence, rural residence, education category, or household wealth quintile.

Table 6.6.2. Recent sexual activity: Men

Percent distribution of men aged 15–49 by timing of last sexual intercourse, according to background characteristics, Marshall Islands 2007

Background characteristic	Timing of last sexual intercourse				Never had sexual intercourse	Total	Number of men
	Within the last 4 weeks	Within 1 year[1]	One or more years	Missing			
Age							
15–19	44.2	17.3	10.2	0.6	27.7	100.0	209
20–24	71.4	16.2	9.2	0.0	3.2	100.0	190
25–29	66.0	19.4	9.1	3.7	1.8	100.0	137
30–34	73.0	16.8	5.4	4.8	0.0	100.0	115
35–39	79.8	9.1	5.9	5.2	0.0	100.0	106
40–44	76.1	5.9	8.2	9.8	0.0	100.0	83
45–49	64.6	21.7	7.1	6.7	0.0	100.0	73
Marital status							
Never married	47.7	18.6	13.4	0.0	20.2	100.0	329
Married or living together	77.6	12.5	4.4	5.5	0.0	100.0	534
Divorced/separated/ widowed	(52.4)	(30.0)	(16.0)	(1.6)	(0.0)	100.0	50
Marital duration[2]							
0–4 years	74.3	15.4	7.1	3.2	0.0	100.0	117
5–9 years	80.8	11.6	3.2	4.4	0.0	100.0	86
10–14 years	83.0	12.7	4.3	0.0	0.0	100.0	58
15–19 years	(68.0)	(11.1)	(4.4)	(16.5)	(0.0)	100.0	47
20–24 years	(77.5)	(11.4)	(8.7)	(2.4)	(0.0)	100.0	49
25+ years	*	*	*	*	*	100.0	23
Married more than once	80.2	11.3	2.3	6.2	0.0	100.0	154
Residence							
Urban	62.9	14.6	10.0	4.5	8.0	100.0	631
Rural	71.0	18.1	4.4	0.7	5.8	100.0	283
Education							
No education/primary	60.4	12.9	12.3	2.0	12.4	100.0	245
Secondary	67.6	16.6	6.7	3.7	5.4	100.0	524
More than secondary	65.9	17.0	7.2	4.3	5.6	100.0	145
Wealth quintile							
Lowest	68.6	21.6	5.9	0.0	3.9	100.0	101
Second	68.7	16.4	7.1	3.2	4.7	100.0	131
Middle	65.8	18.3	4.5	4.2	7.2	100.0	202
Fourth	61.2	13.9	12.2	4.5	8.2	100.0	243
Highest	66.2	12.4	9.1	2.9	9.4	100.0	236
Total 15–49	65.4	15.7	8.3	3.3	7.3	100.0	913
50+	59.0	13.7	16.0	11.1	0.1	100.0	93
Total men 15+	63.2	15.7	10.1	4.7	6.3	100.0	1,055

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Excludes men who had sexual intercourse within the last four weeks

[2] Excludes men who are not currently married

6.7. POSTPARTUM AMENORRHEA, ABSTINENCE, AND INSUSCEPTIBILITY

Postpartum amenorrhea refers to the interval between childbirth and the return of menstruation. During this period, the risk of pregnancy is reduced. Among women who are not using contraception, exposure to the risk of pregnancy in the period following birth is determined by two major factors – namely, breastfeeding and sexual abstinence. Postpartum protection from conception can be prolonged by breastfeeding, which can lengthen the duration of amenorrhea, or by delayed resumption of sexual activity (postpartum abstinence). In Table 6.7, the percentage of births for which mothers are postpartum amenorrhea and abstaining is presented along with the percentage of births for which mothers are defined as still postpartum insusceptible, i.e. either amenorrhea or abstaining or both. These women are classified as not exposed (i.e. insusceptible) to the risk of pregnancy.

At the time of the survey, 33 percent of women who had given birth during the three years preceding the survey were insusceptible because they were still amenorrhea (26 percent) or still abstaining (26 percent) or both.

Table 6.7. Postpartum amenorrhea, abstinence, and insusceptibility

Percentage of births in the three years preceding the survey for which mothers are postpartum amenorrhea, abstaining, or insusceptible, by number of months since birth, and median and mean durations, Marshall Islands 2007

	Percentage of births for which the mother is:			Number of births
Months since birth	Amenorrhea	Abstaining	Insusceptible[1]	
< 2	85.6	97.4	97.4	33
2–3	87.9	71.7	92.5	47
4–5	64.5	44.3	67.6	48
6–7	54.0	46.4	61.4	52
8–9	30.2	24.3	39.8	42
10–11	32.7	22.5	36.3	36
12–13	10.5	21.7	25.4	44
14–15	13.8	15.7	26.4	55
16–17	12.9	8.3	18.9	27
18–19	5.6	9.4	13.7	50
20–21	4.2	14.0	14.0	37
22–23	0.8	9.2	10.1	43
24–25	8.0	6.8	13.7	35
26–27	5.9	6.9	12.7	28
28–29	7.6	6.5	14.1	40
30–31	7.0	2.2	9.2	46
32–33	0.0	1.9	1.9	35
34–35	8.7	9.0	13.0	27
Total	25.6	24.0	32.9	724
Median	6.6	5.0	8.0	na
Mean	9.1	8.6	11.6	na

Note: Estimates are based on status at the time of the survey.

na = not applicable

[1] Includes births for which mothers are either still amenorrhea or still abstaining (or both) following birth

The proportion of women remaining amenorrhea, abstaining, or insusceptible declines as duration since birth increases. Within the first two months after birth, 97 percent of women in RMI are insusceptible to pregnancy, 86 percent are amenorrhea, and 97 percent are abstaining from sex. After six months (the recommended duration of exclusive breastfeeding), 61 percent of mothers are still insusceptible to the risk of pregnancy, mainly because their period has not returned, which remains the main component of postpartum insusceptibility for the first 24 months after birth. After 24 months, only 13.7 percent of mothers are still insusceptible (8 percent are amenorrhea and 7 percent abstaining). By 34–35 months after birth, 13 percent of mothers are insusceptible (8.7 percent are amenorrhea and 9 percent abstaining).

The median duration of postpartum insusceptibility and amenorrhea is less than one year (8.0 and 6.6 months respectively); for postpartum sexual abstinence, it is 5.0 months.

6.8. MEDIAN DURATION OF POSTPARTUM INSUSCEPTIBILITY BY BACKGROUND CHARACTERISTICS

The median duration of postpartum amenorrhea, abstinence, and insusceptibility by various background characteristics is presented in Table 6.8. The median duration of postpartum abstinence shows very little variation across the background characteristics, except for rural respondents and those in the lowest and second household wealth quintile – this is obviously because most rural households are in the lowest and second wealth quintiles. Even in these cases, the variation in postpartum insusceptibility is mainly due to variations in postpartum amenorrhea. There is a small difference (like 1 percent) between women under 30 years of age and women over 30 years of age in the median duration of postpartum amenorrhea.

The duration of postpartum amenorrhea for rural women is obviously longer than for urban women (about nine months compared with six months), which of course is the reason for 10 months' postpartum *insusceptibility for rural women*. Meanwhile, women with more than secondary education show the shortest duration of postpartum amenorrhea (three months) compared with women with no or primary education (eight months). Moreover, the median length of postpartum amenorrhea is nine times longer for women in the poorest households than for women in the wealthiest households (9.3 months compared with 0.6 months).

Table 6.8. Median duration of amenorrhea, postpartum abstinence, and postpartum insusceptibility

Median number of months of postpartum amenorrhea, postpartum abstinence, and postpartum insusceptibility following births in the three years preceding the survey, by background characteristics, Marshall Islands 2007

Background characteristic	Postpartum amenorrhea	Postpartum abstinence	Postpartum insusceptibility[1]
Mother's age			
15–29	6.3	5.1	8.2
30–49	7.6	4.5	7.6
Residence			
Urban	5.6	4.6	6.1
Rural	8.8	5.9	10.2
Education			
No education/primary	7.8	6.6	8.8
Secondary	6.7	4.9	8.1
More than secondary	3.0	2.4	4.2
Wealth quintile			
Lowest	9.3	9.1	11.2
Second	8.7	4.2	10.4
Middle	6.9	5.3	6.9
Fourth	6.1	4.6	6.6
Highest	0.6	3.3	4.7
Total	6.6	5.0	8.0

Note: Medians are based on status at the time of the survey (current status).

[1] Includes births for which mothers are either still amenorrhea or still abstaining (or both) following birth

6.9. MENOPAUSE

Another factor influencing the risk of pregnancy among women after age 30 is menopause. Table 6.9 presents an important indicator concerning fecundity as measured by evidence of menopause. The lack of a menstrual period in the preceding six months among women who are neither pregnant nor postpartum amenorrhea is taken as evidence of menopause and therefore infecundity. Although the onset of menopause is difficult to determine for an individual woman, methods are available for estimating the proportion of women who are menopausal for the population as a whole. For this analysis, a woman is considered menopausal if she is neither pregnant nor postpartum amenorrhea but did not have a menstrual period in the six months preceding the survey.

Table 6.9 summarizes the percentage of women aged 30–49 who are menopausal. According to the 2007 RMIDHS, 6.2 percent of women aged 30–49 are menopausal. The proportion of women who are menopausal rises with age from about 5 percent for age group 30–34 to 29 percent for age group 48–49. It is clear that the onset of infertility with increasing age reduces the proportion of women who are exposed to the risk of pregnancy.

Table 6.9. Menopause

Percentage of women aged 30–49 who are menopausal, by age, Marshall Islands 2007

Age	Percentage menopausal[1]	Number of women
Age		
30–34	4.6	213
35–39	4.3	205
40–41	3.9	72
42–43	(5.7)	44
44–45	2.9	66
46–47	12.0	56
48–49	(29.0)	37
Total	6.2	693

Note: Figures in parentheses are based on 25–49 unweighted cases.

[1] Percentage of all women who are not pregnant and not postpartum amenorrhea whose last menstrual period occurred six or more months preceding the survey

CHAPTER 7. FERTILITY PREFERENCES

This chapter addresses three questions that allow an assessment of the need for contraception. Does the respondent want more children? If so, how long would she prefer to wait before the next child? If she could start afresh, how many children in all would she want?

Two further issues are examined. To what extent do unwanted or mistimed pregnancies occur? What effect would the prevention of such pregnancies have on fertility rates? Bearing in mind that the underlying rationale of most family planning programs is to give couples the freedom and ability to bear the number of children they want and to achieve the spacing of births they prefer, the importance of this chapter is obvious.

Thus, the 2007 RMIDHS included questions to ascertain fertility preferences. Women who were either not pregnant or unsure about their status were asked the question: *Would you like to have (a/another) child or would you prefer not to have any (more) children?* A different question was posed for women who were pregnant at the time of the survey. Pregnant women were asked: *After the child you are expecting, would you like to have another child or would you prefer not to have any more children?* The women who indicated that they wanted another child were asked how long they would like to wait before the birth of the next child. Finally, women were asked the number of children they would like to have in total, as well as their preference regarding the children's sex, if they were to start childbearing afresh.

Given the ongoing family planning programs that address both men and women, and that men play a vital role in the realization of reproductive goals, the 2007 DHS included questions that elicited information on the fertility preferences of men.

The responses to the questions that were included in the 2007 RMIDHS questionnaire provide a basis for the classification of women and men by their fertility preferences according to selected background characteristics.

7.1. DESIRE FOR MORE CHILDREN

Data on desire for more children can provide an indication of future reproductive behavior provided that the required family planning services are available, affordable, and accessible to allow people to realize their fertility preferences. Table 7.1 presents the distribution of currently married women and men by the desire for more children according to the number of living children. Only 13 percent of currently married women want another child after two years, 12 percent want to wait for less than two years to have another child, and 60 percent declared that they do not want to have any more children at all or are sterilized. About 2 percent of women report not being able to have any more children because they are infecund. Figure 7.1 depicts the fertility preferences of women and men. Men are more undecided than women about whether to have another child or not (23 percent against 11 percent.)

As Table 7.1 shows, generally the proportion wanting another child decreases with increasing number of living children. It is equally evident that the proportion of women and men aged 15–49 years who want to stop childbearing increases rapidly with increasing number of living children. For instance, 33 percent of currently married women with one child indicate that they do not want more children or have been sterilized, while 86 percent of currently married women with six or more children indicate the same. Among women with six or more children, 7 percent desire more children.

Table 7.1. Fertility preferences by number of living children

Percent distribution of currently married women and currently married men aged 15–49 by desire for children, according to number of living children, Marshall Islands 2007

Desire for children	Number of living children 0	1	2	3	4	5	6+	Total 15–49	Total men 50+	Total men 15+
WOMEN[1]										
Have another soon[2]	61.1	19.7	10.0	5.4	3.8	2.8	2.4	12.4	na	na
Have another later[3]	7.0	31.2	19.9	12.7	8.1	2.2	3.3	12.9	na	na
Have another, undecided when	6.5	2.5	2.3	3.0	0.9	1.7	1.2	2.4	na	na
Undecided	9.1	10.6	13.9	10.0	9.9	9.7	5.1	9.9	na	na
Want no more	10.0	30.7	40.7	38.6	41.7	37.7	35.0	35.0	na	na
Sterilized[4]	1.5	2.7	11.8	27.1	35.1	44.3	50.8	25.2	na	na
Declared infecund	3.6	1.8	0.8	3.1	0.6	1.7	1.7	1.8	na	na
Missing	1.2	0.7	0.6	0.0	0.0	0.0	0.4	0.4	na	na
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	na	na
Number of women	103	171	218	176	156	134	187	1,145	na	na
MEN[5]										
Have another soon[2]	58.7	26.8	17.9	9.2	3.6	9.4	0.0	16.1	2.9	13.5
Have another later[3]	4.8	24.8	10.9	6.6	1.9	1.3	2.1	8.5	1.6	7.2
Have another, undecided when	9.4	1.1	3.3	1.2	0.0	0.0	0.0	1.8	0.6	1.6
Undecided	12.5	22.8	31.0	22.6	25.0	35.1	9.9	22.6	2.2	18.8
Want no more	12.0	20.7	32.6	58.3	56.8	39.3	73.0	43.3	80.6	50.6
Sterilized[4]	0.0	3.8	4.3	2.1	12.8	14.9	15.0	7.4	12.0	8.0
Declared infecund	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Missing	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	48	93	100	81	69	51	92	534	82	654

na = not applicable

[1] The number of living children includes current pregnancy for women.

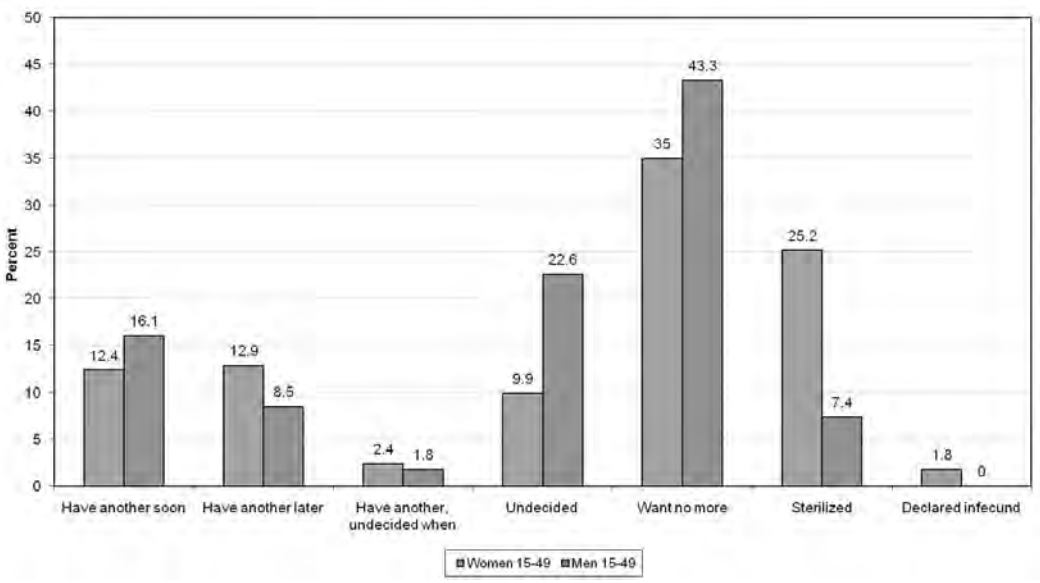
[2] Wants next birth within two years

[3] Wants to delay next birth for two or more years

[4] Includes both female and male sterilization

[5] The number of living children includes one additional child if the respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

Figure 7.1. Fertility preferences among currently married women and men aged 15–49 years



7.2. DESIRE TO LIMIT CHILDBEARING BY BACKGROUND CHARACTERISTICS

Tables 7.2.1 and 7.2.2 present the percentage of currently married women and men who want no more children, by number of living children, according to background characteristics. Overall, about 6 out of every 10 Marshallese women and 5 in 10 men aged 15–49 indicate no desire for more children. Figure 7.2 shows that generally the desire to stop childbearing is higher among women than men from one living child onward, and the difference increases with each child.

Table 7.2.1. Desire to limit childbearing: Women

Percentage of currently married women aged 15–49 who want no more children, by number of living children, according to background characteristics, Marshall Islands 2007

	Number of living children1							
Background characteristic	0	1	2	3	4	5	6+	Total
Residence								
Urban	12.3	37.3	54.1	64.0	74.0	84.6	85.4	59.6
Rural	9.5	24.7	48.6	69.7	81.3	77.5	86.5	61.3
Education								
No education/primary	11.4	37.3	54.7	72.5	87.1	77.7	88.1	67.2
Secondary	7.1	34.1	51.3	64.1	73.5	83.3	85.0	58.8
More than secondary	28.7	27.0	53.9	54.3	75.7	84.5	78.0	51.8
Wealth quintile								
Lowest	16.6	28.3	60.5	65.7	76.6	77.3	90.5	61.9
Second	4.5	33.4	41.0	68.2	81.0	87.5	75.9	59.7
Middle	19.5	24.1	58.0	81.2	88.9	76.1	82.3	62.5
Fourth	0.0	47.0	53.0	76.5	71.2	92.1	95.7	64.2
Highest	19.0	29.7	52.8	45.8	68.8	73.9	83.2	53.3
Total	11.5	33.4	52.4	65.8	76.7	81.9	85.8	60.2

Note: Women who have been sterilized are considered to want no more children.

[1] The number of living children includes the current pregnancy.

Table 7.2.2. Desire to limit childbearing: Men

Percentage of currently married men aged 15–49 who want no more children, by number of living children, according to background characteristics, Marshall Islands 2007

	Number of living children[1]							
Background characteristic	0	1	2	3	4	5	6+	Total
Residence								
Urban	16.1	18.2	42.4	67.1	65.6	43.4	91.2	51.2
Rural	0.0	34.0	25.8	50.0	77.5	72.3	81.1	49.7
Education								
No education/primary	18.7	25.6	33.8	67.0	53.1	71.4	85.6	44.7
Secondary	5.2	31.6	38.5	56.7	72.0	49.2	92.1	54.8
More than secondary	19.6	6.4	36.5	68.3	84.4	52.6	65.2	45.2
Wealth quintile								
Lowest	0.0	32.5	14.1	54.0	69.6	89.4	69.3	44.5
Second	0.0	35.7	37.2	51.8	81.8	62.4	86.4	51.9
Middle	26.7	21.2	50.9	71.2	74.6	51.8	95.2	58.1
Fourth	14.1	18.2	33.8	57.9	55.4	74.5	84.4	48.2
Highest	13.1	20.5	39.9	56.7	73.7	28.2	90.3	48.4
Total 15–49	12.0	24.5	36.9	60.4	69.5	54.1	87.9	50.7
50+	57.0	100.0	100.0	100.0	100.0	76.4	98.1	92.6
Total men 15+	17.3	28.0	39.4	64.7	75.9	61.5	92.1	58.6

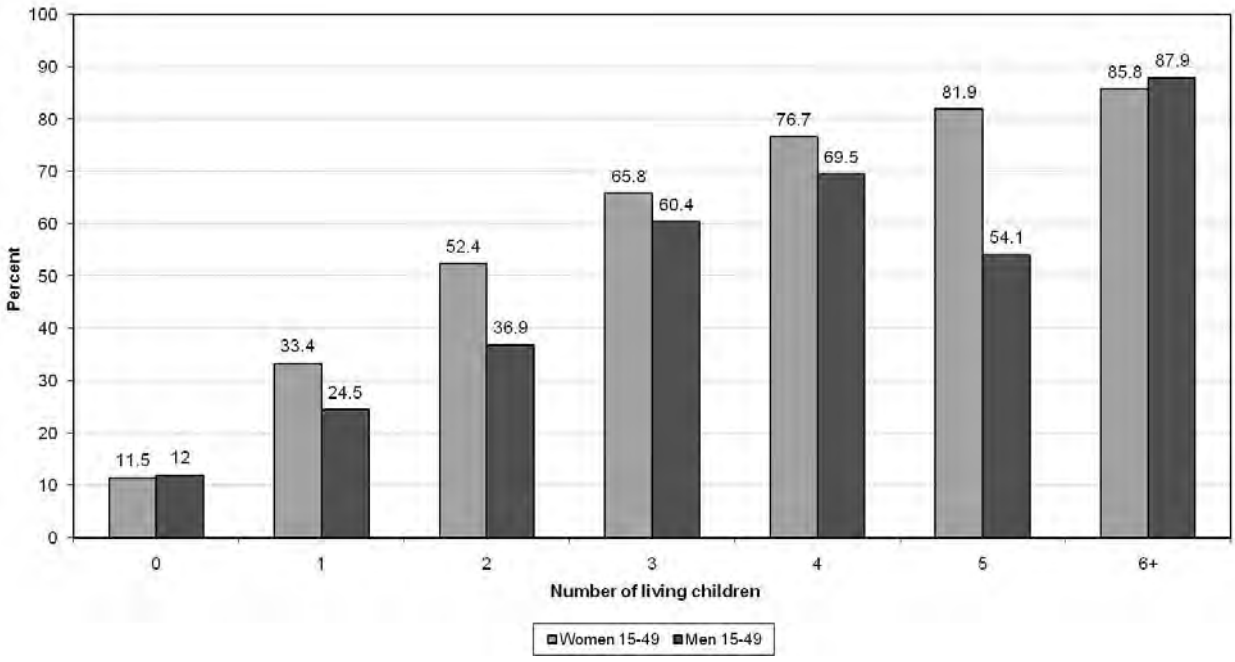
Note: Men who have been sterilized or who state in response to the question about desire for children that their wife has been sterilized are considered to want no more children.

[1] The number of living children includes one additional child if the respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

The proportion of women in rural areas with no desire for more children (61 percent) is not very different from their counterparts in urban areas (60 percent). Women with no or primary education are more likely to report that they do not want more children than their counterparts who are educated beyond secondary level (67 percent compared with 52 percent). On the other hand, the desire to limit childbearing among men is the same (45 percent) between those with no or primary education and those with secondary or more (Table 7.2.2). Marshallese men educated at secondary level, however, are more likely to desire to limit childbearing. This analysis shows that, comparatively, women's education has a more positive relationship with the desire to limit family size then men's.

The analysis of women's and men's desire to limit childbirth by wealth quintile shows that overall there is not much variation in the desire to limit childbearing with increasing wealth quintile. Although the levels are comparatively different between the sexes, with a higher proportion of women than men, the patterns do not produce a strong relationship between household wealth and desire to limit childbearing. There is little difference for low parities, but the effect of wealth quintile on the desire to stop childbearing increases rapidly when the number of children is five or higher.

Figure 7.2. Percentage of currently married women and men aged 15–49 years who want no more children by number of living children



7.3. NEED FOR FAMILY PLANNING SERVICES

In the 2007 RMIDHS, women who indicate that they either want no more children (limiters) or want to wait for two or more years before having another child (spacers), but are not using contraception, constitute a group that has *unmet need for family planning*. Women who are currently using a family planning method are considered to have a met need for family planning. The women with unmet need for family planning and those who are currently using contraception form the total demand for family planning.

Table 7.3.1 presents estimates for unmet need, met need, and total demand for family planning services **for currently married women.** Overall, 8 percent of currently married women have an unmet need for family planning services, 3 percent for spacing, and 5 percent for limiting. Over 4 out of every 10 married women (45 percent) are using contraceptive methods, which constitutes the met need. The total demand for family planning is estimated at 53 percent, and the demand satisfied is 85 percent.

There are substantial differences by background characteristics in the level of unmet need for family planning and the proportion of family planning demand satisfied. Teenage women (age 15–19) are more likely to have higher unmet need both for spacing and for limiting childbirths – 33 percent altogether, or one out of three teenage women – than women aged 20–24 years (12.5 percent) and older women. On the other hand, older women have a higher proportion of their family planning needs met. The very high unmet need in young currently married women aged 15–19 and 20–24 has important implications for the planning of adolescent sexual and reproductive health (ASRH) contraceptive information and services to ensure that the needs for family planning are met.

The differentials by place of residence show that rural women have higher unmet need (10 percent) than their sisters in urban areas – the 10 percent unmet need for rural women is higher than the national average of 8 percent. As regards education there is very little variation, which shows that perhaps the compulsory education policy in RMI assists in information and communication about family planning services and their accessibility. Regarding wealth quintiles, the lower the wealth quintile, the higher the unmet need for family planning.

The met need of family planning – level of contraceptive use – is higher for spacing among young women and for limiting among older women. By rural and urban, there are more current users in rural areas than in urban areas and most use is made for limiting childbearing. The met need for urban dwellers is about 13 percent less than for their rural counterparts (42.7 and 48.3 percent respectively). Met need decreases consistently with educational attainment, whereas the level of current use by household wealth quintile is consistent.

If women aged 15–19 (and 45–49) are excluded, the total demand for family planning services increases with age from 40 percent among women aged 20–24 to 61 percent among women aged 35–39. Teenage currently married Marshallese women have a total demand level of 58 percent (of which 43 percent is satisfied). The total demand is higher in rural areas than urban areas (58 percent and 50 percent respectively). The demand for family planning decreases with level of education and with wealth, from 57 percent in the lowest quintile to 50 percent in the highest quintile.

The percentage of demand satisfied generally increases with age, from 43 percent among teenagers to 100 percent coverage among women in the age group 44–49 years. Both rural and urban dwellers have the same or a similar level of demand satisfied (83.4 and 85.4 respectively). There is not much variation in total demand satisfied at each level of education. As for the percentage of satisfied demand by wealth quintile, if the fourth quintile is excluded, the percentage generally increases with increasing quintile – with the lowest percentage of 75 observed for the lowest quintile.

Table 7.3.1. Need and demand for family planning among currently married women

Percentage of currently married women aged 15–49 with unmet need for family planning, percentage with met need for family planning, total demand for family planning, and percentage of the demand for contraception that is satisfied, by background characteristics, Marshall Islands 2007

Background characteristic	Unmet need for family planning[1]			Met need for family planning (currently using)[2]			Total demand for family planning[1]			Percentage of demand satisfied	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total		
Age											
15–19	11.4	21.8	33.2	12.5	12.5	25.1	23.9	34.3	58.3	43.0	65
20–24	5.5	7.0	12.5	12.8	14.7	27.6	18.4	21.7	40.1	68.8	217
25–29	3.7	5.6	9.3	10.8	30.6	41.4	14.5	36.2	50.7	81.7	240
30–34	2.1	5.5	7.6	9.9	38.5	48.4	12.0	44.0	56.0	86.4	196
35–39	1.0	1.7	2.8	3.4	54.5	57.9	4.5	56.2	60.7	95.4	185
40–44	0.0	1.4	1.4	1.3	55.2	56.6	1.3	56.6	57.9	97.6	141
45–49	0.0	0.0	0.0	0.0	52.9	52.9	0.0	52.9	52.9	100.0	102
Residence											
Urban	3.1	4.2	7.3	6.9	35.9	42.7	10.0	40.1	50.1	85.4	762
Rural	2.8	6.8	9.6	9.6	38.7	48.3	12.4	45.5	57.9	83.4	383
Education											
No education/ primary	2.5	6.4	9.0	7.7	42.4	50.1	10.2	48.9	59.1	84.8	293
Secondary	2.9	4.7	7.6	7.5	35.7	43.2	10.4	40.4	50.8	85.1	721
More than secondary	4.6	4.3	8.9	9.6	30.3	39.9	14.2	34.6	48.8	81.8	131
Wealth quintile											
Lowest	2.9	11.2	14.1	10.2	33.0	43.2	13.1	44.3	57.3	75.4	148
Second	3.0	8.2	11.1	7.7	36.9	44.6	10.7	45.0	55.7	80.0	181
Middle	3.1	6.0	9.1	5.4	38.4	43.8	8.5	44.4	52.9	82.8	220
Fourth	2.0	2.5	4.6	6.2	40.4	46.6	8.2	43.0	51.2	91.1	313
Highest	4.1	2.1	6.2	10.3	33.5	43.8	14.4	35.6	49.9	87.7	284
Total	3.0	5.1	8.1	7.8	36.8	44.6	10.8	41.9	52.7	84.6	1,145

[1] Unmet need for spacing includes pregnant women whose pregnancy was mistimed; amenorrheic women who are not using family planning and whose last birth was mistimed, or whose last birth was unwanted but who now say they want more children; and fecund women who are neither pregnant nor amenorrheic, who are not using any method of family planning, and say they want to wait two or more years for their next birth. Also included in unmet need for spacing are fecund women who are not using any method of family planning and say they are unsure whether they want another child, or who want another child but are unsure when to have the birth. Unmet need for limiting refers to pregnant women whose pregnancy was unwanted; amenorrheic women who are not using family planning, whose last child was unwanted and who do not want any more children; and fecund women who are neither pregnant nor amenorrheic, who are not using any method of family planning, and who want no more children.

[2] Using for spacing is defined as women who are using some method of family planning and say they want to have another child or are undecided whether to have another. Using for limiting is defined as women who are using and who want no more children. Note that the specific methods used are not taken into account here.

Table 7.3.2 presents estimates for unmet need, met need, and total demand for family planning services for all women and for women who are not currently married (see also Table 7.3.2.1). Overall, 6 percent of all women have an unmet need for family planning services, 2 percent for spacing, and 4 percent for limiting. Almost 4 out of every 10 women (37 percent) are using contraceptive methods, which constitutes the met need. The total demand for family planning services for all Marshallese women is estimated at 43 percent, and the demand satisfied is 86 percent (1 percent more than for currently married women).

As with currently married women, there are differences by background characteristics, as can be expected in the level of unmet need for family planning and the proportion of family planning demand satisfied. The percentage of demand satisfied increases with age, from 57 percent for teenagers (age 15–19) to 100 percent for older women (age 45–49 years) – this is contributed largely by the met demand for limiting, which obviously increases by age from a low 4 percent to 55 percent for all women aged 45–49 years. The lowest percentages of demand satisfied are experienced among young women (15–19 years), women in rural areas, and women in the lowest wealth quintile.

Table 7.3.2. Need and demand for family planning for all women, and for women who are not currently married

Percentage of all women and women not currently married aged 15–49 with unmet need for family planning, percentage with met need for family planning, total demand for family planning, and percentage of the demand for contraception that is satisfied, by background characteristics, Marshall Islands 2007

Background characteristic	Unmet need for family planning[1]			Met need for family planning (currently using)[2]			Total demand for family planning			Percentage of demand satisfied	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total		
ALL WOMEN											
Age											
15–19	2.6	4.9	7.5	5.5	4.4	10.0	8.1	9.4	17.5	57.0	306
20–24	3.6	4.5	8.1	11.2	13.9	25.1	14.8	18.4	33.2	75.5	334
25–29	3.0	4.9	7.9	11.1	28.9	40.1	14.2	33.8	48.0	83.5	293
30–34	1.9	5.0	7.0	10.2	38.8	49.0	12.2	43.8	56.0	87.5	213
35–39	0.9	1.6	2.5	3.1	53.2	56.3	4.1	54.8	58.8	95.7	205
40–44	0.0	1.2	1.2	1.2	54.2	55.4	1.2	55.5	56.6	97.8	155
45–49	0.0	0.0	0.0	0.0	54.9	54.9	0.0	54.9	54.9	100.0	119
Residence											
Urban	2.1	3.0	5.1	6.3	28.2	34.5	8.4	31.2	39.6	87.0	1,106
Rural	2.2	5.2	7.4	9.2	33.4	42.6	11.4	38.6	50.0	85.2	519
Education											
No education/ primary	1.7	4.4	6.2	7.0	33.2	40.1	8.7	37.6	46.3	86.7	427
Secondary	2.1	3.5	5.6	6.6	29.2	35.8	8.8	32.7	41.5	86.4	1,016
More than secondary	3.3	3.1	6.4	10.8	26.2	37.0	14.1	29.3	43.4	85.3	182
Wealth quintile											
Lowest	2.1	8.2	10.4	10.4	29.7	40.2	12.6	38.0	50.5	79.5	202
Second	2.4	6.6	9.0	6.8	31.4	38.2	9.2	38.0	47.2	81.0	240
Middle	2.3	4.4	6.7	6.2	32.3	38.4	8.5	36.6	45.2	85.1	300
Fourth	1.3	1.9	3.2	4.7	31.4	36.1	6.1	33.3	39.4	91.8	472
Highest	2.8	1.4	4.2	9.4	25.6	35.0	12.2	27.1	39.3	89.2	412
Total	2.1	3.7	5.9	7.2	29.9	37.1	9.3	33.6	43.0	86.4	1,625

[1] Unmet need for spacing includes pregnant women whose pregnancy was mistimed; amenorrheic women who are not using family planning and whose last birth was mistimed, or whose last birth was unwanted but who now say they want more children; and fecund women who are neither pregnant nor amenorrheic, who are not using any method of family planning, and who say they want to wait two or more years for their next birth. Also included in unmet need for spacing are fecund women who are not using any method of family planning and say they are unsure whether they want another child, or who want another child but are unsure when to have the birth. Unmet need for limiting refers to pregnant women whose pregnancy was unwanted; amenorrheic women who are not using family planning, whose last child was unwanted and who do not want any more children; and fecund women who are neither pregnant nor amenorrheic, who are not using any method of family planning, and who want no more children.

[2] Using for spacing is defined as women who are using some method of family planning and say they want to have another child or are undecided whether to have another. Using for limiting is defined as women who are using and want no more children. Note that the specific methods used are not taken into account here.

As for Marshallese women not currently married, Table 7.3.2.1 presents estimates of their unmet need, their met need, and the total demand for family planning services. Overall, only 0.5 percent of women not currently married have an unmet need for family planning services, which is likely to be contributed by unmet need for limiting for women aged 15–24 years who are likely to live in a rural area, have secondary-level education, and in the second quintile household wealth category. About one out of every five currently not married Marshallese women (19.1 percent) is using contraceptive methods, which constitutes a measure of their met need. These women's total demand for family planning is estimated at about 20 percent (less than half the demand of currently married women, which is 53 percent), and the demand satisfied is 97 percent.

Table 7.3.2.1. Need and demand for family planning for women who are not currently married

Percentage of women not currently married aged 15–49 with unmet need for family planning, percentage with met need for family planning, the total demand for family planning, and percentage of the demand for contraception that is satisfied, by background characteristics, Marshall Islands 2007

Background characteristic	Unmet need for family planning			Met need for family planning (currently using)			Total demand for family planning			Percentage of demand satisfied	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total		
WOMEN NOT CURRENTLY MARRIED											
Current age											
15–19	0.2	0.4	0.6	4.3	3.2	7.5	4.5	3.6	8.1	92.9	263
25–29	0.0	1.2	1.2	12.1	16.8	29.0	12.1	18.1	30.2	95.9	81
30–39	0.0	0.0	0.0	4.7	25.6	30.2	4.7	25.6	30.2	100.0	68
40–49	0.0	0.0	0.0	4.8	36.8	41.6	4.8	36.8	41.6	100.0	67
Residence											
Urban	0.0	0.3	0.3	4.8	11.3	16.2	4.8	11.6	16.5	98.3	343
Rural	0.4	0.7	1.2	8.0	18.6	26.6	8.4	19.3	27.7	95.8	136
Education											
No education/ primary	0.0	0.0	0.0	5.3	13.0	18.3	5.3	13.0	18.3	100.0	134
Secondary	0.2	0.7	0.9	4.5	13.2	17.7	4.7	13.9	18.6	95.4	295
More than secondary	0.0	0.0	0.0	14.0	15.5	29.5	14.0	15.5	29.5	100.0	51
Wealth quintile											
Lowest	0.0	0.0	0.0	11.2	20.6	31.8	11.2	20.6	31.8	100.0	54
Second	0.6	1.7	2.3	4.1	14.7	18.8	4.7	16.4	21.1	89.0	59
Middle	0.2	0.0	0.2	8.4	15.5	23.9	8.7	15.5	24.1	99.0	80
Fourth	0.0	0.6	0.6	1.8	13.5	15.3	1.8	14.1	15.9	96.2	158
Highest	0.0	0.0	0.0	7.4	8.3	15.7	7.4	8.3	15.7	100.0	128
Total	0.1	0.4	0.5	5.8	13.4	19.1	5.9	13.8	19.7	97.3	480

There are some differences observed by background characteristics in the level of unmet need for family planning and the proportion of family planning demand satisfied for these currently not married women; however, overall, between 90 and 100 percent of these women's family planning demands are satisfied.

7.4. IDEAL NUMBER OF CHILDREN

The 2007 RMIDHS asked women and men about the total number of children they would like to have in their lifetime. For respondents who already had living children, the question was posed hypothetically: *If you could go back to the time when you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?* Table 7.4 presents the distribution of women and men aged 15–49 years by their ideal number of children.

Table 7.4. Ideal number of children

Percent distribution of women and men aged 15–49 by ideal number of children, and mean ideal number of children for all respondents and for currently married respondents, according to number of living children, Marshall Islands 2007

Ideal number of children	Number of living children							Total
	0	1	2	3	4	5	6+	
WOMEN[1]								
0	14.6	3.4	2.6	4.0	4.3	4.0	9.3	7.0
1	6.6	19.3	1.3	3.0	2.7	0.0	1.3	5.6
2	40.3	40.6	34.7	19.1	13.9	6.4	12.5	27.5
3	14.2	12.8	18.4	31.4	5.5	8.6	6.1	14.2
4	15.6	17.2	30.9	30.5	52.5	23.2	21.6	25.5
5	3.9	2.5	4.6	5.1	9.2	33.1	4.8	7.1
6+	3.8	2.0	4.9	5.2	9.8	20.6	36.0	10.2
Non-numeric responses	1.2	2.2	2.6	1.6	2.0	4.3	8.4	2.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	396	252	255	194	176	139	212	1,625
Mean ideal number of children for:[2]								
All women	2.4	2.4	3.2	3.3	3.8	4.6	4.7	3.3
Number	391	246	249	191	172	133	194	1,578
Currently married women	2.9	2.6	3.3	3.3	3.9	4.6	4.6	3.6
Number	103	168	211	173	154	129	170	1,108
MEN[3]								
0	7.0	7.7	3.7	3.7	14.9	5.8	12.5	7.5
1	10.2	12.2	3.8	2.6	0.0	0.0	0.0	6.5
2	32.6	30.7	28.8	8.0	18.0	14.4	6.4	24.5
3	21.6	22.3	21.3	31.0	13.3	9.3	7.0	19.6
4	12.8	16.4	17.2	18.9	18.9	5.4	18.3	15.1
5	6.3	4.4	11.3	20.2	20.9	27.4	4.9	10.1
6+	6.8	4.6	7.4	15.7	12.6	36.4	43.8	13.5
Non-numeric responses	2.7	1.7	6.5	0.0	1.4	1.3	7.1	3.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	356	134	117	85	71	51	99	913
Mean ideal number children for:[2]								
All men	2.9	2.9	3.2	4.0	3.5	5.2	5.3	3.5
Number	346	132	109	85	70	50	92	885
Currently married men	2.4	2.9	3.1	4.1	3.5	5.2	5.4	3.8
Number	48	92	93	81	68	50	86	518
Mean ideal number children for men 15+:[2]								
All men	2.9	2.9	3.2	4.1	3.4	5.1	5.5	3.7
Number	352	136	114	94	89	68	148	1,021
Currently married men	2.4	2.9	3.1	4.1	3.4	5.1	5.6	4.0
Number	54	96	98	90	86	68	141	633

[1] The number of living children includes current pregnancy for women.

[2] Means are calculated excluding respondents who gave non-numeric responses.

[3] The number of living children includes one additional child if the respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

Generally, men express a desire for a slightly larger family than women. The mean ideal number of children among all women is 3.3 children, and among all men it is 3.5 children. Compared to the ideal family size among all women, the ideal family size for currently married women is slightly higher (3.6 children). Married men aged 15–49 have a slightly higher mean ideal family size than all men in that age group (3.8 children).

Among all women aged 15–49, the ideal number of children increases from 2.4 children for women with no living children to 4.7 children for women with six or more children. A similar pattern is shown among men aged 15–49, although the level is a little higher and the range is about the same: 2.9 children for men with no living children and 5.3 children for men with six or more children.

The desired family size falls below the actual number of children for those women who currently have four or more children and from six children for men. This is an indication that women who have had four or more children would have liked to have fewer children and could not realize their goals due to unwanted births.

Table 7.5. Mean ideal number of children

Mean ideal number of children for all women aged 15–49 by background characteristics, Marshall Islands 2007

Background characteristic	Mean	Number of women[1]
Age		
15–19	2.2	299
20–24	2.7	330
25–29	3.0	286
30–34	3.9	209
35–39	4.2	200
40–44	4.2	148
45–49	4.4	106
Residence		
Urban	3.2	1,081
Rural	3.3	497
Education		
No education/primary	3.4	411
Secondary	3.2	990
More than secondary	3.2	176
Wealth quintile		
Lowest	3.4	195
Second	3.4	232
Middle	3.3	286
Fourth	3.2	457
Highest	3.2	408
Total	3.3	1,578

[1] Number of women who gave a numeric response

The mean ideal number of children among women aged 15–49 by background characteristics is presented in Table 7.5. The average ideal number of children increases steadily with age. The mean ideal number of children is 2.2 for women aged 15–19 and 4.4 for women aged 45–49. Rural–urban differentials show that there is not much difference; however, urban women are more likely to want fewer children than rural women (3.2 children and 3.3 children respectively).

Considering the educational levels of respondents, there is very little variation; however, in general the mean ideal number of children declines with increased education. Women with no or primary education prefer 3.4 children, while those with secondary or higher education prefer 3.2 children.

The analysis by wealth quintile shows a similar trend to the analysis by education level of women. The mean ideal number of children increases from 3.2 children for women in the highest wealth quintile to 3.4 children for those in the lowest quintile.

7.5. FERTILITY PLANNING

To measure the level of unwanted fertility during the 2007 RMIDHS, women were asked, for all children born in the preceding five years, whether the pregnancy was wanted at the time, wanted but at a later time, or not wanted at all. For women who were pregnant at the time of the interview, this question was also asked with reference to the current pregnancy. The procedure required the respondents to recall accurately their wishes at one or more points in the last five years. Care has to be exercised in interpreting the results because an unwanted conception may have become a cherished child, leading to rationalization of responses to the question.

According to Table 7.6, 49 percent of births in the five years preceding the survey were wanted then, 15 percent were wanted later (mistimed), and 35 percent were not wanted at the time they were conceived. This finding indicates an increase in demand for birth limiting, which is roughly consistent with the increase in unmet need for birth limiting observed in Table 7.3.1.

Looking at fertility planning status by birth order and age of the mother, the data show that the proportion of births that were wanted then varies with the birth order, but there is no clear direction (that is, either increase or decrease) with those characteristics. For example, although 48 percent of first births were wanted then, there were also about 47 percent of fourth- or higher-order births that were wanted at the time they occurred, whereas over 50 percent of the second- and third-order births were wanted at the time they occurred. On the other hand, the percentage of births that are unwanted changes markedly from 30 percent of third-order births to 42 percent of fourth- and higher-order births.

In addition, fertility planning status increases with age of the mother, as indicated in the steady increase of ‘wanted then’ with age of the mother, from 36.9 percent for the younger age group to 61.6 percent for older mothers. Women aged less than 20 years are much more likely to report their birth in the five years before the survey as unwanted than women over the age of 20 years. Altogether, 62 percent of births to teenage mothers were not wanted or not timely (43 percent unwanted and 19 percent wanted later).

Table 7.6. Fertility planning status

Percent distribution of births to women aged 15–49 in the five years preceding the survey (including current pregnancies), by planning status of the birth, according to birth order and mother's age at birth, Marshall Islands 2007

Birth order and mother's age at birth	Planning status of birth				Total	Number of births
	Wanted then	Wanted later	Wanted no more	Missing		
Birth order						
1	47.9	18.8	32.7	0.6	100.0	338
2	51.1	17.1	31.9	0.0	100.0	281
3	55.0	15.0	29.7	0.3	100.0	194
4+	46.5	12.0	41.5	0.0	100.0	437
Mother's age at birth						
<20	36.9	19.6	42.6	0.9	100.0	225
20–24	52.1	15.9	31.8	0.2	100.0	428
25–29	50.8	17.0	32.2	0.0	100.0	314
30–34	50.1	11.8	38.1	0.0	100.0	174
35–39	61.6	6.7	31.7	0.0	100.0	94
40–49	*	*	*	*	100.0	15
Total	49.2	15.4	35.1	0.2	100.0	1,250

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

The wanted fertility rate measures the potential demographic impact of avoiding unwanted births. It is calculated in the same manner as the conventional total fertility rate, except that unwanted births are excluded. A birth is considered wanted if the number of living children at the time of conception was fewer than the ideal number of children reported by the respondent. The gap between wanted and actual fertility shows how successful women are in achieving their reproductive intentions.

A comparison of the total wanted fertility rates and total fertility rates for the three years preceding the survey by background characteristics is presented in Table 7.7. The data reveal that if all unwanted births are eliminated, the total fertility rate in RMI is 3.3 children per woman instead of the actual total fertility rate of 4.5 children per woman.

Table 7.7. Wanted fertility rates

Total wanted fertility rates and total fertility rates for the three years preceding the survey, by background characteristics, Marshall Islands 2007

Background characteristic	Total wanted fertility rates	Total fertility rate
Residence		
Urban	3.0	4.1
Rural	4.0	5.2
Education		
No education/primary	3.2	4.4
Secondary	3.6	4.7
More than secondary	2.4	3.2
Wealth quintile		
Lowest	4.4	5.7
Second	3.8	4.9
Middle	3.9	4.9
Fourth	2.8	4.1
Highest	2.8	3.7
Total	3.3	4.5

Note: Rates are calculated based on births to women aged 15–49 in the period 1–36 months preceding the survey. The total fertility rates are the same as those presented in Table 4.2.

Considerable variation is observed in the total wanted fertility rate by background characteristics. The gap between actual and wanted fertility for most of the above characteristic categories is within the 1.0–1.3 range. The lowest gap in fertility is found for women with above secondary-level education (0.8 children) and for women in the highest household wealth quintile (0.9 children).

CHAPTER 8. INFANT AND CHILD MORTALITY

This chapter presents estimates of levels, trends, and differentials of neonatal, postneonatal, infant, and childhood mortality as well as perinatal mortality in the Republic of the Marshall Islands. The information presented in this chapter is important not only for demographic assessment of the country's population, but also for the design and evaluation of health policies and programs. According to the latest RMI Government health objectives and outcomes document, primary and preventative health services are priority targets toward improving the quality of life of the Marshallese people, which includes the reduction of infant and childhood mortality and the incidence of high-risk pregnancies. The estimates of infant and child mortality presented here also serve as an input into population projections, particularly if the level of adult mortality is known from another source or can be inferred with reasonable confidence. They also serve the needs of the Health Ministry by identifying categories of the population, particularly babies and their mothers, that are at high risk of mortality.

8.1. DEFINITIONS, METHODOLOGY, AND ASSESSMENT OF DATA QUALITY

The childhood mortality measures or indicators presented in this chapter are defined as:

Neonatal mortality: the probability of dying within the first month of life

Infant mortality: the probability of dying between birth and the first birthday

Postneonatal mortality: the arithmetical difference between infant and neonatal mortality

Child mortality: the probability of dying between exact age one and the fifth birthday

Under-five mortality: the probability of dying between birth and the fifth birthday

The data used in the estimation of these mortality rates were collected in the birth history section of the 2007 RMIDHS women's questionnaire. The section began with questions about the respondent's childbearing experience, i.e. the number of sons and daughters who live in the household, those who live elsewhere, and those who have died. Next, for each live birth, information on name, date of birth, sex, whether the birth was single or multiple, and survivorship status was recorded. For each living child, information about his/her age and whether the child resided with his/her mother was obtained. For children who had died, the respondent was asked to provide their age at death.

A retrospective birth history, such as that included in the 2007 RMIDHS, is susceptible to several data collection errors. First, only surviving women aged 15–49 were interviewed; therefore, no data are available for children of women who have died. The resulting mortality estimates will be biased if the child mortality of surviving and non-surviving women differs substantially. Another possible error in data collection is underreporting of events (births and deaths), especially in cases where death occurs early in infancy. If such deaths are selectively omitted, the consequence will not only be a lower infant mortality rate (IMR) and neonatal mortality rate (NNMR), but also a low ratio of neonatal deaths to infant deaths and early neonatal deaths (within one week) to neonatal deaths. It is believed that underreporting of early infant deaths may increase with the length of time since a child's death, e.g. an early infant death that occurred 10 years before the survey may be more likely to be omitted than an early infant death two years before the survey. Thus, an examination of these patterns over time is critical.

8.1.1. Reporting of children's birth dates

Misstatement of date of birth and age at death will result in distortion of the age pattern of death. This may affect the final indices obtained because of shifting ages above or below the borderline ages. Many DHS reports worldwide have reported evidence of age shifting or heaping to years outside of the required cutoff year to avoid administering the lengthy birth-history-related questions. In the case of the 2007 RMIDHS, evidence from Appendix Table C.4 shows that there was no serious shift in the reporting of births during the operations. This is not to say that this was not the case, however – probably there were cases where interviewers shifted dates, but not enough to show heaping in Table C.4.

8.1.2. Reporting of children's age at death

Another aspect that affects childhood mortality estimates is the accurate reporting of age at death. In general, this problem is less serious for periods in the recent past than for those in the more distant past. If the ages are misreported, it will bias the estimates, especially if the net effect of the age misreporting results in transference of deaths from one age bracket to another. For example, a net transfer of deaths from under one year to one year and older will decrease the estimate of infant mortality and increase the estimate of child mortality. To minimize errors in the reporting of age at death, the 2007 RMIDHS interviewers were instructed to record the age at death in days if the death took place within one month after birth, in months if the child died within 24 months, and in years if the child was two years or older.

The distribution of child deaths by the age of the child at death is shown in Appendix Table C.5. The table shows that age heaping at ages seven days, 14 days, and 21 days, which are usually observed in other DHS, are not a concern in the RMI results. Although age heaping at 14 days and 21 days may not bias any indicator, heaping at seven days usually leads to a lower estimate of early neonatal mortality and perinatal mortality. However, since this is not the case in RMI, the results can be confidently incorporated into policy/planning decision support.

Appendix Table C.6 presents the distribution of deaths under two years by age at death in months over a 20-year period, split into groups of five years. Neonatal deaths constituted 68 percent of all infant deaths, which is considered quite high. The rates vary within a narrow range (53–73 percent) over the 20 years prior to the survey. Similar to the Table C.5 discussion, Table C.6 shows no evidence of heaping at age 12 months, which might have had an impact on the estimation of IMR.

Finally, some caution should also be exercised when comparing the early childhood mortality results from the 2007 RMIDHS to estimates from other data sources, which have been calculated using a different technique. In RMI, childhood mortality rates have been typically computed using two approaches: direct and indirect techniques. Direct mortality estimates have been computed from the 2007 DHS using information collected using the birth history table, and birth registration data. On the other hand, lacking the necessary information for producing estimates using direct methods, population censuses give indirect estimates based on the number of children ever born and children surviving to women aged 15–49 years. The underlying assumptions used in the indirect methods can introduce a potential bias in the estimate.

8.2. EARLY CHILDHOOD MORTALITY RATES: LEVELS AND TRENDS

The 2007 RMIDHS collected birth histories from roughly 1,625 women. The early childhood mortality rates for the 15-year period preceding the survey are presented by five-year periods in Table 8.1.

Table 8.1. Early childhood mortality rates

Neonatal, postneonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey, Marshall Islands 2007

Years preceding the survey		Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality (1q0)	Child mortality (4q1)	Under-five mortality (5q0)
0–4	(2003–2007)	15	6	21	16	37
5–9	(1998–2002)	32	14	46	11	56
10–14	(1993–1997)	7	8	15	12	26

[1] Computed as the difference between the infant and neonatal mortality rates

For the most recent period (i.e. 0–4 years before the survey, reflecting roughly 2003–2007), the infant mortality rate is 21 deaths per 1,000 live births. This means that two in every 100 babies born in RMI do not live to their first birthday. Of those who survive to their first birthday, 16 out of 1,000 die before reaching their fifth birthday. The overall under-five mortality is 37 deaths per 1,000 live births, which implies that four in every 100 Marshallese babies do not survive to their fifth birthday.

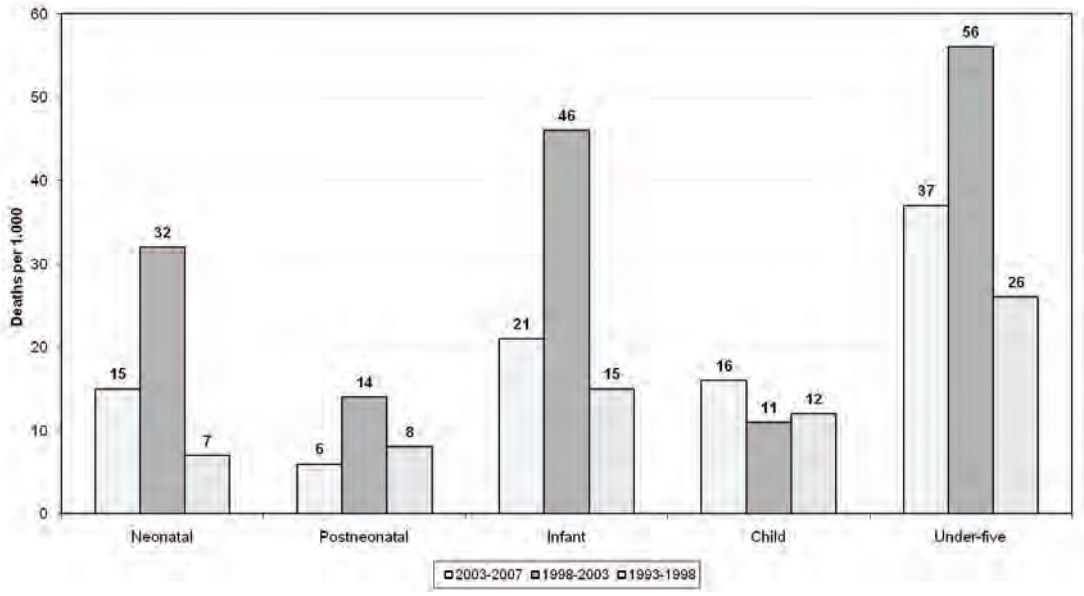
The first month of life is associated with the highest risk to survival. The neonatal mortality rate is 15 deaths per 1,000 live births, implying that nearly two out of every 100 infant deaths occur during the first month of life. As childhood mortality declines, postneonatal mortality usually declines faster than the neonatal mortality because neonatal mortality is frequently caused by biological factors that are not easily addressed by primary care interventions. Postneonatal mortality is six per 1,000 births among Marshallese infants.

The mortality estimates in Table 8.1 for the period 1998–2003 increase from the low levels observed for the period 1993–1998. For example, a very high-level increase is observed in neonatal deaths between 1993 and 1998 and 1998–2003, from seven deaths per 1,000 live births to 32 per 1,000 – a fivefold increase, which is mainly responsible for the increase in the infant mortality of Marshallese babies during the same period.

Another way of examining mortality levels is by comparing the 2007 RMIDHS figures with rates from other sources, such as the 2004–2006 births/deaths registration data, which were collected from health registration systems and calculated with a similar technique to that which produces the IMR for RMI, at 33 deaths per 1,000 live births compared to 21 deaths per 1,000 live births (2003–2007) from the 2007 DHS. It should be noted that the IMR derived from the health registration data (33) is a three-year average, whereas the one derived from the DHS (21) is a five-year average.

A comparison of the mortality estimates from these two sources shows a similar level. Data from the 2007 RMIDHS show that the situation of childhood mortality in RMI perhaps worsened in the period 1998–2003 compared to the earlier period 1993–1998. This worsened situation is observed in all components of childhood mortality. The infant mortality rate increased from 15 per 1,000 live births during the period 1993–1998 to 46 per 1,000, and under-five mortality increased from 26 to 56 (see Figure 8.1).

Figure 8.1. Mortality trends



8.3. EARLY CHILDHOOD MORTALITY BY SOCIOECONOMIC CHARACTERISTICS

Table 8.2 presents early childhood mortality rates in RMI by socioeconomic characteristics. The rates refer to the 10-year period 1998–2007. Typically, mortality rates are calculated for the five-year period preceding the survey. To provide better and more stable estimates for smaller subgroups, the 10-year period before the survey is used. As expected, and as evidenced from sources such as censuses, there are differences between the mortality levels in the urban population and those of the rural population. For example, the IMR in rural RMI during the 10 years before the 2007 DHS is 37 deaths per 1,000 births, as opposed to 30 in urban areas. This rural IMR of 37 is above the national average of 33 deaths per 1,000 births. The urban–rural gap in childhood mortality appears to be consistent as the age of children increases, except for postneonatal mortality, where there is no difference between rural and urban populations, and child mortality, where the gap is quite small (one death per 1,000). Surprisingly, the probability of dying between the first and fifth birthday for urban infants is 8 percent higher than for rural infants.

In comparing the mortality rates for urban and rural areas, it is important to note that ‘urban’ covers only two islands: Majuro and Ebeye; these two islands are home to over 68 percent of the total population of RMI. Both islands are entirely urban and have a different socioeconomic environment in terms of general sanitation and nutrition; however, a large proportion of the population is not employed by the formal sector.

Table 8.2. Early childhood mortality rates by socioeconomic characteristics

Neonatal, postneonatal, infant, child, and under-five mortality rates for the 10-year period preceding the survey, by background characteristics, Marshall Islands 2007

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality (1q0)	Child mortality (4q1)	Under-five mortality (5q0)
Residence					
Urban	21	10	30	14	44
Rural	27	10	37	13	49
Mother's education					
No education/primary	14	14	28	19	47
Secondary	27	8	35	13	47
More than secondary	*	*	*	*	*
Wealth quintile					
Lowest	(29)	(10)	(39)	(12	(51)
Second	(16)	(19)	(35)	(34	(68)
Middle	(34)	(11)	(45)	(12)	(56)
Fourth	(28)	(5)	(34)	(7)	(40)
Highest	(9)	(7)	(16)	(9)	(24)
Total	23	10	33	14	46

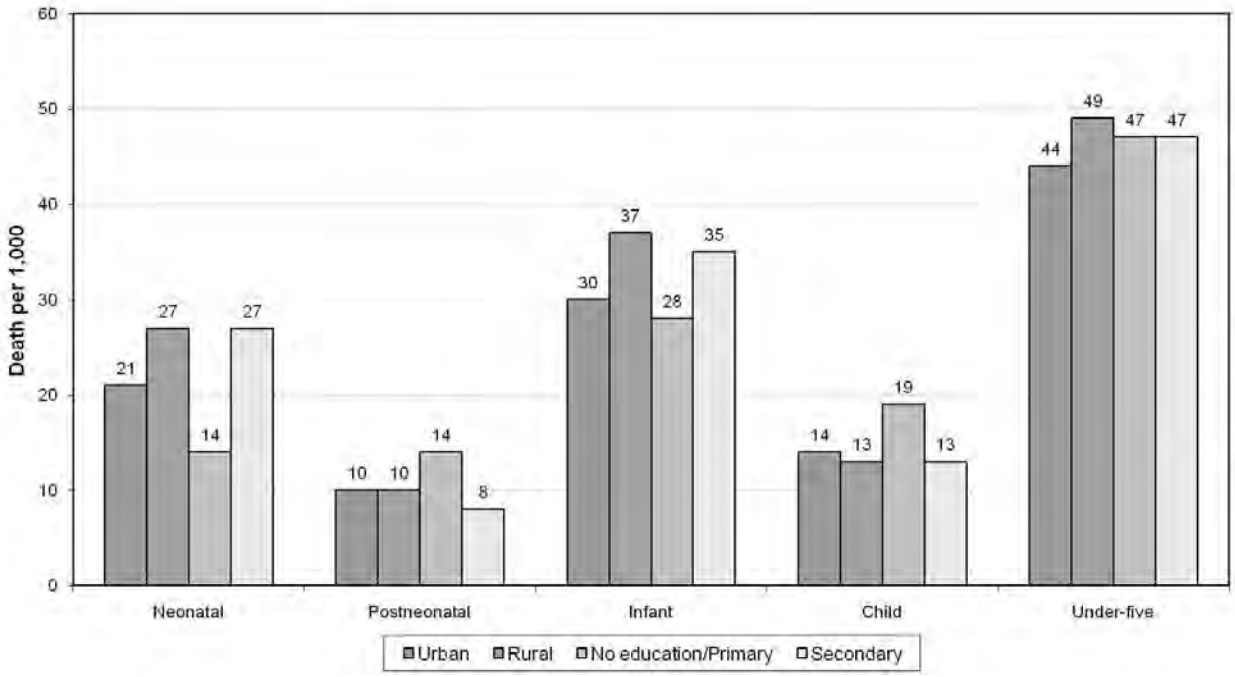
Note: For mortality rates, parentheses are used if based on 250–499 children exposed in any of the component rates, and an asterisk is used if based on fewer than 250 children.

[1] Computed as the difference between the infant and neonatal mortality rates

Mother's education is strongly associated with higher rates of child survival. In general, children born to a mother with secondary or higher education have by far the lowest rates for all types of childhood mortality. However, the situation presented for RMI in Table 8.2 shows that for neonatal mortality, 27 deaths per 1,000 births were observed for mothers with secondary-level education compared to 14 per 1,000 for mothers with no education or primary education. In other words, the probability of a baby dying in the first month of life for mothers with secondary education is 46 percent higher than for infants whose mothers have no or primary-level education. This contributes directly to the above-national-average IMR of 35 deaths per 1,000 to mothers with secondary-level education, compared to 28 deaths per 1,000 for mothers with no or primary education. The same information is presented in picture form in Figure 8.2.

In contrast, postneonatal mortality and childhood mortality are higher for mothers with no or primary-level education than for mothers with secondary education. This leads to the observation that the under-five mortality rates for children whose mothers had no or primary education and those whose mothers had secondary education are the same, at 47 deaths per 1,000. It is worth noting that most of the benefit of secondary education over no or primary education is due to a difference in the IMR (28 versus 35). There is virtually no difference between children of women with secondary education and women with no or primary education in under-five mortality rates. Thus, it is reasonable to assume that universal education in RMI could be helping to lower the levels of under-five mortality, particularly improving the survival of children between their first and fifth birthdays.

Figure 8.2. Mortality levels by selected socioeconomic characteristics



It is generally noted that the wealth status of a woman's household is inversely associated with childhood mortality. Although there are several exceptions to this general guide in the case of RMI as presented in Table 8.2, children in the highest quintile of the household population have the lowest mortality rates, while those in the middle to lowest quintile have the highest mortality rates. Please note that *caution should be taken in interpreting the results due to the small number of children on which the rates are based.*

The mortality differentials observed by the socioeconomic characteristics of the mother are greater for the neonatal period than for the postneonatal period. This is undoubtedly due to the fact that most causes of neonatal mortality are more biological and less amenable to socioeconomic interventions, whereas causes of postneonatal mortality are more connected to standard-of-living factors. This means that efforts to reduce infant mortality in RMI will yield greater results if they are targeted at mothers' and households' behavioral factors. Thus, it is safe to assume that besides education, the declining infant mortality could also be the result of RMI Government interventions targeting issues related to mothers' and households' attitudes and practices**.**

8.4. EARLY CHILDHOOD MORTALITY BY DEMOGRAPHIC CHARACTERISTICS

The demographic characteristics of both mother and child have been found to play an important role in the survival probability of children. Table 8.3 presents early childhood mortality by a number of these characteristics, including sex of child, mother's age at birth, birth order, and previous birth interval.

As is commonly observed in demographic data, mortality levels in RMI are consistently higher among male children than among female children. The IMR for males is 6 percent higher than that for females. As expected, the differences between mortality rates for male and female children are highest in the neonatal period (42 percent).

The results in Table 8.3 are in agreement with the traditional hypothesis of 'too early and too late increases child's mortality'. In RMI, children born 'too early' (mother <20 years) are disadvantaged compared with children born to mothers aged between 20 and 39 years. Given that the sample is too small, the hypothesis that 'too late increases child's mortality' cannot be tested; however, it is likely that the hypothesis is also true in the Marshallese case. In RMI, children born to mothers aged less than 20 years have a 91 percent higher risk of dying before one month of age than children born to mothers aged 30–39.

The effect of birth order affects one's risk of survival mostly during infancy, and for RMI the first birth is particularly of much higher mortality risk than higher-order births. For example, in the case of neonatal mortality the risk is 76 percent higher than the risk for birth order 2–3. For those children surviving the neonatal period, IMR increases slightly for higher birth orders. In the case of under-five mortality, fourth- to sixth-order births have the lowest risk (28 per 1,000) of dying before age five. The risk of dying before age five for seventh- and higher-order births is represented by asterisks because it is based on fewer than 250 children and is therefore considered unreliable.

The data in Table 8.3 also show that short birth intervals are associated with increased risk of mortality. The shortest birth interval, less than two years, carries the greatest risk of mortality, and the risk of mortality is generally observed to decline with each increase in the length of the birth interval. For example, children born less than two years after a previous birth are about 81 percent more likely to die before reaching age five than those born four years or more after the last birth. The 2007 RMIDHS data therefore reinforce the need to promote child spacing as a way of enhancing child survival.

Table 8.3. Early childhood mortality rates by demographic characteristics

Neonatal, postneonatal, infant, child, and under-five mortality rates for the 10-year period preceding the survey, by demographic characteristics, Marshall Islands 2007

Demographic characteristic	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality (1q0)	Child mortality (4q1)	Under-five mortality (5q0)
Child's sex					
Male	27	7	34	13	46
Female	19	12	32	14	45
Mother's age at birth					
<20	(44)	(15)	(59)	(13)	(71)
20–29	17	10	27	12	39
30–39	(23)	(5)	(28)	(18)	(46)
40–49	*	*	*	*	*
Birth order					
1	37	12	49	(12)	(61)
2–3	21	13	34	17	50
4–6	12	6	18	(10)	(28)
7+	*	*	*	*	*
Previous birth interval[2]					
<2 years	28	2	30	(18)	(47)
2 years	(15)	(18)	(33)	(7)	(40)
3 years	*	*	*	*	*
4+ years	(7)	(3)	(10)	(15)	(26)
Total	23	10	33	14	46

Note: For mortality rates, parentheses are used if based on 250–499 children exposed in any of the component rates, and an asterisk is used if based on fewer than 250 children.

[1] Computed as the difference between the infant and neonatal mortality rates

[2] Excludes first-order births

8.5. EARLY CHILDHOOD MORTALITY BY STATUS OF WOMEN

This section presents information on indicators of women's empowerment, develops three empowerment indices, and relates those indices to early childhood mortality outcomes. The 2007 RMIDHS women's questionnaire collected data on the general background characteristics of female respondents (e.g. age, education, wealth quintile, employment status) and also data more specific to women's empowerment, such as household decision-making and reasons for which violence against women is justified. This section tabulates and presents early childhood mortality rates classified by two of the indicators of women's empowerment – a woman's participation in household decision-making, and her attitude toward violence against women. That is, these measures of empowerment were developed based on the number of household decisions in which the respondent participates, and her opinion on the number of reasons that justify violence against women. These measures were used to cross-tabulate early childhood mortality indicators to determine the relationship between women's empowerment and childhood mortality outcomes, as presented in Table 8.4.

Table 8.4. Early childhood mortality rates by women's status

Infant, child, and under-five mortality rates for the 10-year period preceding the survey, by indicators of women's status, Marshall Islands 2007

Empowerment indicator	Infant mortality (1q0)	Child mortality (4q1)	Under-five mortality (5q0)
Number of decisions in which women participate[1]			
0	(23)	*	*
1–2	(24)	*	*
3–4	35	14	48
Number of reasons[2] for which violence against women is justified			
0	26	11	37
1–2	*	*	*
3–4	43	(14)	(57)
5	(20)	(16)	(36)

Note: For mortality rates, parentheses are used if based on 250–499 children exposed in any of the component rates, and an asterisk is used if based on fewer than 250 children.

[1] Restricted to currently married women. See Table 15.5.1 for the list of decisions.

[2] See Table 13.6.1 for the list of reasons

For participation in decision-making processes in the household, there does not appear to be any clear correlation between women's empowerment and early childhood mortality. However, Table 8.4 shows that the probability of babies dying before reaching their first birthday is low among babies born to mothers who have a low participation level in decision-making compared to babies born to mothers who participate in 3–4 decision-making opportunities. Whether the low levels of IMR observed are correlated to non-participation in decision-making processes is not certain.

The 2007 RMIDHS also gathered information on women's attitudes toward violence against women, a proxy for women's perception of their status. Women who believe that a husband is justified in hitting or beating his wife for any of the specified reasons may believe themselves to be low in status, both absolutely and relative to men. Such a perception could act as a barrier to accessing health care for themselves and their children, affect their attitude toward contraceptive use, and impact their general well-being. Women were asked whether a husband is justified in committing violence against his wife under a series of circumstances, including if the wife burns the food, argues with him, goes out without telling him, neglects the children, or refuses sexual relations, among others. Reading the cross-tabulation of early childhood mortality by this empowerment indicator (Table 8.4) shows that the probability of babies dying before reaching their first birthday is low among babies born to mothers who provided zero or fewer than two reasons for husbands hitting their wives compared to those born to mothers who provided 3–4 reasons. This suggests that perhaps there exists some correlation between violence against women and infant mortality.

8.6. PERINATAL MORTALITY

In the 2007 RMIDHS, women were asked to report all pregnancy losses in the five years before the survey. For each such pregnancy, the duration was recorded. In this report, perinatal deaths include pregnancy losses occurring after seven completed months of gestation (stillbirths) and deaths to live births within the first seven days of life (early neonatal deaths). The distinction between a stillbirth and an early neonatal death may be a fine one, depending often on the observed presence or absence of some faint signs of life after birth. The causes of stillbirths and early neonatal deaths overlap, and examining just one or the other can understate the true level of mortality around the time of delivery. For this reason, in this report the two event types are combined and examined together.

The perinatal mortality rate is the sum of the number of stillbirths and early neonatal deaths divided by the number of pregnancies of seven or more months' duration. The perinatal mortality rate is a useful indicator of the state of delivery services, in terms of both their utilization and their quality, i.e. the degree to which complications arising during childbirth and the immediate postpartum are prevented or managed effectively. Data in Table 8.5 show that overall, the survey recorded 27 perinatal deaths, of which 10 were stillbirths and 17 were early neonatal deaths, resulting in a perinatal mortality rate in RMI of 23 per 1,000 pregnancies.

Perinatal mortality is highest among women in the youngest age group and decreases as the age of the mother increases. Table 8.5 further demonstrates that the duration of the previous pregnancy interval is strongly related to pregnancy outcome. Pregnancies occurring within 15 months of a previous birth and first pregnancies have the highest risk of pregnancy loss or early death (42 and 38 pregnancy losses or early deaths per 1,000 pregnancies, respectively). The safest pregnancy interval is 39 months and over (11 pregnancy losses or early deaths per 1,000 pregnancies), which has over three times less risk than the risk for first pregnancies and pregnancies with a birth interval of less than 15 months.

The perinatal mortality rate in rural areas is very high compared with that in urban areas (30 pregnancy losses or early deaths per 1,000 compared to 19 per 1,000). In other words, the risk of pregnancy losses in rural areas is 58 percent higher than the risk in urban areas.

Evidence noted in Table 8.5 indicates that in RMI, perinatal mortality increases with the level of education of the mother, with the largest difference being observed between women with no or primary education and those with more than secondary education (20 pregnancy losses or early deaths per 1,000 pregnancies compared with 25). Perinatal mortality is lowest among women with no or primary education (20 pregnancy losses or early deaths per 1,000 pregnancies). This pattern is similar to that observed for other childhood mortality measures discussed in previous sections. Meanwhile, there is no clear relationship between the wealth quintile and the level of perinatal mortality, except to note that perinatal mortality is highest among the lowest quintile household population.

Table 8.5. Perinatal mortality

Number of stillbirths and early neonatal deaths, and the perinatal mortality rate, for the five-year period preceding the survey, by background characteristics, Marshall Islands 2007

Background characteristic	Number of stillbirths[1]	Number of early neonatal deaths[2]	Perinatal mortality rate[3]	Number of pregnancies of 7+ months duration
Mother's age at birth				
<20	0	7	31	212
20–29	5	10	21	702
30–39	3	1	17	254
40–49	*	*	*	14
Previous pregnancy interval in months				
First pregnancy	3	9	38	312
<15	1	3	42	89
15–26	1	4	20	295
27–38	1	1	12	203
39+	3	1	11	284
Residence				
Urban	6	8	19	757
Rural	3	10	30	425
Mother's education				
No education/primary	4	1	20	271
Secondary	5	13	24	799
More than secondary	0	2	25	108
Wealth quintile				
Lowest	2	5	36	185
Second	1	3	20	199
Middle	0	4	16	225
Fourth	3	4	20	324
Highest	4	2	24	249
Total	10	17	23	1,182

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Stillbirths are fetal deaths in pregnancies lasting seven or more months.

[2] Early neonatal deaths are deaths at age 0–6 days among live-born children.

[3] The sum of the number of stillbirths and early neonatal deaths divided by the number of pregnancies of seven or more months' duration, expressed per 1000

8.7. HIGH-RISK FERTILITY BEHAVIOR

The 2007 RMIDHS examined the relative importance of maternal fertility patterns associated with increased risk of mortality. Generally, infants and children have a greater probability of dying if they are born to mothers who are too old or too young, if they are born after a short birth interval, or if they are of high birth order. In the analysis of the effects of high-risk fertility behavior on child survival, a mother is classified as too young if she is less than 18 years of age, and too old if she is over 34 years of age at the time of the birth. A short birth interval is defined as a birth occurring less than 24 months after the previous birth, and a child is of high birth order if the mother has previously given birth to three or more children (i.e. if the child is of birth order four or higher).

Table 8.6 shows the percent distributions of births in the five-year period before the survey according to these elevated risk factors. The table also examines the relative risk of dying for children by comparing the proportion dead in each specified high-risk category with the proportion dead among children not in any

high-risk category. Although first births are commonly associated with increased risk of mortality, they are not included in any high-risk category because they are considered an unavoidable risk.

Only 24 percent of births in RMI are not in any high-risk category. An additional 21 percent of births are first-order births to mothers aged 18–34 years – considered an unavoidable risk category. The remaining 55 percent of births in RMI are in at least one of the specified avoidable high-risk categories. Over one-third of births (38 percent) are in only one of the high-risk categories (mostly high birth order >3, 18 percent; and 13 percent for a short birth interval of <24 months), while 16.9 percent are in multiple high-risk categories. The births in multiple high-risk categories are mostly found in two combinations: birth order higher than three with birth interval <24 months (9 percent of births) and birth order higher than three with mothers aged greater than 34 years (7 percent).

The second column of Table 8.6 shows that the risk of dying for a child who falls in any avoidable high-risk category is 1.14 times higher than for a child not in any high-risk category. Children in a single high-risk category had a 28 percent higher mortality risk; however, the mortality risk for children in multiple high-risk categories is almost 20 percent lower than the risk for children not in any high-risk category.

The single high-risk category associated with the highest risk ratio is mother's age greater than 34 years. Children born to mothers 34 years of age and over have 11 times higher risk of dying than children not in any high-risk category. It is important to note that the proportion of births that are first order births may be higher among women aged 34 years and over than among younger women (because the level of fertility was high when these women had their first birth experience). The second-highest risk is associated with mother's age less than 18 years (with two times higher risk), followed third by the birth interval. In the case of birth interval, children born less than 24 months after the most recent birth have a mortality risk that is 64 percent higher than those who are not in any high-risk category. Most Marshallese children in a single high-risk category are in that of mother's age 34 years and older. While high birth order is generally considered a high-risk category, Table 8.6 shows that in RMI, children of birth order three or higher actually have a somewhat lower mortality risk (0.31) than children not in any high-risk category (1.00).

The category with the highest multiple-risks ratio is births with the two risk factors combined: children born to older women (age 34 or older) with a short birth interval (less than 24 months) have 20.26 times higher risk of mortality than children not in any high-risk category. However, this category involves only 0.1 percent of births. Among the multiple high-risk categories with the highest percentage of births, high birth order and short birth interval increases mortality risk by 17 percent.

Table 8.6 also shows the potential for high-risk births among currently married women. A woman's current age, time elapsed since the last birth, and parity are used to determine the risk categories in which any child she conceived at the time of the survey would fall. In the final data processing, the criteria for placing women in specific risk categories are adjusted to take into account gestation period.

Four in 10 (40 percent) currently married women in RMI are not in any high-risk category, while over half (53 percent) have the potential of giving birth to a child exposed to a higher risk of mortality, with almost a quarter (24 percent) of married women falling into multiple high-risk categories.

Table 8.6. High-risk fertility behavior

Percent distribution of children born in the five years preceding the survey by category of elevated risk of mortality and the risk ratio, and percent distribution of currently married women by category of risk if they were to conceive a child at the time of the survey, Marshall Islands 2007

Risk category	Births in the 5 years preceding the survey		Percentage of currently married women[1]
	Percentage of births	Risk ratio	
Not in any high-risk category	24.1	1.00	40.3[a]
Unavoidable risk category			
First order births between ages 18 and 34 years	21.3	1.18	6.8
Single high-risk category			
Mother's age <18	6.2	2.68	0.5
Mother's age >34	0.4	11.68	5.1
Birth interval <24 months	13.0	1.64	12.2
Birth order >3	18.1	0.31	11.3
Subtotal	37.7	1.28	29.1
Multiple high-risk category			
Age <18 & birth interval <24 months2	0.2	5.73	0.0
Age >34 & birth interval <24 months	0.1	20.26	0.1
Age >34 & birth order >3	6.8	0.00	13.9
Age >34 & birth interval <24 months & birth order >3	0.9	0.00	2.2
Birth interval <24 months & birth order >3	8.9	1.17	7.7
Subtotal	16.9	0.83	23.8
In any avoidable high-risk category	54.6	1.14	52.9
Total	100.0	na	100.0
Number of births/women	1,173	na	1,145

Note: Risk ratio is the ratio of the proportion dead among births in a specific high-risk category to the proportion dead among births not in any high-risk category.

na = not applicable

[1] Women are assigned to risk categories according to the status they would have at the birth of a child if they were to conceive at the time of the survey: current age less than 17 years and 3 months or older than 34 years and 2 months, and latest birth less than 15 months ago, or latest birth being of order 3 or higher.

[2] Includes the category age <18 and birth order >3

[a] Includes sterilized women

CHAPTER 9. REPRODUCTIVE HEALTH

This chapter presents the 2007 RMIDHS findings on the general state of reproductive health. It covers women's utilization of antenatal, delivery, and postpartum care – that is, the findings from several areas of importance to reproductive and women's health: antenatal, delivery, and postnatal care, and general access to health services.

Information on antenatal, delivery, and postnatal care is of great value in identifying subgroups of women who do not utilize such services, and is useful in planning for improvements in service delivery. Information on antenatal care (ANC) is shown according to the number of ANC visits made, the stage of pregnancy at the time of the first visit, the type of provider, and the specific services and information provided during antenatal visits, including whether tetanus toxoid was received. Similarly, delivery services are described according to the place of delivery, the type of person assisting the delivery, and the rate of caesarean section. Information on postnatal care is shown by whether a woman delivered in a health facility or elsewhere, and describes the time since delivery of the first postnatal care and from whom it was received. This information helps identify population groups who are underserved with maternity care services. Selected general health information for women is also presented in this chapter: namely, their access and barriers to use of health services.

The results of the 2007 DHS are very important in evaluating reproductive health programs and their achievements based on the action plan agreed upon at the 1994 International Conference on Population and Development in Cairo, Egypt. The findings also provide an evaluation of interventions by other sectors to improve quality of care, service utilization, and the health of mothers.

9.1. ANTENATAL CARE

The major objective of ANC is to identify, treat, and prevent problems during pregnancy, such as anemia, infections, and potential life-threatening conditions. It is during an ANC visit that screening for complications and advice on a range of issues, including place of delivery and referral of mothers with complications, occur. In the RMIDHS, interviewers recorded the source of ANC and the person who provided that care for women's most recent births. If a woman received ANC from more than one provider, the provider with the highest qualifications was recorded. Table 9.1 shows the background characteristics of women who had live births in the five years preceding the survey according to the type of ANC provider.

The results indicate that 95 percent of women received ANC from a skilled provider. Most women sought care from a doctor (70 percent), 14 percent received care from a health assistant/personnel, and 12 percent received care from a nurse or midwife. Less than 1 percent (0.3 percent) of women received ANC from a traditional birth attendant (TBA) as their most qualified provider. About 5 percent of women who gave birth in the five years preceding the survey received no ANC.

Data in Table 9.1 further indicate that the choice of ANC provider varies slightly by the mother's age. Mothers aged 35–49 are less likely than younger mothers to receive ANC from a skilled provider (87 percent compared with 96 percent for mothers younger than 20). First- to third-order births are most likely to receive ANC, while fourth- and higher-order births are least likely to receive ANC.

Almost all women in both urban and rural areas receive ANC from a skilled provider (95 percent). Mothers in urban areas are more likely than mothers in rural areas to receive ANC from a doctor (80 percent compared with 50 percent).

In RMI, ANC coverage is not strongly associated with a woman's education. Better-educated women are almost equally likely to have ANC as less educated women; however, they are more likely to be attended to by a doctor than less educated women are. Eighty-nine percent of women who have attained 'more than secondary' education receive ANC from a doctor; the corresponding proportion for women with no or

primary education is 64 percent. Further to this, 3 percent of women with no education receive no ANC compared with only 1 percent who have 'more than secondary' education.

Table 9.1. Antenatal care

Percent distribution of women aged 15–49 who had a live birth in the five years preceding the survey by ANC provider during pregnancy for the most recent birth and the percentage receiving ANC from a skilled provider for the most recent birth, according to background characteristics, Marshall Islands 2007

Background characteristic	Doctor	Nurse/ midwife	Health assistant/ personnel	Traditional birth attendant	Other	No one	Total	Percentage receiving ANC from a skilled provider[1]	Number of women
Mother's age at birth									
<20	69.5	11.1	15.1	0.0	0.0	4.3	100.0	95.7	125
20–34	69.1	12.4	14.2	0.4	0.1	3.7	100.0	95.7	568
35–49	72.4	7.9	7.0	0.0	1.9	10.9	100.0	87.3	82
Birth order									
1	73.1	11.7	11.1	0.0	0.0	4.1	100.0	95.9	186
2–3	69.8	11.5	15.5	0.0	0.0	3.2	100.0	96.8	292
4–5	64.8	12.2	14.3	1.2	0.8	6.8	100.0	91.2	193
6+	71.3	11.4	11.4	0.0	0.6	5.3	100.0	94.1	103
Residence									
Urban	80.3	14.1	0.5	0.3	0.2	4.6	100.0	94.9	502
Rural	49.6	7.3	37.7	0.2	0.5	4.6	100.0	94.7	272
Mother's education									
No education/ primary	63.8	12.9	19.9	0.0	0.7	2.7	100.0	96.6	178
Secondary	68.4	12.1	13.1	0.5	0.2	5.8	100.0	93.6	515
More than secondary	89.4	6.4	3.2	0.0	0.0	1.0	100.0	99.0	81
Wealth quintile									
Lowest	52.0	7.8	33.5	0.3	0.7	5.7	100.0	93.2	189
Second	61.4	12.4	21.4	0.0	0.0	4.8	100.0	95.2	188
Middle	79.0	15.1	1.4	0.0	0.6	4.0	100.0	95.4	150
Fourth	80.9	12.3	0.0	0.0	0.0	6.8	100.0	93.2	132
Highest	85.9	11.9	0.0	1.5	0.0	0.7	100.0	97.8	116
Total	69.5	11.7	13.6	0.3	0.3	4.6	100.0	94.8	774

Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications was considered in this tabulation.

[1] Skilled provider includes doctor, nurse, midwife, and health assistant/personnel.

Women in the highest wealth quintile are slightly more likely to receive ANC from a skilled provider (98 percent) than women in the lowest wealth quintile (93 percent). They are especially more likely to receive ANC from a doctor: 86 percent compared with 52 percent of women in the lowest wealth quintile.

9.1.1. Number of antenatal care visits and timing of the first visit

In line with World Health Organization (WHO) guidelines, the RMI Ministry of Health recommends that a woman who is having a normal pregnancy attend four ANC visits, the first of which should take place during the first trimester. Information on ANC visits and the stage at which pregnant women seek ANC is presented in Table 9.2. More than 70 percent of women (77 percent) attend four or more visits for ANC; thus, more than three-quarters attend the number of ANC visits recommended by WHO standards.

Table 9.2 further shows that a high proportion of pregnant women (43 percent) attend their first visit during the first three months of pregnancy. Twenty-nine percent of women make their first ANC visit during the fourth or fifth month of pregnancy, while 19 percent make their first visit during the sixth month of pregnancy or later. The median gestational age at which women make their first visit is 4.3 months, when the opportunity may have passed to diagnose problems early, provide treatment, or prevent further complications.

Table 9.2. Number of antenatal care visits and timing of first visit

Percent distribution of women aged 15–49 who had a live birth in the five years preceding the survey by number of ANC visits for the most recent live birth and by the timing of the first visit, and among women with ANC, median months pregnant at first visit, according to residence, Marshall Islands 2007

	Residence		
Number and timing of ANC visits	Urban	Rural	Total
Number of ANC visits			
None	4.6	4.6	4.6
1	0.9	4.1	2.0
2–3	12.7	11.7	12.3
4+	76.6	78.1	77.1
Don't know/missing	5.3	1.5	3.9
Total	100.0	100.0	100.0
Number of months pregnant at time of first ANC visit			
No antenatal care	4.6	4.6	4.6
<4	43.0	42.4	42.8
4–5	30.4	25.7	28.8
6–7	18.7	19.6	19.0
8+	2.3	7.6	4.2
Don't know/missing	1.0	0.1	0.7
Total	100.0	100.0	100.0
Number of women	502	272	774
Median months pregnant at first visit (for those with ANC)	4.3	4.4	4.3
Number of women with ANC	479	260	739

9.1.2. Quality of antenatal care

The Sexual and Reproductive Health Policy Guidelines for RMI (MOH 2006) provide details of what is to be done by a health service provider during ANC. Some health workers have been trained to offer this package. Table 9.3 shows the percentage of mothers who received ANC by content of ANC and background characteristics. The results show that not all women received the minimum package. Over two-thirds of women (71 percent) who gave birth in the five years preceding the survey took iron tablets or syrup during their last pregnancy. Over 9 out of 10 women (92 percent) who received ANC for their most recent birth in the past five years had their weight measured during the pregnancy. Over 90 percent (93 percent) had their blood pressure measured, and over half (53 percent) received information on how to recognize signs of problems during pregnancy. A urine sample was taken from 85 percent of women with

ANC while a blood sample was taken from the same proportion of women (85 percent). Meanwhile, a small percentage (5 percent) were given drugs for intestinal parasites.

Table 9.3. Components of antenatal care

Among women aged 15–49 with a live birth in the five years preceding the survey, the percentage who took iron tablets or syrup and drugs for intestinal parasites during the pregnancy of the most recent birth, and among women receiving ANC for the most recent live birth in the five years preceding the survey, the percentage receiving specific antenatal services, according to background characteristics, Marshall Islands 2007

	Among women with a live birth in the last five years, the percentage who during the pregnancy of their last birth:			Among women who received ANC for their most recent birth in the last five years, the percentage with selected services:					
Background characteristic	Took iron tablets or syrup	Took intestinal parasite drugs	Number of women with a live birth in the last five years	Informed of signs of pregnancy complications	Weighed	Blood pressure measured	Urine sample taken	Blood sample taken	Number of women with ANC for their most recent birth
Mother's age at birth									
<20	73.7	4.3	125	52.1	88.9	88.6	83.3	83.5	119
20–34	71.8	5.3	568	53.8	92.7	93.1	84.5	85.0	547
35–49	58.1	6.4	82	52.6	93.5	95.1	88.5	86.9	73
Birth order									
1	74.1	3.7	186	56.7	91.8	91.8	86.8	88.0	178
2–3	76.4	4.4	292	54.4	91.5	90.5	84.0	83.5	283
4–5	63.1	5.7	193	48.9	92.4	94.9	83.9	84.6	180
6+	62.4	9.4	103	53.2	94.6	95.8	84.6	83.9	98
Residence									
Urban	62.3	6.0	502	59.0	99.0	98.7	98.8	99.5	479
Rural	86.1	3.8	272	43.2	79.6	81.2	58.8	58.0	260
Mother's education									
No education/ primary	69.5	4.2	178	50.6	88.8	91.5	76.6	77.2	173
Secondary	70.3	5.5	515	54.8	92.4	92.1	85.6	85.7	486
More than secondary	75.8	5.6	81	51.2	98.4	97.5	96.7	96.7	80
Wealth quintile									
Lowest	78.2	2.2	189	48.4	77.5	80.0	58.6	57.9	178
Second	67.6	7.6	188	42.7	91.1	90.9	79.8	80.7	179
Middle	74.6	7.7	150	57.1	100.0	100.0	99.3	99.3	144
Fourth	55.2	5.8	132	63.5	98.5	97.5	99.1	99.1	123
Highest	75.9	2.4	116	62.6	100.0	100.0	99.1	100.0	115
Total	70.7	5.2	774	53.4	92.2	92.6	84.7	84.9	739

The differences in the content of ANC by background characteristics are shown in Table 9.3. In general, the majority of women who received ANC services with their most recent births tended to get only three of the ANC interventions. Women in urban areas were much more likely to receive all of these key ANC services than rural women, with the exception of iron tablets or syrup, which rural women were more likely to take (86 percent compared to 62 percent). In general, women with 'more than secondary' education and those in higher wealth quintiles were also more likely than other women to receive key ANC services.

9.1.3. Tetanus toxoid immunization

Neonatal tetanus is a leading cause of neonatal death in developing countries where a high proportion of deliveries are conducted at home or in places where hygienic conditions may be poor. Tetanus toxoid (TT) immunization is given to pregnant women to prevent neonatal tetanus. If a woman has received no previous TT injections, for full protection a pregnant woman needs two doses of TT during pregnancy. However, if a woman was immunized before she became pregnant, she may require only one or no TT injections during pregnancy, depending on the number of injections she has ever received and the timing of the last injection. For a woman to have lifetime protection, a total of five doses is required.

Table 9.4. Tetanus toxoid injections

Among mothers aged 15–49 with a live birth in the five years preceding the survey, the percentage receiving two or more tetanus toxoid injections during the pregnancy for the last live birth and the percentage whose last live birth was protected against neonatal tetanus, according to background characteristics, Marshall Islands 2007

Background characteristic	Percentage receiving two or more injections during last pregnancy	Percentage whose last birth was protected against neonatal tetanus[1]	Number of mothers
Mother's age at birth			
<20	13.4	23.6	125
20–34	20.3	40.4	568
35–49	26.2	38.2	82
Birth order			
1	16.1	21.1	186
2–3	22.2	44.5	292
4–5	16.1	41.5	193
6+	26.7	39.3	103
Residence			
Urban	25.8	47.1	502
Rural	8.8	19.7	272
Mother's education			
No education/primary	16.4	26.5	178
Secondary	21.1	40.6	515
More than secondary	19.4	41.7	81
Wealth quintile			
Lowest	7.7	20.7	189
Second	12.9	27.7	188
Middle	28.2	47.7	150
Fourth	31.0	46.6	132
Highest	27.0	56.9	116
Total	19.8	37.5	774

[1] Includes mothers with two injections during the pregnancy of their last birth, or two or more injections (the last within three years of the last live birth), or three or more injections (the last within five years of the last birth), or four or more injections (the last within 10 years of the last live birth), or five or more injections prior to the last birth

The 2007 RMIDHS collected data on whether or not women received at least two TT injections during pregnancy and whether or not the pregnancy was protected against neonatal tetanus for women's most recent live birth in the five years preceding the survey. Table 9.4 shows that only one in every five (20 percent) pregnant women received two or more TT injections during her last pregnancy. However, over one-third (38 percent) of women had their last pregnancy protected against neonatal tetanus due to their previous immunization history.

Older women and women pregnant with higher-order births are more likely to receive two TT injections during their pregnancy. The likelihood of having a pregnancy that is protected against neonatal tetanus

does not decline with mother's age at birth, and women who are pregnant with their first child are actually less likely to have their pregnancy protected against neonatal tetanus than women with higher-order pregnancies. Previous pregnancies as well as increasing age may expose women to opportunities to receive TT injections that also contribute to protecting their later pregnancies. Therefore, older and higher-parity women may be less likely to require two TT injections during pregnancy in order for their pregnancies to be protected against neonatal tetanus.

Women in urban areas are more likely to have their last pregnancy protected against neonatal tetanus than rural women (47 percent versus 20 percent). The proportion of women *who received two or more injections during their last pregnancy* was higher in urban areas than rural areas (26 percent compared to 9 percent). The likelihood of having the last pregnancy protected against neonatal tetanus increases with educational attainment. Likewise, the likelihood of having the last pregnancy protected against neonatal tetanus increases with the level of household wealth.

9.2. CHILDBIRTH CARE

Some of the factors associated with birth outcome include the place where the mother delivers the baby, the disinfection practices used there, the equipment available, and the skills and performance of those who assist the woman. Table 9.5 shows the percent distribution of live births in the five years preceding the survey by place of childbirth and by background characteristics of the mother.

Overall, 85 percent of births occurred at health facilities; only 13 percent of births took place at home. According to Table 9.5, births to younger women and low-order births are more likely to take place in a health facility than births to older women and higher-order births. For example, 81 percent of births to mothers aged 35–49 took place at a health facility, whereas the corresponding figure for births to women under 20 years old is 83 percent. Similarly, 89 percent of first-order births occurred at health facilities, compared with 80 percent of sixth- and higher-order births.

ANC attendance is related to place of childbirth. Births to women who make four or more ANC visits are more likely to occur in a health facility than births to women who do not attend ANC (85 percent and 74 percent).

Table 9.5. Place of delivery

Percent distribution of live births in the five years preceding the survey by place of delivery and percentage delivered in a health facility, according to background characteristics, Marshall Islands 2007

Background characteristic	Health facility		Home	Other	Missing	Total	Percentage delivered in a health facility	Number of births
	Public sector	Private sector						
Mother's age at birth								
<20	78.6	4.2	14.5	1.8	1.0	100.0	82.8	212
20–34	82.8	3.2	12.7	1.0	0.3	100.0	86.0	864
35–49	81.3	0.0	16.0	2.7	0.0	100.0	81.3	97
Birth order								
1	84.7	4.1	7.9	2.3	1.0	100.0	88.9	317
2–3	80.8	2.7	15.4	1.0	0.1	100.0	83.5	449
4–5	81.8	3.7	14.2	0.0	0.3	100.0	85.5	273
6+	79.3	0.9	17.4	2.4	0.0	100.0	80.2	134
Residence								
Urban	90.3	4.4	3.4	1.4	0.4	100.0	94.7	751
Rural	67.1	0.8	30.8	0.9	0.3	100.0	67.9	422
Mother's education								
No education/primary	74.3	1.1	24.1	0.5	0.0	100.0	75.4	271
Secondary	83.9	2.9	11.2	1.5	0.6	100.0	86.7	794
More than secondary	87.0	10.1	1.2	1.7	0.0	100.0	97.0	108
Antenatal care visits[1]								
None	74.3	0.0	25.7	0.0	0.0	100.0	74.3	36
1–3	84.5	5.1	10.4	0.0	0.0	100.0	89.6	111
4+	81.3	3.9	13.2	1.5	0.0	100.0	85.2	597
Don't know/missing	(84.3)	(0.0)	(15.7)	(0.0)	(0.0)	100.0	(84.3)	31
Wealth quintile								
Lowest	66.7	1.2	31.6	0.0	0.5	100.0	67.9	298
Second	83.1	0.0	16.1	0.6	0.2	100.0	83.1	286
Middle	92.0	2.7	2.8	2.2	0.4	100.0	94.7	234
Fourth	91.7	4.1	2.6	0.8	0.8	100.0	95.9	189
Highest	82.0	11.3	2.7	4.0	0.0	100.0	93.3	165
Total	81.9	3.1	13.3	1.3	0.4	100.0	85.1	1,173

Note: Figures in parentheses are based on 25–49 unweighted cases.

[1] Includes only the most recent birth in the five years preceding the survey

The proportion of births occurring in a health facility is much higher in urban areas (95 percent) than in rural areas (68 percent). Meanwhile, births to mothers with 'more than secondary' education are more likely to occur in a health facility than births to women with no or primary education (97 percent and 75 percent). A woman's wealth status also has a direct relationship with the place she gives birth to her baby. In general, the proportion of births in a health facility increases incrementally with each rising wealth quintile.

9.2.1. Assistance during childbirth

In addition to place of birth, assistance during childbirth is an important variable that influences the birth outcome and the health of the mother and the infant. This is because the skills and performance of the birth attendant determine whether or not he/she can manage complications and observe hygienic practices. Table 9.6 shows the percent distribution of live births in the five years preceding the survey by person providing assistance, according to background characteristics.

Overall, 94 percent of births were assisted by a skilled provider during delivery. Just half of all births (45 percent) were delivered with the assistance of a doctor, 41 percent were assisted by a nurse/midwife, and 8 percent were assisted by a medical assistant/clinical officer. Only about 2 percent of births were assisted by a TBA, while under 1 percent were assisted by relatives or friends. For 0.6 percent of births, the mother did not receive any assistance during childbirth.

Births to younger women and low-order births are more likely to receive assistance during childbirth from a skilled provider than births to other women. Almost all births (97 percent) to urban women were attended by a skilled provider, compared with 90 percent of births to rural women. Women of lower educational backgrounds and in poor wealth quintiles were less likely to receive assistance during childbirth from a skilled provider. Use of a TBA is highest among births to women in the lower quintiles.

Table 9.6. Assistance during delivery

Percent distribution of live births in the five years preceding the survey by person providing assistance during delivery, percentage of birth assisted by a skilled provider and percentage delivered by caesarean section, according to background characteristics, Marshall Islands 2007

	Person providing assistance during delivery								Percentage delivered by a skilled provider1	Percentage delivered by C-section	Number of births
Background characteristic	Doctor	Nurse/ midwife	Health assistant/ personnel	Traditional birth attendant	Relative/ other	No one	Don't know/ missing	Total			
Mother's age at birth											
<20	45.2	39.8	8.5	2.5	0.9	0.7	2.4	100.0	93.5	9.7	212
20–34	45.4	40.7	8.4	2.0	0.9	0.7	1.9	100.0	94.5	9.7	864
35–49	39.2	49.2	3.0	0.0	0.0	0.0	8.6	100.0	91.4	5.7	97
Birth order											
1	51.0	39.8	5.7	1.9	0.3	0.8	0.6	100.0	96.4	13.5	317
2–3	41.3	42.4	8.7	3.0	1.4	0.6	2.7	100.0	92.4	9.0	449
4–5	46.8	36.7	10.9	1.3	0.6	0.6	3.3	100.0	94.3	5.8	273
6+	38.5	50.3	5.0	0.0	0.9	0.5	4.8	100.0	93.8	7.9	134
Place of delivery											
Health facility	49.8	44.0	5.2	0.1	0.1	0.0	0.8	100.0	98.9	11.0	997
Elsewhere	17.5	26.4	24.1	12.6	4.7	2.2	12.4	100.0	68.0	0.0	171
Residence											
Urban	51.3	45.2	0.2	0.6	0.7	0.7	1.4	100.0	96.7	10.9	751
Rural	33.4	34.2	21.8	4.3	1.2	0.6	4.5	100.0	89.5	6.6	422
Mother's education											
No education/ primary	37.6	41.2	10.5	4.2	1.1	0.1	5.2	100.0	89.3	4.3	271
Secondary	45.5	41.5	8.0	1.4	0.7	0.9	1.9	100.0	95.0	10.5	794
More than secondary	58.4	39.4	1.4	0.0	0.8	0.0	0.0	100.0	99.2	13.7	108
Wealth quintile											
Lowest	32.6	35.2	20.2	3.7	1.4	0.3	6.5	100.0	88.0	5.5	298
Second	35.9	46.0	11.6	2.9	0.4	0.5	2.7	100.0	93.6	7.7	286
Middle	53.5	43.4	0.0	1.5	1.2	0.4	0.0	100.0	96.9	10.4	234
Fourth	57.6	39.0	0.0	0.0	1.0	1.2	1.1	100.0	96.6	9.7	189
Highest	55.6	43.4	0.0	0.0	0.0	1.0	0.0	100.0	99.0	17.1	165
Total	44.9	41.3	8.0	1.9	0.8	0.6	2.5	100.0	94.1	9.3	1,173

Note: If the respondent mentioned more than one person attending during delivery, only the most qualified person is considered in this tabulation. Total includes five births with missing information on the place of delivery, which are not shown separately.

[1] Skilled provider includes doctor, nurse, midwife and health assistant/personnel.

Figure 9.1. Level of assistance by skilled provider during childbirth

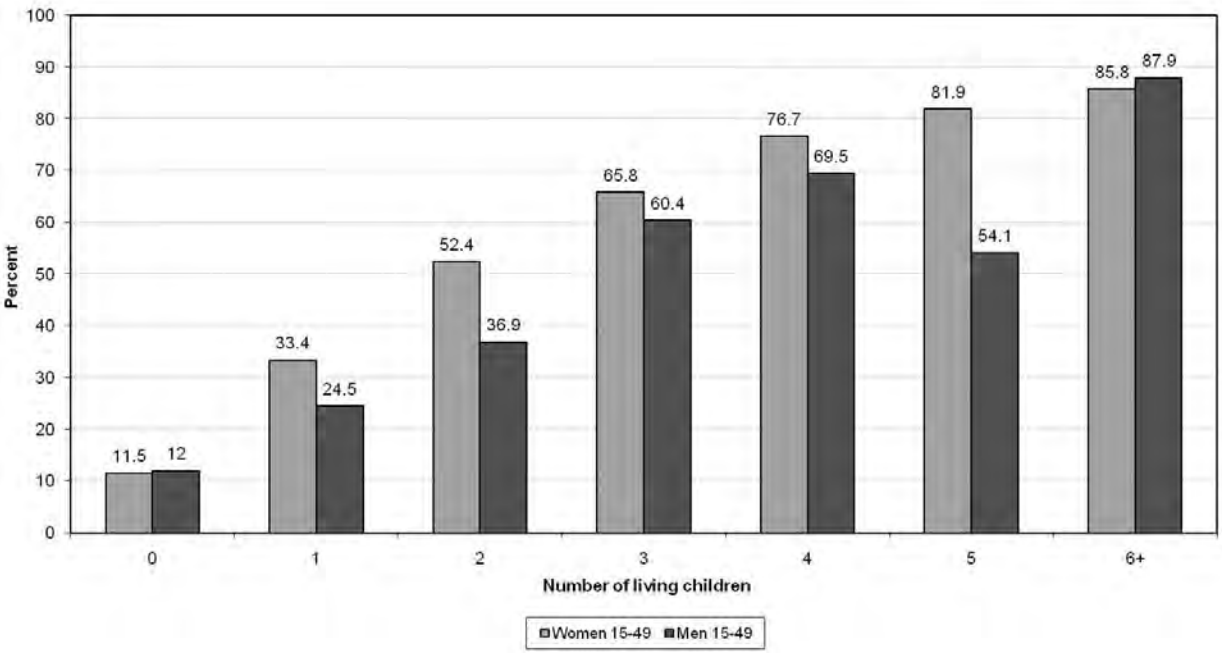


Figure 9.1 shows that women who have attained 'more than secondary' education are more likely to be assisted at childbirth by a skilled provider than women with no or primary education (99 percent compared with 89 percent). The likelihood of receiving skilled attendance at birth increases with wealth quintile, from 88 percent of births in the lowest quintile to 99 percent in the highest.

Table 9.6 also presents data on prevalence of births by caesarean section. Overall, 9 percent of births were delivered by C-section. C-sections were more common among first births, births to women in urban areas, and births to women with higher education. The results show inequity across wealth quintiles in access to C-section, with 6 percent of births to women in the lowest wealth quintile occurring by C-section compared with 17 percent of births to women in the highest wealth quintile.

9.3. POSTPARTUM CARE

Postpartum care is important for both the mother and the child to treat complications arising from the delivery as well as to provide the mother with important information on how to care for herself and her child. The postpartum period, also known as the puerperium, is defined as the time between delivery of the placenta and 42 days (six weeks) following delivery. The timing of postpartum care is important. The first two days after delivery are critical, since most maternal and neonatal deaths occur during this period. The RMI MOH recommends that a mother should attend postpartum care during the puerperal period to check complications that may arise in her health. Through provision of integrated services, the MOH recommends that mothers receive postpartum care when they bring their infants for immunization.

In the 2007 RMIDHS, the timing of the first postpartum checkup was assessed among women who gave birth in the five years preceding the survey. Table 9.7 shows the timing of the first postpartum checkup by background characteristics. The table indicates that 21 percent of women did not receive postpartum care. Sixty-four percent of women received postpartum care within the first two day. Women in the age group 20–34, women with higher-order births, rural women, less educated women, and those in the highest wealth quintile are more likely to get postpartum care than other women.

Table 9.7. Timing of first postnatal checkup

Among women aged 15–49 giving birth in the five years preceding the survey, the percent distribution of the mother's first postnatal checkup for the last live birth by time after delivery, according to background characteristics, Marshall Islands 2007

	Timing after delivery of mother's first postnatal checkup							
Background characteristic	Less than 4 hours	4–23 hours	2 days	3–41 days	Don't know/ missing	No postnatal checkup[1]	Total	Number of women
Mother's age at birth								
<20	36.3	8.0	14.4	13.2	2.8	25.3	100.0	125
20–34	40.7	3.9	19.7	14.3	2.0	19.4	100.0	568
35–49	44.0	0.8	21.1	9.4	0.0	24.7	100.0	82
Birth order								
1	37.1	6.1	16.1	17.2	2.7	20.8	100.0	186
2–3	39.8	4.3	18.9	12.1	1.3	23.6	100.0	292
4–5	45.0	2.7	19.5	12.8	2.0	18.0	100.0	193
6+	39.3	3.3	23.5	12.6	2.3	19.0	100.0	103
Residence								
Urban	41.8	4.2	15.1	13.8	2.6	22.4	100.0	502
Rural	37.6	4.2	26.2	13.1	0.8	18.1	100.0	272
Education								
No education/primary	36.5	4.3	20.4	13.3	0.7	24.9	100.0	178
Secondary	42.9	4.4	19.3	13.1	1.7	18.5	100.0	515
More than secondary	32.5	2.6	14.3	17.2	6.0	27.3	100.0	81
Wealth quintile								
Lowest	35.8	3.6	22.6	13.0	1.1	23.9	100.0	189
Second	32.4	6.3	20.8	15.7	0.0	24.8	100.0	188
Middle	39.8	3.6	18.6	13.3	4.4	20.4	100.0	150
Fourth	54.0	1.7	15.4	11.6	1.8	15.6	100.0	132
Highest	45.8	5.6	15.0	13.6	3.5	16.5	100.0	116
Total	40.4	4.2	19.0	13.6	1.9	20.9	100.0	774

[1] Includes women who received a checkup after 41 days

9.3.1. Type of provider for the first postpartum checkup

The type of provider for postpartum care was assessed. This is important because the skills of a provider determine the ability to diagnose problems and to recommend appropriate treatment or referral. Table 9.8 shows that 66 percent of women received postpartum care from a doctor, nurse, or midwife, while 7 percent received postpartum care from other cadres of health professionals. Three percent of women received postpartum care from a TBA. Generally, women in the age category 20–34, those who gave birth to their first child, urban women, those with secondary education and above, and those in the highest wealth quintile are more likely to receive postpartum care from skilled professionals. Use of a doctor, nurse, or midwife for postpartum care in rural areas (52 percent) is very much lower than the national average of 66 percent; however, greater use of other health assistants or personnel for postpartum care (19 percent of women) and TBAs (5 percent) in rural areas increases the **proportion of women with any postpartum care** to almost equal the national average.

Table 9.8. Type of provider of first postnatal checkup

Among women aged 15–49 giving birth in the five years preceding the survey, the percent distribution by type of provider of the mother's first postnatal health check for the last live birth, according to background characteristics, Marshall Islands 2007

	Type of health provider of mother's first postnatal checkup						
Background characteristic	Doctor/nurse/ midwife	Health assistant/ personnel	Traditional birth attendant	Other	No postnatal checkup[1]	Total	Number of women
Mother's age at birth							
<20	62.8	6.0	1.5	1.6	25.3	97.1	125
20–34	66.5	7.9	2.8	0.0	19.4	96.7	568
35–49	65.6	1.5	3.5	0.0	24.7	95.3	82
Birth order							
1	71.6	3.8	1.6	0.5	20.8	98.3	186
2–3	62.9	7.5	2.2	0.4	23.6	96.5	292
4–5	65.4	9.5	4.3	0.0	18.0	97.2	193
6+	64.7	6.5	2.8	0.0	19.0	92.9	103
Residence							
Urban	73.3	0.5	1.3	0.2	22.4	97.7	502
Rural	52.0	18.9	5.2	0.4	18.1	94.6	272
Education							
No education/primary	55.8	8.8	5.4	0.1	24.9	95.0	178
Secondary	68.9	7.4	2.1	0.2	18.5	97.1	515
More than secondary	68.4	0.2	0.0	1.2	27.3	97.1	81
Wealth quintile							
Lowest	46.4	17.3	4.1	0.1	23.9	91.8	189
Second	60.9	9.3	3.0	0.5	24.8	98.6	188
Middle	77.0	1.4	1.3	0.0	20.4	100.0	150
Fourth	73.7	0.0	4.0	0.7	15.6	94.0	132
Highest	82.0	1.4	0.0	0.0	16.5	100.0	116
Total	65.8	6.9	2.7	0.3	20.9	96.6	774

[1] Includes women who received a checkup after 41 days

9.3.2. Problems encountered in accessing health care

The 2007 RMIDHS assessed problems encountered in accessing health care. Table 9.9 shows the percentage of women who reported that they had various types of serious problems in accessing health care. Overall, 84 percent of the women reported that they encountered at least one serious problem in accessing health care. Concern that there are no drugs available and concern that there are no service providers available are two equally common constraints to accessing health care, with 78 percent of each reported. The second common constraint to accessing health care is a concern that no female provider is available, with 56 percent of women perceiving this as a problem. Getting money to pay for treatment is the most commonly reported constraint to accessing health care, with 44 percent of women saying getting money is a serious problem. Having to take transport (42 percent) is considered important, followed by distance to the health facility (40 percent). Lesser-reported problems are not wanting to go alone (35 percent) and getting permission to go for treatment, reported by 22 percent of women.

Looking at the results by age and birth order, older women and women with more children are more likely to cite getting money, distance to health facility, having to take transport, concern that no provider is available, and availability of drugs as major problems to accessing health care. Younger women and those with fewer children, on the other hand, are more likely to cite getting permission, getting money for treatment, not wanting to go alone, concern that there is no female provider, concern that no provider is available, and concern that no drugs are available as major problems. Divorced, separated, or widowed women are generally more constrained in getting money for treatment than their currently married and never-married counterparts. By employment status, women who are unemployed are most likely to report having each of the problems asked about in accessing health care, except getting permission to go for treatment. Women who are not employed for cash are usually more likely to also report having most of the problems in accessing health care, including getting money to pay for treatment.

Rural women are more likely than urban women to report having each of the problems asked about in accessing health care. They are especially more likely to report that distance to a health facility and having to take transport are serious problems. Less educated women and those in lower wealth quintiles are more likely to report at least one serious problem in accessing health care than other women. Educational attainment has an especially strong association with reporting getting money for treatment, distance to health facility, and having to take transport as serious problems. By wealth quintile, Table 9.9 shows that women in the highest wealth quintile are much less likely than women in other wealth quintiles to report each of the problems asked about in accessing health care. As expected, the probability of reporting getting money as a barrier to care decreases steadily as wealth quintile increases.

Table 9.9. Problems in accessing health care

Percentage of women aged 15–49 who reported that they have serious problems in accessing health care for themselves when they are sick, by type of problem, according to background characteristics, Marshall Islands 2007

	Problems in accessing health care									
Background characteristic	Getting permission to go for treatment	Getting money for treatment	Distance to health facility	Having to take transport	Not wanting to go alone	Concern no female provider available	Concern no provider available	Concern no drugs available	At least one problem accessing health care	Number of women
Age										
15–19	27.2	46.0	41.4	42.7	52.5	66.7	81.0	80.9	86.0	306
20–34	23.6	43.2	38.8	40.0	34.2	53.1	76.5	76.4	83.6	840
35–49	17.1	45.6	41.8	43.8	25.9	52.7	74.2	74.5	82.0	479
Number of living children										
0	22.0	39.3	36.1	35.0	42.6	58.9	75.4	74.5	81.0	419
1–2	24.7	45.1	40.7	43.5	36.7	54.2	77.1	77.2	84.4	496
3–4	22.6	46.1	40.1	42.5	31.4	52.4	76.7	76.6	84.0	370
5+	19.1	47.9	44.5	46.2	28.1	56.7	77.5	78.5	85.1	340
Marital status										
Never married	22.9	42.0	38.6	38.4	43.0	59.2	78.4	77.8	83.1	383
Married or living together	21.9	44.3	40.3	42.4	32.8	54.2	75.9	75.8	83.2	1,145
Divorced/separated/widowed	25.9	55.7	44.3	46.0	32.7	57.2	79.0	82.1	89.8	97
Employed last 12 months										
Not employed	21.4	45.2	40.6	42.6	39.3	59.8	78.1	77.3	84.9	1,117
Employed for cash	24.5	43.4	39.3	40.0	26.4	46.9	74.0	75.9	81.4	479
Employed not for cash	(22.0)	(30.9)	(37.0)	(31.3)	(23.2)	(32.5)	(65.6)	(63.3)	(68.4)	29
Residence										
Urban	15.5	36.9	29.8	31.5	32.0	51.8	72.2	71.8	78.8	1,106
Rural	36.9	60.3	62.3	63.2	42.1	63.4	86.2	87.1	93.7	519
Education										
No education/primary	29.8	53.3	51.7	52.8	43.1	65.7	80.2	79.4	87.0	427
Secondary	20.9	43.1	38.6	41.0	35.0	55.2	77.6	77.9	84.0	1,016
More than secondary	13.0	30.6	22.0	19.1	18.2	33.4	63.3	63.4	73.0	182
Wealth quintile										
Lowest	37.0	62.7	63.1	64.7	47.1	66.6	86.9	86.5	93.9	350
Second	30.4	61.5	52.7	55.8	35.9	61.2	84.0	85.7	91.5	353
Middle	18.9	42.1	35.3	37.3	32.5	53.0	72.4	70.3	80.6	319
Fourth	16.0	35.9	30.7	30.4	36.9	51.7	75.3	77.0	81.4	306
Highest	5.9	14.0	13.3	14.2	21.6	42.3	61.9	60.8	67.5	298
Total	22.4	44.4	40.2	41.6	35.2	55.5	76.7	76.7	83.6	1,625

Note: Figures in parentheses are based on 25–49 unweighted cases.

CHAPTER 10. CHILD HEALTH

This chapter presents the findings on several areas of importance to child health. The information that is presented on birth weight and birth size is important for the design and implementation of programs aimed at reducing neonatal and infant mortality. Many deaths in early childhood can be prevented by immunizing children against preventable diseases and by ensuring that children receive prompt and appropriate treatment when they become ill. Vaccination coverage information focuses on the age group 12–23 months. Overall coverage levels at the time of the survey and by 12 months of age are shown for this age group. Additionally, the source of vaccination information (whether based on a written vaccination card or the mother's recall) is shown. Differences in vaccination coverage between subgroups of the population will assist in program planning.

Information on treatment practices and contact with health services among children with the three most important childhood illnesses (acute respiratory infection [ARI], fever, and diarrhea) helps in the assessment of national programs aimed at reducing the mortality impact of these illnesses. Information is provided on the prevalence of ARI and its treatment with antibiotics, and the prevalence of fever and its treatment with antibiotics. The treatment of diarrheal disease with oral rehydration therapy (including increased fluids) aids in the assessment of programs that recommend such treatment. Because appropriate sanitary practices can help prevent and reduce the severity of diarrheal disease, information is also provided on the manner of disposing of children's fecal matter.

10.1. CHILD'S SIZE AT BIRTH

A child's birth weight or size at birth is an important indicator of its vulnerability to the risk of childhood illnesses and the chances of survival. Children whose birth weight is less than 2.5 kilograms, or children reported to be 'very small' or 'smaller than average', are considered to have a higher-than-average risk of early childhood death. For births in the five years preceding the survey, birth weight was recorded in the questionnaire if available from either a written record or the mother's recall. Since birth weight may not be known for many babies, the mother's estimate of the baby's size at birth was also obtained. Even though this is subjective, it can be a useful proxy for the weight of the child. Table 10.1 presents information on child's weight and size at birth according to background characteristics.

Over 8 in 10 children (85 percent) in the Marshall Islands are weighed at birth, which is not surprising as the majority of births take place in a health facility. Among children born in the five years before the survey with a reported birth weight, 18 percent weighed less than 2.5 kg at birth. Birth weight is lower among children born to younger women (age at birth less than 20 years), first-born children, female babies, children of women with no or primary-level education, and babies of mothers in the lowest wealth quintile households. The birth weight of a child also varies somewhat by mother's place of residence. Twenty percent of births in rural areas have a reported birth weight less than 2.5 kg compared with 17 percent in urban areas.

Table 10.1 also includes information on the mother's assessment of the baby's size at birth. In the absence of birth weight, a mother's subjective assessment of the size of the baby at birth may be useful. Five percent of births were reported to be very small and 18 percent were reported as smaller than average. More than one-quarter of births to women under age 20 and almost a quarter of first-order births were small or smaller than average compared with births to older women and higher-order births. Births to mothers with no or primary education and urban births are more likely to be reported as very small or smaller than average than births to mothers with higher-level education and births in rural areas. Births to mothers in the poorest households are more likely to be small or smaller-than-average babies.

Table 10.1. Child's weight and size at birth

Percent distribution of live births in the five years preceding the survey with a reported birth weight by birth weight, percent distribution of all live births in the five years preceding the survey by mother's estimate of baby's size at birth, and percentage of all births with a reported birth weight, according to background characteristics, Marshall Islands 2007

Background characteristic	Percent distribution of births with a reported birth weight[1]		Total	Number of births	Percentage of all births with a reported birth weight[1]	Percent distribution of all live births by size of child at birth				Total	Number of births
	Less than 2.5 kg	2.5 kg or more				Very small	Smaller than average	Average or larger	Don't know/ missing		
Mother's age at birth											
<20	25.0	75.0	100.0	171	80.7	9.7	18.6	66.7	5.1	100.0	212
20–34	16.9	83.1	100.0	743	85.5	4.8	18.2	74.4	2.7	100.0	864
35–49	12.3	87.7	100.0	87	87.6	0.6	18.2	81.2	0.0	100.0	97
Sex											
Male	16.5	83.5	100.0	527	85.6	4.3	16.6	75.9	3.2	100.0	612
Female	19.4	80.6	100.0	474	84.0	6.4	20.1	71.0	2.6	100.0	560
Birth order											
1	25.6	74.4	100.0	283	89.2	9.1	22.2	66.0	2.8	100.0	317
2–3	17.8	82.2	100.0	372	82.3	5.2	19.2	72.9	2.7	100.0	449
4–5	11.9	88.1	100.0	233	84.9	3.2	15.1	78.4	3.3	100.0	273
6+	10.9	89.1	100.0	114	82.6	0.9	12.1	83.8	3.2	100.0	134
Residence											
Urban	16.7	83.3	100.0	697	92.0	4.7	19.3	74.5	1.4	100.0	751
Rural	20.4	79.6	100.0	305	72.0	6.3	16.3	71.8	5.5	100.0	422
Mother's education											
No education/primary	19.2	80.8	100.0	206	75.7	5.8	19.5	69.5	5.2	100.0	271
Secondary	18.0	82.0	100.0	699	87.3	5.2	18.0	74.8	2.0	100.0	794
More than secondary	14.2	85.8	100.0	97	89.9	4.6	17.0	74.5	3.9	100.0	108
Wealth quintile											
Lowest	22.4	77.6	100.0	125	68.3	7.9	19.6	64.0	8.5	100.0	183
Second	18.4	81.6	100.0	150	75.3	4.7	18.9	72.6	3.8	100.0	198
Middle	18.8	81.2	100.0	203	90.0	5.7	24.2	69.7	0.5	100.0	225
Fourth	18.2	81.8	100.0	294	90.7	5.5	15.0	78.2	1.3	100.0	321
Highest	13.9	86.1	100.0	231	92.5	3.3	15.4	78.9	2.3	100.0	245
Total	17.9	82.1	100.0	1,002	84.8	5.3	18.2	73.6	2.9	100.0	1,173

[1] Based on either a written record or the mother's recall

10.2. VACCINATION COVERAGE

Universal immunization of children against the eight vaccine-preventable diseases (namely, tuberculosis, diphtheria, whooping cough [pertussis], tetanus, hepatitis B, *Haemophilus influenzae*, polio, and measles) is crucial to reducing infant and child mortality. Differences in vaccination coverage among subgroups of the population are useful for program planning and targeting resources to areas most in need. Additionally, information on immunization coverage is important for the monitoring and evaluation of the Expanded Programme on Immunization (EPI).

The 2007 RMIDHS collected information on vaccination coverage for all living children born in the five years preceding the survey. According to the guidelines developed by WHO, children are considered fully vaccinated when they have received a vaccination against tuberculosis (BCG), three doses each of the DPT and polio vaccines, and a measles vaccination by the age of 12 months. BCG should be given at birth or at first clinical contact, DPT and polio require three vaccinations at approximately six, 10, and 14 weeks of age, and measles should be given at or soon after reaching nine months of age.

Information on vaccination coverage was collected in two ways in the RMIDHS: from vaccination cards shown to the interviewer, and from mothers' verbal reports. If the cards were available, the interviewer copied the vaccination dates directly onto the questionnaire. When there was no vaccination card for the child or if a vaccine had not been recorded on the card as being given, the respondent was asked to recall the vaccines given to her child. Table 10.2 shows the percentage of children aged 12–23 months who had received the various vaccinations by source of information – that is, from vaccination card or mother's report. This is the youngest cohort of children who have reached the age by which they should be fully vaccinated.

Table 10.2. Vaccinations by source of information

Percentage of children aged 12–23 months who received specific vaccines at any time before the survey, by source of information (vaccination card or mother's report), and percentage vaccinated by 12 months of age, Marshall Islands 2007

		DPT			Polio						
Source of information	BCG	1	2	3	1	2	3	Measles	All basic vaccinations[1]	No vaccinations	Number of children
Vaccinated at any time before survey											
Vaccination card	69.5	71.2	57.7	47.8	70.4	59.0	45.9	54.1	34.3	0.5	187
Mother's report	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.8	62
Either source	69.5	71.2	57.7	47.8	70.4	59.0	45.9	54.1	34.3	25.3	249
Vaccinated by 12 months of age2	66.7	65.1	48.6	37.9	66.6	50.1	36.5	6.2	2.6	27.6	249

[1] BCG, measles and three doses each of DPT and polio vaccine

[2] For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccination.

Thirty-four percent of children aged 12–23 months were fully vaccinated at the time of the survey, about 70 percent had received the BCG vaccination, and 54 percent had been vaccinated against measles. Because the DPT and polio vaccines are often administered at the same time, their coverage rates are expected to be similar. However, differences in coverage of DPT and polio result in part from stock-outs of the vaccines. Over 70 percent of children received the first doses of DPT and of polio. However, only 48 percent of children received the third dose of DPT and only 46 percent received the third dose of polio.

Table 10.3 shows the vaccination coverage among children aged 12–23 months, according to information from vaccination card or mother's report, by background characteristics. A vaccination card was seen for 75 percent of children aged 12–23 months. This information may give some indication of the success of the immunization program in reaching out to all population subgroups. Male babies are more likely to have

higher vaccination coverage rates for all basic vaccinations than female babies (37 percent compared to 32 percent).

Table 10.3. Vaccinations by background characteristics

Percentage of children aged 12–23 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), and percentage with a vaccination card, by background characteristics, Marshall Islands 2007

Background characteristic	BCG	DPT 1	DPT 2	DPT 3	Polio 1	Polio 2	Polio 3	Measles	All basic vaccinations[1]	No vaccinations	Percentage with a vaccination card seen	Number of children
Sex												
Male	65.3	65.5	55.1	47.6	66.1	56.4	42.5	53.9	36.8	31.4	69.6	115
Female	73.0	76.0	60.0	47.9	74.0	61.3	48.8	54.3	32.3	20.1	79.9	135
Birth order												
1	71.6	72.0	60.9	49.0	71.4	62.5	41.6	58.4	33.1	25.5	74.5	67
2–3	65.5	71.5	59.5	51.6	72.2	60.2	52.6	51.9	37.1	25.8	75.4	96
4–5	76.6	75.8	59.0	49.2	72.4	59.7	48.4	61.0	39.1	19.6	80.4	58
6+	(63.1)	(58.4)	(41.3)	(28.6)	(57.3)	(45.4)	(27.9)	(37.2)	(17.9)	(34.5)	(65.5)	28
Residence												
Urban	68.2	69.9	65.7	60.6	68.0	66.6	58.3	55.9	43.6	29.4	70.6	173
Rural	72.4	74.0	39.7	18.8	75.6	41.8	17.9	50.0	13.4	16.0	85.5	76
Mother's education												
No education/ primary	67.6	70.0	50.2	44.6	67.7	54.3	46.4	49.5	35.6	25.4	74.6	57
Secondary	71.0	72.3	61.0	49.1	71.8	59.8	45.4	55.8	34.2	24.1	76.6	171
More than secondary	*	*	*	*	*	*	*	*	*	*	*	21
Wealth quintile												
Lowest	(65.6)	(61.1)	(37.2)	(23.0)	(61.6)	(33.2)	(22.1)	(48.3)	(17.0)	(24.9)	(78.6)	33
Second	78.7	83.0	50.7	38.9	87.3	58.5	36.3	54.6	30.5	11.0	89.0	38
Middle	82.6	85.9	73.2	58.4	83.2	73.2	51.1	68.1	40.5	12.9	87.1	55
Fourth	74.9	72.9	69.0	62.2	71.3	70.2	63.2	60.0	47.7	25.1	74.9	62
Highest	(48.7)	(54.5)	(48.0)	(42.6)	(52.1)	(49.3)	(42.6)	(38.6)	(27.1)	(45.5)	(54.5)	62
Total	69.5	71.2	57.7	47.8	70.4	59.0	45.9	54.1	34.3	25.3	75.2	249

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] BCG, measles and three doses each of DPT and polio vaccine

First-born children are least likely to be fully immunized, with 33 percent having received all basic vaccinations compared with children of higher birth orders. There are urban–rural differences in vaccination coverage: children residing in urban areas are more likely to be fully immunized than children in rural areas (44 percent versus 13 percent).

The percentage of children fully immunized varies by mother's education. Thirty-six percent of children whose mothers have no or primary education are fully immunized, compared with 34 percent of children born to mothers with secondary-level education. Children in households in the lowest wealth quintile are less likely to have been fully immunized than children in households in the higher wealth quintiles.

10.2.1. Trends in vaccination coverage

One way of measuring trends in vaccination coverage is to compare coverage among children of different ages in the 2007 RMIDHS. Table 10.4 shows the percentage of children who received vaccinations during

their first year of life by current age. This type of data can provide information on trends in vaccination coverage over the past four years.

There have been notable improvements in vaccination coverage over the past four years. The percentage of children who have received no vaccinations at all by 12 months of age has declined over the past four years from 47 percent among children aged 48–59 months at the time of the survey to 28 percent among children aged 12–23 months. The expectation that over the same period the percentage fully immunized by age 12 months will be increased as a result does not appear to be so, as Table 10.4 shows – and the reason for this is not known. However, it could be due to the small number of the respondents. Vaccination cards were shown for 75 percent of children aged 12–23 months but for only 61 percent of children aged 48–59 months. This may be because vaccination cards for older children have been discarded or lost.

Table 10.4. Vaccinations in first year of life

Percentage of children aged 12–59 months at the time of the survey who received specific vaccines by 12 months of age, and percentage with a vaccination card, by current age of child, Marshall Islands 2007

Age in months	BCG	DPT 1	DPT 2	DPT 3	Polio 1	Polio 2	Polio 3	Measles	All basic vaccinations[1]	No vaccinations	Percentage with a vaccination card seen	Number of children
12–23	66.7	65.1	48.6	37.9	66.6	50.1	36.5	6.2	2.6	27.6	75.2	249
24–35	61.0	62.4	47.1	32.4	60.3	46.9	33.3	3.2	0.9	29.7	73.4	207
36–47	61.1	53.9	40.1	32.0	54.3	41.5	30.3	2.9	1.3	34.6	70.8	214
48–59	47.4	42.5	24.9	16.6	49.0	37.5	21.4	12.6	4.2	46.5	61.0	214
Total 12–59	59.3	56.3	40.5	30.0	57.9	44.2	30.6	6.3	2.3	34.4	70.3	884

Note: Information was obtained from vaccination cards or, if there was no written record, from mothers. For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccinations.

[1] BCG, measles and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)

The data generally show that vaccination coverage in RMI has improved over the past five years. The percentage of children who received each specific vaccination has also increased in the past five years. As noted above, the percentage who received none of the six basic vaccinations decreased from 47 percent in the 48–59 months before the survey to 28 percent 12–23 months before the survey.

10.3. ACUTE RESPIRATORY INFECTION

Acute respiratory infection is among the leading causes of childhood morbidity and mortality throughout the world. Early diagnosis and treatment with antibiotics can prevent a large proportion of deaths caused by ARI. In the 2007 RMIDHS, the prevalence of ARI was estimated by asking mothers whether their children under age five had been ill in the two weeks preceding the survey with a cough accompanied by short, rapid breathing that the mother considered to be chest-related. These symptoms are compatible with ARI. It should be noted that the morbidity data collected are subjective in the sense that they are based on the mother's perception of illness without validation by medical personnel.

Table 10.5 shows that only 2 percent of children under five years of age showed symptoms of ARI at some time in the two weeks preceding the survey. The prevalence of ARI symptoms varies by age of child. Children aged 6–11 months are most likely to show symptoms of ARI (4 percent) compared with children in the other age groups. There are no significant differences in the prevalence of ARI by sex of the child. Children of mothers who use wood, coconut husk or coconut shell as fuel for cooking are more likely to exhibit symptoms of ARI (3 percent) than children of mothers who use other fuel for cooking.

Coughing and rapid breathing were higher among children in rural areas (3 percent) than children in urban areas (1 percent). Generally, ARI prevalence is inversely associated with mother's education, where

children of uneducated mothers are more likely to experience ARI symptoms than children of mothers with secondary or higher education. However, the result in Table 10.5 does not quite support this assumption, which could be due to the small number of respondents. Meanwhile, the proportion of children with ARI symptoms decreases steadily with increasing wealth quintile of the household, from a high of 3 percent among children living in households of the lowest wealth quintile to a low of 1 percent among children living in households of the highest wealth quintile.

In Table 10.5, please note that the percentage for whom advice or treatment was sought from a health facility or provider and the percentage who received antibiotics as treatment are not presented due to the extremely small number of children who had symptoms of ARI in the two weeks preceding the survey.

Table 10.5. Prevalence of symptoms of ARI

Among children under age five, the percentage who had symptoms of acute respiratory infection (ARI) in the two weeks preceding the survey, according to background characteristics, Marshall Islands 2007

	Children under age five	
Background characteristic	Percentage with symptoms of ARI[1]	Number of children
Age in months		
<6	0.8	125
6–11	4.4	127
12–23	1.9	249
24–35	0.9	207
36–47	0.7	214
48–59	1.1	214
Sex		
Male	1.8	592
Female	1.2	545
Cooking fuel		
Electricity or gas, solar energy	0.4	336
Kerosene	1.2	330
Charcoal	*	1
Wood/coconut husk, shells	2.5	469
No food cooked in household	*	1
Residence		
Urban	0.8	731
Rural	2.8	405
Mother's education		
No education/primary	1.4	263
Secondary	1.6	769
More than secondary	1.0	105
Wealth quintile		
Lowest	2.9	175
Second	2.3	191
Middle	0.9	216
Fourth	1.1	315
Highest	1.1	240
Total	1.5	1,137

[1] Symptoms of ARI (cough accompanied by short, rapid breathing that is chest-related) is considered a proxy for pneumonia.

10.4. FEVER

Fever is another symptom of acute infections in children. Illnesses that cause fever contribute to high levels of malnutrition and mortality. Fever can occur year-round; therefore, factors that cause it must be taken into account when interpreting prevalence of fever in the Marshall Islands.

Table 10.6 shows the percentage of children under five with fever during the two weeks preceding the survey and the percentage receiving various treatments, by selected background characteristics. Nine percent of children under five were reported to have had fever in the two weeks preceding the survey. The prevalence of fever varies by age of child. Children aged 6–11 months and 12–23 months are more commonly sick with fever (16 percent and 13 percent respectively) than other children.

There are no significant variations in the prevalence of fever by sex of child or between children in urban and rural areas. Similarly, there are no significant variations in the prevalence of fever by level of education of mother; however, the percentage of children with fever generally decreases with increasing level of education of mother. Except for the fourth wealth quintile, the proportion of children with fever decreases with increasing wealth quintile, from a high of 9 percent among children living in households of the lowest wealth quintile to a low of 7 percent among children living in households of the highest wealth quintile.

Over three-fifths (63 percent) of children with fever were taken to a health facility or provider for treatment. Children aged 12–23 months were more likely to be taken to a health facility or provider for treatment of fever than other children. Likewise, children living in rural areas were more likely to be treated in a health facility or by a provider than urban children. Children with mothers who had no or primary-level education and in the fourth wealth quintile were more likely to be taken to a health facility or provider for treatment for fever than other children. *Caution is necessary in interpretation, as these results are based on a small number of respondents.*

Over half (51 percent) of children with fever received antibiotic drugs. There is not much variation in the use of antibiotic drugs by background characteristics of mother.

Table 10.6. Prevalence and treatment of fever

Among children under age five, the percentage who had a fever in the two weeks preceding the survey; and among children with fever, the percentage of children for whom treatment was sought from a health facility or provider, the percentage who took antimalarial drugs and the percentage who took antibiotic drugs, by background characteristics, Marshall Islands 2007

	Among children under age five:		Among children under age five with fever:		
Background characteristic	Percentage with fever	Number of children	Percentage for whom advice or treatment was sought from a health facility or provider[1]	Percentage who took antibiotic drugs	Number of children
Age in months					
<6	4.8	125	*	*	6
6–11	15.7	127	*	*	20
12–23	13.0	249	(59.1)	(47.4)	32
24–35	10.2	207	*	*	21
36–47	6.8	214	*	*	15
48–59	4.7	214	*	*	10
Sex					
Male	8.5	592	67.3	50.5	50
Female	9.9	545	58.6	51.1	54
Residence					
Urban	9.6	731	55.3	51.1	70
Rural	8.3	405	(78.3)	(50.2)	34
Mother's education					
No education/primary	9.8	263	(71.9)	(54.2)	26
Secondary	9.2	769	57.6	50.3	71
More than secondary	7.1	105	*	*	7
Wealth quintile					
Lowest	9.0	175	*	*	16
Second	9.1	191	*	*	17
Middle	8.8	216	*	*	19
Fourth	11.0	315	49.6	47.8	35
Highest	7.3	240	*	*	17
Total	9.2	1,137	62.8	50.8	104

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Excludes pharmacy, shop, and traditional practitioner

10.5. PREVALENCE OF DIARRHEA

Dehydration caused by severe diarrhea is a major cause of morbidity and mortality among young children, although the condition can be easily treated with oral rehydration therapy (ORT). Exposure to diarrhea-causing agents is frequently related to the use of contaminated water and to unhygienic practices in food preparation and disposal of excreta. In interpreting the findings of the 2007 RMIDHS, it should be borne in mind that prevalence of diarrhea varies seasonally.

Table 10.7 shows the percentage of children under five with diarrhea in the two weeks preceding the survey according to selected background characteristics. Overall, 9 percent of all children under five had diarrhea while 1 percent had diarrhea with blood.

Table 10.7. Prevalence of diarrhea

Percentage of children under age five who had diarrhea in the two weeks preceding the survey, by background characteristics, Marshall Islands 2007

Background characteristic	Diarrhea in the two weeks preceding the survey		Number of children
	All diarrhea	Diarrhea with blood	
Age in months			
<6	2.0	0.0	125
6–11	6.3	0.8	127
12–23	19.4	1.1	249
24–35	9.9	0.3	207
36–47	5.9	1.5	214
48–59	5.0	2.2	214
Sex			
Male	8.7	1.1	592
Female	9.4	1.1	545
Source of drinking water			
Improved	9.3	1.1	1,067
Not improved	4.6	0.0	70
Toilet facility			
Improved, not shared	8.1	0.8	735
Non-improved or shared	10.5	1.7	394
Residence			
Urban	8.8	0.4	731
Rural	9.5	2.2	405
Mother's education			
No education/primary	10.0	2.9	263
Secondary	8.4	0.5	769
More than secondary	11.1	0.8	105
Wealth quintile			
Lowest	9.3	2.5	175
Second	10.1	0.9	191
Middle	12.3	2.1	216
Fourth	7.4	0.0	315
Highest	7.2	0.6	240
Total	9.0	1.1	1,137

Note: Total includes eight children from households with missing information on type of toilet facility.

The occurrence of diarrhea varies by age of child. Young children aged 12–23 months are more prone to diarrhea than children in other age groups. There is not much variation in the prevalence of diarrhea by child's sex. Diarrhea is more common among children who live in households with a non-improved or shared toilet facility than among children who live in households with improved, not shared facilities. Surprisingly, diarrhea is common among children who live in households with an improved source of drinking water. Although there is not much difference, rural children are more likely than urban children to get sick with diarrhea (10 percent versus 9 percent). The pattern of prevalence of diarrhea by mother's level of education is not clear. The prevalence of diarrhea generally decreases as wealth quintile increases; however, this is not very clear.

The prevalence of diarrhea with blood follows a pattern similar to that observed for diarrhea in general, with higher prevalence observed among children aged 48–59 months, in rural areas whose mothers have no or primary-level education, and in the lowest to the middle wealth quintile households.

10.6. DIARRHEA TREATMENT

In the 2007 RMIDHS, mothers of children who had diarrhea were asked about what was done to treat the illness. Table 10.8 shows the percentage of children with diarrhea who received specific treatments by background characteristics. Over half the children (51 percent) with diarrhea were taken to a health-care provider. Children of uneducated mothers and those living in rural households were more likely to be taken to a health-care provider than other children. Fifty-seven percent of female children who had diarrhea in the two weeks preceding the survey were taken to a health-care provider compared to 46 percent of boys. Meanwhile, 45 percent of the children who had non-bloody diarrhea in the two weeks preceding the survey were taken to a health-care provider.

Almost three in four (70 percent) children with diarrhea were treated with some kind of ORT or increased fluids. About 4 in 10 children (38 percent) were treated with oral rehydration salt (ORS) prepared from an ORS packet, 13 percent were given recommended home fluids, and 43 percent were given increased fluids.

Twenty-six percent of children were given antibiotic drugs and 9 percent were given home remedies or other treatments. Twenty-one percent of children with diarrhea did not receive any treatment at all.

Mothers with the lowest level of education and mothers in rural areas were more likely to seek advice or treatment for diarrhea for their children than other mothers. However, ORT and other treatments varied by urban and rural residence, as observed in Table 10.8. Surprisingly, more children in urban than rural areas did not seek treatment (25 percent compared to 15 percent). Similarly, 12 percent of children in urban areas were treated with home remedies or other treatment compared to 4 percent in rural areas.

Table 10.8. Diarrhea treatment

Among children under age five who had diarrhea in the two weeks preceding the survey, the percentage for whom advice or treatment was sought from a health facility or provider, the percentage given oral rehydration therapy (ORT), the percentage given increased fluids, the percentage given ORT or increased fluids, and the percentage who were given other treatments, by background characteristics, Marshall Islands 2007

Background characteristic	Percentage of children with diarrhea for whom advice or treatment was sought from a health facility or provider[1]	ORT					Other treatments				
		ORS packets or pre-packaged liquid	Recommended home fluids (RHF)	Either ORS or RHF	Increased fluids	ORT or increased fluids	Antibiotic drugs	Intra-venous solution	Home remedy/ other	No treatment	Number of children
Sex											
Male	(46.2)	(36.7)	(13.8)	(44.1)	(41.3)	(70.5)	(30.1)	(0.0)	(10.5)	(18.2)	52
Female	56.7	39.7	12.3	47.4	44.1	70.1	20.9	2.5	7.3	23.6	51
Type of diarrhea											
Non-bloody	44.9	35.4	14.8	44.0	41.0	67.0	19.0	1.4	10.1	23.7	91
Bloody	*	*	*	*	*	*	*	*	*	*	12
Residence											
Urban	40.7	38.9	19.8	49.9	31.1	65.3	13.3	2.0	12.0	24.2	64
Rural	69.4	37.0	1.7	38.7	62.1	78.6	46.1	0.0	3.6	15.3	38
Mother's education											
No education/ primary	(63.4)	(51.1)	(5.6	(51.1)	(36.3)	(68.8)	(33.9)	(4.8)	(0.0)	(19.1)	26
Secondary	46.1	28.6	14.4	40.5	45.9	71.2	25.7	0.0	14.1	19.7	65
More than secondary	*	*	*	*	*	*	*	*	*	*	12
Total	51.4	38.2	13.0	45.7	42.7	70.3	25.5	1.2	8.9	20.9	103

Notes: ORT includes solution prepared from oral rehydration salt (ORS), pre-packaged ORS packet, and recommended home fluids (RHF). There are too few cases to show feeding practices during diarrhea by age and wealth quintile. Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Excludes pharmacy, shop and traditional practitioner

10.7. FEEDING PRACTICES

Mothers are encouraged to continue feeding children who have diarrhea normally and to increase the amount of fluids. These practices help to reduce dehydration and minimize the adverse consequences of diarrhea on the child's nutritional status. Mothers were asked whether they gave the child less, the same amount, or more fluids and food than usual when their child had diarrhea. Table 10.9 shows the percent distribution of children under five who had diarrhea in the past two weeks by feeding practices, according to background characteristics.

Thirty-eight percent of children who had diarrhea were given the same amount of liquid as usual, 43 percent were given more, 6 percent were given somewhat less than the usual amount, and 12 percent were given much less than the usual amount. Only 1 percent of children who had diarrhea were given no liquids.

Regarding the amount of food offered to children who had diarrhea, 36 percent were given the same as usual, 27 percent were given more, 24 percent were given somewhat less than the usual amount of food, 13 percent were given much less than the usual amount of food, and only 1 percent of children who usually ate solid foods did not receive food during their illness.

Children who had non-bloody diarrhea, those living in rural areas, and children of the most educated mothers were more likely to receive more than the usual amount of liquid during episodes of diarrhea than other children. Regarding the amount of food offered during diarrhea, the largest differentials were observed by place of residence, with children in rural areas being the most likely to receive more food during a diarrhea episode (48 percent compared to 14 percent).

Table 10.9 also shows that 38 percent of children were given increased fluids and continued feeding, while 69 percent of the children who continued feeding were given ORT and/or increased fluids, with the largest differentials observed by place of residence.

Table 10.9. Feeding practices during diarrhea

Percent distribution of children under age five who had diarrhea in the two weeks preceding the survey by amount of liquids and food offered compared with normal practice, the percentage of children given increased fluids and continued feeding during the diarrhea episode, and the percentage of children who continued feeding and were given ORT and/or increased fluids during the episode of diarrhea, by background characteristics, Marshall Islands 2007

	Amount of liquids offered						Amount of food offered								
Background characteristic	More	Same as usual	Somewhat less	Much less	None	Total	More	Same as usual	Somewhat less	Much less	None	Total	Percentage given increased fluids and continued feeding[1,2]	Percentage who continued feeding and were given ORT and/or increased fluids[3]	Number of children with diarrhea
Sex															
Male	(41.3)	(46.8)	(5.1)	(5.0)	(1.9)	100.0	(23.6)	(35.3)	(27.1)	(11.7)	(2.2)	100.0	(32.7)	(67.6)	52
Female	44.1	29.2	7.4	19.3	0.0	100.0	29.5	36.6	20.1	13.7	0.0	100.0	43.4	70.1	51
Type of diarrhea															
Non-bloody	41.0	41.3	3.8	12.9	1.1	100.0	23.8	38.2	23.9	12.8	1.3	100.0	35.7	65.4	91
Bloody	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12
Residence															
Urban	31.1	43.5	7.6	16.3	1.5	100.0	13.9	43.6	23.6	17.1	1.8	100.0	24.9	63.0	64
Rural	62.1	28.8	3.9	5.1	0.0	100.0	47.9	23.1	23.7	5.3	0.0	100.0	60.2	78.6	38
Mother's education															
No education/ primary	(36.3)	(28.1)	(15.9)	(19.7)	(0.0)	100.0	(22.2)	(29.6)	(30.8)	(17.4)	(0.0)	100.0	(36.3)	(68.8)	26
Secondary	45.9	41.2	3.4	8.0	1.5	100.0	33.1	39.4	15.9	9.9	1.8	100.0	38.5	68.9	65
More than secondary	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12
Total	42.7	38.0	6.2	12.1	0.9	100.0	26.6	36.0	23.6	12.7	1.1	100.0	38.0	68.8	103

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. There are too few cases to show feeding practices during diarrhea by age and wealth index.

[1] Equivalent to the UNICEF/WHO indicator 'Home management of diarrhea', MICS Indicator 34

[2] Continued feeding practices includes children who were given more, the same as usual, or somewhat less food during the diarrhea episode.

[3] Equivalent to UNICEF MICS Indicator 35

10.8. KNOWLEDGE OF ORS PACKETS

A simple and effective response to dehydration caused by diarrhea is a prompt increase in the child's fluid intake through some form of ORT, which may include the use of a solution prepared from packets of oral rehydration salt (ORS). To ascertain how widespread knowledge of ORS is in the Marshall Islands, respondents were asked whether they knew about ORS packets.

Table 10.10 shows that almost half of the women (46 percent) who gave birth in the five years preceding the survey know about ORS packets. ORS knowledge is higher among rural women (47 percent) than among urban women (45 percent). Knowledge of ORS increases as the age of women increases, from 30 percent among the youngest age group to 52 percent in the oldest age group.

Knowledge of ORS packets varies by mother's level of education: it increases steadily from 35 percent among no or primary-level-educated mothers to 50 percent among mothers with more than secondary-level education. There is no discernible relationship between knowledge of ORS packets and wealth.

Table 10.10. Knowledge of ORS packets or pre-packaged liquids

Percentage of mothers aged 15–49 who gave birth in the five years preceding the survey who know about ORS packets or ORS pre-packaged liquids for treatment of diarrhea by background characteristics, Marshall Islands 2007

Background characteristic	Percentage of women who know about ORS packets or ORS pre-packaged liquids	Number of women
Age		
15–19	29.8	67
20–24	41.7	221
25–34	49.0	355
35–49	51.7	133
Residence		
Urban	45.1	502
Rural	46.9	272
Education		
No education/primary	34.7	178
Secondary	48.9	515
More than secondary	49.9	81
Wealth quintile		
Lowest	42.4	117
Second	50.0	123
Middle	46.5	153
Fourth	44.8	210
Highest	45.3	172
Total	45.7	774

ORS = oral rehydration salt

10.9. STOOL DISPOSAL

If human feces are left uncontained, disease may spread by direct contact or by animal contact with the feces. Hence, the proper disposal of children's stools is extremely important in preventing the spread of disease. Table 10.11 presents information on the disposal of the stools of children under five, by background characteristics.

Table 10.11. Disposal of children's stools

Percent distribution of youngest children under age five living with the mother by the manner of disposal of the child's last fecal matter, and percentage of children whose stools are disposed of safely, according to background characteristics, Marshall Islands 2007

Background characteristic	Manner of disposal of children's stools								Total	Percentage of children whose stools are disposed of safely	Number of mothers
	Child used toilet or latrine	Put/rinsed into toilet or latrine	Buried	Put/rinsed into drain or ditch	Thrown into garbage	Rinsed away	Other	Missing			
Age in months											
<6	2.1	5.5	8.3	20.1	55.4	4.2	2.5	1.9	100.0	15.9	122
6–11	11.5	6.7	7.8	20.7	45.4	5.4	2.0	0.6	100.0	26.0	116
12–23	17.7	7.4	6.0	21.0	43.1	3.7	1.0	0.0	100.0	31.1	206
24–35	23.4	13.3	7.3	19.2	28.6	7.6	0.6	0.0	100.0	44.0	109
36–47	30.7	9.5	8.1	13.5	27.6	8.2	2.3	0.0	100.0	48.4	86
48–59	27.6	19.9	5.8	17.7	14.8	6.2	2.6	5.3	100.0	53.4	76
Toilet facility											
Improved, not shared	22.0	12.6	4.6	12.0	42.2	4.9	0.8	0.9	100.0	39.3	464
Non-improved or shared	9.2	3.0	11.9	33.3	31.1	6.7	3.5	1.2	100.0	24.2	246
Residence											
Urban	24.1	12.8	4.3	6.7	50.3	0.0	0.7	1.1	100.0	41.2	465
Rural	5.1	3.3	12.3	42.9	16.3	15.7	3.6	0.7	100.0	20.7	248
Education											
No education/ primary	10.2	7.0	8.7	26.7	35.3	9.5	1.5	1.1	100.0	25.8	163
Secondary	18.2	9.4	7.0	19.2	38.5	4.8	1.8	1.1	100.0	34.6	477
More than secondary	29.2	15.3	4.8	2.9	45.5	0.9	1.4	0.0	100.0	49.3	73
Wealth quintile											
Lowest	3.0	2.4	15.2	39.5	22.5	13.3	2.4	1.7	100.0	20.7	107
Second	8.5	4.0	11.3	38.7	19.2	14.2	3.1	1.0	100.0	23.7	114
Middle	10.3	7.5	10.3	25.7	36.6	6.2	3.4	0.0	100.0	28.1	138
Fourth	22.0	14.3	3.1	6.0	53.4	0.0	0.7	0.6	100.0	39.3	202
Highest	35.1	13.9	0.8	2.4	46.0	0.0	0.0	1.9	100.0	49.8	152
Total	17.5	9.5	7.1	19.3	38.5	5.5	1.7	1.0	100.0	34.1	713

Total includes four children from households with missing information on type of toilet facility.

Sixty-three percent of children's stools are left uncontained: 19 percent are put or rinsed into a drain or ditch, another 39 percent are thrown into the garbage, and 6 percent are rinsed away. Thirty-four percent of children's stools are disposed of hygienically: 7 percent are buried, 10 percent are disposed of in a toilet or latrine, and 18 percent of children under five use a toilet or latrine. Children's stools are more likely to be contained as the children grow older (16 percent for children aged less than six months compared to 53 percent for children aged 48–59 months).

There are pronounced differences by mother's level of education in the way stools are disposed of. For 49 percent of the children of mothers with more than secondary-level education, stools are disposed of hygienically (child uses toilet, or child's stool is thrown into toilet or buried in yard), compared with 26 percent of children of mothers with no or primary-level education. Not surprisingly, 39 percent of children in households with improved toilets that are not shared with other households have their stools contained compared with 24 percent of children in households using non-improved or shared toilet facilities. Children's stools are much more likely to be contained in the wealthiest households (50 percent) than in the poorest households (21 percent).

Children's stools are more likely to be contained in urban areas (41 percent) than in rural areas (21 percent). This marked difference could be attributed to the fact that toilet facilities are more available in urban areas.

CHAPTER 11 NUTRITION OF CHILDREN AND ADULTS

This chapter covers nutritional concerns for children and women. Infant and young child feeding (IYCF) practices, including breastfeeding and feeding with solid/semisolid foods, are presented for children. Diversity of foods consumed, micronutrient intake, and vitamin A deficiency are presented for women and for children under age five.

Adequate nutrition is critical to child development. The period from birth to two years of age is important for optimal growth, health, and development. Unfortunately, this period is often marked by growth faltering, micronutrient deficiencies, and common childhood illnesses such as diarrhea and acute respiratory infections. Optimal feeding practices reported in this chapter include early initiation of breastfeeding, exclusive breastfeeding during the first six months of life, continued breastfeeding up to two years of age and beyond, timely introduction of complementary feeding at six months of age, frequency of feeding solid/semisolid foods, and the diversity of food groups fed to children between six and 23 months of age. A summary indicator that describes the quality of infant and young child (age 6–23 months) feeding practices is included.

Micronutrient deficiencies are a result of inadequate intake of micronutrient-rich foods and inadequate utilization of available micronutrients in the diet due to infections, parasitic infestations, and other dietary factors. Measures of micronutrient status (anemia and night-blindness), consumption of vitamin A-rich and iron-rich foods, and micronutrient supplementation for iron and vitamin A are included in this chapter for both women and children. The chapter will discuss the diversity of food groups consumed by mothers who gave birth in the last three years (for example, vitamin A-rich foods), providing important information on maternal eating patterns.

11.1. INITIATION OF BREASTFEEDING

Early initiation of breastfeeding is encouraged for a number of reasons. Mothers benefit from early suckling because it stimulates breast milk production and facilitates the release of oxytocin, which helps the contraction of the uterus and reduces postpartum blood loss. The first breast milk contains colostrum, which is highly nutritious and has antibodies that protect the newborn from diseases. Early initiation of breastfeeding also fosters bonding between mother and child.

Table 11.1 shows the percentage of all children born in the five years before the survey by breastfeeding status and the timing of initial breastfeeding, by background characteristics. Breastfeeding is nearly universal in the Marshall Islands, with 95 percent of children born in the five years preceding the survey having been breastfed at some time. There is very little difference in whether children are ever breastfed by most background characteristics, except place of residence and wealth status. There is an obvious difference between rural and urban areas in the proportion ever breastfed, where the practice is almost universal (97 percent) in rural areas compared to 93 percent in urban areas. Similarly, the proportions of children being breastfed are likely to be higher among mothers in lower wealth quintile households than mothers in richer households.

Table 11.1. Initial breastfeeding

Percentage of children born in the five years preceding the survey who were ever breastfed, and for the last children born in the five years preceding the survey ever breastfed, the percentage who started breastfeeding within one hour and within one day of birth and the percentage who received a prelacteal feed, by background characteristics, Marshall Islands 2007

	Breastfeeding among children born in the last five years		Among last-born children ever breastfed:			
Background characteristic	Percentage ever breastfed	Number of children born in the last five years	Percentage who started breastfeeding within 1 hour of birth	Percentage who started breast-feeding within 1 day of birth[1]	Percentage who received a prelacteal feed[2]	Number of last-born children ever breastfed
Sex						
Male	93.3	612	71.3	96.2	17.8	372
Female	95.8	560	73.8	94.9	21.7	366
Residence						
Urban	93.0	751	69.3	95.0	20.4	473
Rural	97.3	422	78.4	96.6	18.5	265
Mother's education						
No education/primary	93.1	271	73.6	96.9	15.7	170
Secondary	95.2	794	71.6	94.7	21.2	493
More than secondary	92.9	108	76.3	98.3	18.8	75
Assistance at delivery						
Health professional[3]	94.4	1,103	71.3	95.3	20.3	695
Traditional birth attendant	*	23	*	*	*	16
Other	*	10	*	*	*	6
No one	*	7	*	*	*	3
Missing	*	29	*	*	*	18
Place of delivery						
Health facility	94.4	997	70.0	94.9	20.5	630
At home	95.8	156	86.5	99.3	11.8	99
Other	*	15	*	*	*	8
Wealth quintile						
Lowest	95.3	298	80.4	97.0	16.5	182
Second	97.0	286	71.8	95.4	17.8	184
Middle	93.8	234	73.0	94.0	20.7	142
Fourth	91.4	189	66.2	91.8	19.1	123
Highest	93.2	165	67.2	100.0	27.8	107
Total	94.5	1,173	72.5	95.6	19.7	738

Note: Table is based on births in the last five years whether the children are living or dead at the time of interview. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Total includes five cases with missing information on place of delivery, which are not shown separately.

[1] Includes children who started breastfeeding within one hour of birth

[2] Children given something other than breast milk during the first three days of life

[3] Doctor, nurse/midwife, or auxiliary midwife

Almost three-fourths of the children born five years preceding the survey (73 percent) were breastfed within one hour of birth. Children who were born at home, in rural areas, to mothers who had more than secondary-level education, and in less wealthy homes were more likely than other children to have been breastfed in the first hour after birth.

As for initiating breastfeeding in the first day of life, 96 percent of children were breastfed. The differences by background characteristics in the percentage initiating breastfeeding during the first 24 hours are comparatively small, but the pattern is similar to that observed in the percentage initiating breastfeeding within the first hour after birth. For instance, children who were born at home, in rural areas, to mothers who had more than secondary-level education, and in the poorest or wealthiest households were more likely than other children to have been breastfed in the first day after birth.

Every one in five last-born children (20 percent) who were ever breastfed received something other than breast milk during the first three days of life. There are differences in prelacteal feeding by sex of the child, place of residence, and other background characteristics. The proportion of children receiving prelacteal feeding is more likely to be high among female children, children living in urban areas, children whose mothers have secondary or higher levels of education, children born in a health facility, and children in wealthy homes.

11.2. BREASTFEEDING STATUS BY AGE

The United Nations Children's Fund (UNICEF) and WHO recommend that children be exclusively breastfed during the first six months of life and that they be given solid or semisolid complementary food in addition to continued breastfeeding from six months until 24 months or more when the child is fully weaned. Exclusive breastfeeding is recommended because breast milk is uncontaminated and contains all the nutrients necessary for children in the first few months of life. In addition, the mother's antibodies in breast milk provide immunity to disease.

Early supplementation is discouraged for several reasons. First, it exposes infants to pathogens and increases their risk of infection disease. Second, it decreases infants' intake of breast milk and therefore suckling, which reduces breast milk production. Third, in low-resource settings, supplementary food is often nutritionally inferior.

Information on complementary feeding was obtained by asking mothers about the current breastfeeding status of all children under five years of age and, for the youngest child born in the three-year period before the survey and living with the mother, foods and liquids given to the child the day and night before the survey.

Table 11.2 shows the percent distribution of youngest children below three years of age living with the mother by breastfeeding status and percentage of children under three years using a bottle with a nipple, according to age in months. The data presented in Table 11.2 show that, contrary to WHO's recommendations, only a little over one in four (27 percent) Marshallese children under the age of six months are exclusively breastfed. Among children aged 4–5 months, only one in five or 20 percent are exclusively breastfed. Under the age of two months, 47 percent of children are exclusively breastfed, while 5 percent receive breast milk and non-milk liquids or juice, 7 percent receive breast milk and other milk, and 42 percent already receive some complementary foods. Although some children receive complementary foods too early, others begin to receive complementary foods too late. After six months of life, breast milk does not satisfy all of an infant's nutritional needs. Nonetheless, only 82 percent of Marshallese children aged 6–8 months receive complementary foods. Only 1 percent are still exclusively breastfeeding, and 4 percent receive just plain water in addition to breast milk while 8 percent are breastfed with other milk.

Table 11.2. Breastfeeding status by age

Percent distribution of youngest children under three years who are living with their mother by breastfeeding status and the percentage currently breastfeeding; and the percentage of all children under three years using a bottle with a nipple, according to age in months, Marshall Islands 2007

	Percent distribution of youngest children under three living with their mother by breastfeeding status										
			Breastfeeding and consuming:								
Age in months	Not breast-feeding	Exclusively breastfed	Plain water only	Non-milk liquids/ juice	Other milk	Comple-mentary foods	Total	Percentage currently breast-feeding	Number of youngest child under three years	Percentage using a bottle with a nipple[1]	Number of children
0–1	(0.0)	(46.8)	(0.0)	(4.6)	(6.9)	(41.7)	100.0	(100.0)	33	(6.5	33
2–3	(5.3)	(20.4)	(1.4)	(2.1)	(19.5)	(51.3)	100.0	(94.7)	46	(19.9)	48
4–5	(7.4)	(19.9)	(9.0)	(1.5)	(22.1)	(40.1)	100.0	(92.6)	43	(32.0)	45
6–8	5.8	1.1	3.5	0.0	8.1	81.5	100.0	94.2	61	38.1	70
9–11	16.7	1.2	0.0	2.5	0.0	79.6	100.0	83.3	55	19.0	58
12–17	36.7	0.0	0.0	0.0	0.0	63.3	100.0	63.3	109	22.4	120
18–23	48.5	0.0	0.0	0.0	0.0	51.5	100.0	51.5	96	19.4	129
24–35	68.1	0.0	0.0	0.0	0.0	31.9	100.0	31.9	109	13.1	207
0–3	3.1	31.3	0.8	3.1	14.3	47.4	100.0	96.9	79	14.4	80
0–5	4.6	27.3	3.7	2.6	17.0	44.8	100.0	95.4	122	20.7	125
6–9	11.9	0.8	2.6	1.7	6.0	77.0	100.0	88.1	82	35.2	92
12–15	36.2	0.0	0.0	0.0	0.0	63.8	100.0	63.8	86	23.5	93
12–23	42.2	0.0	0.0	0.0	0.0	57.8	100.0	57.8	206	20.8	249
20–23	46.9	0.0	0.0	0.0	0.0	53.1	100.0	53.1	60	13.9	80

Notes: Figures in parentheses are based on 25–49 unweighted cases. Breastfeeding status refers to a '24-hour' period (yesterday and last night). Children who are classified as breastfeeding and consuming plain water only consumed no liquid or solid supplements. The categories of not breastfeeding, exclusively breastfeeding, and breastfeeding and consuming plain water, non-milk liquids/juice, other milk, or complementary foods (solids and semisolids) are hierarchical and mutually exclusive, and their percentages add up to 100 percent. Thus, children who receive breast milk and non-milk liquids and who do not receive complementary foods are classified in the non-milk liquid category even though they may also get plain water. Any children who get complementary food are classified in that category as long as they are breastfeeding as well.

[1] Based on all children under three years

Around half of Marshallese children continue to breastfeed until the age of 24 months. Exclusive breastfeeding quickly declines from birth to age 6–7 months. A substantial proportion of children are fed water, other milk, and complementary foods starting from very young ages.

11.3. DURATION AND FREQUENCY OF BREASTFEEDING

Table 11.3 shows the median duration of breastfeeding by selected background characteristics. The estimates of median and mean durations of breastfeeding are based on current status data – that is, the proportion of children in the three years preceding the survey who were being breastfed at the time of the survey.

Table 11.3. Median duration and frequency of breastfeeding

Median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children born in the three years preceding the survey, percentage of breastfeeding children under six months living with the mother who were breastfed six or more times in the 24 hours preceding the survey, and mean number of feeds (day/night), by background characteristics, Marshall Islands 2007

	Median duration (months) of breastfeeding among children born in the last three years[1]			Frequency of breastfeeding among children under six months[2]			
Background characteristic	Any breast-feeding	Exclusive breastfeeding	Predominant breastfeeding[3]	Percentage breastfed 6+ times in last 24 hours	Mean number of day feeds	Mean number of night feeds	Number of children
Sex							
Male	15.8	1.5	2.0	85.9	5.8	5.2	57
Female	14.9	0.6	0.6	86.3	5.5	4.6	59
Residence							
Urban	14.2	1.4	1.6	86.0	5.6	5.4	76
Rural	19.9	0.4	0.5	86.5	5.9	4.0	40
Mother's education							
No education/primary	(15.6)	(0.7)	(1.1)	(78.3)	5.8	5.5	34
Secondary	14.7	0.7	0.7	89.5	5.7	4.7	77
More than secondary	*	*	*	*	4.7	3.2	5
Total	15.4	0.7	0.9	86.1	5.7	4.9	116
Mean for all children	18.1	2.3	2.8	na	na	na	na

Notes: Median and mean durations are based on current status. Includes children living and deceased at the time of the survey. Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

na = not applicable

[1] It is assumed that non-last-born children and last-born children not currently living with the mother are not currently breastfeeding.

[2] Excludes children for whom there was no valid answer on the number of times breastfed

[3] Either exclusively breastfed or received breast milk and plain water, and/or non-milk liquids only

The median duration of breastfeeding is 15.4 months, while the median duration of exclusive breastfeeding is 0.7 months and the median duration of predominant breastfeeding is 0.9 months. In contrast, the mean duration is longer, with overall mean duration of breastfeeding at 18.1 months, the mean duration of exclusive breastfeeding at 2.3 months, and the mean duration of predominant breastfeeding at 2.8 months. There is little difference in the duration of breastfeeding by sex of child. Rural children are breastfed for a slightly longer duration than urban children (19.9 months compared to 14.2 months). Mothers with secondary education breastfeed their children for a shorter duration than mothers with less education.

Both duration and frequency of breastfeeding can affect the length of postpartum amenorrhea. Table 11.3 shows that the overwhelming majority (86 percent) of children under six months of age were breastfed six or more times in the 24 hours preceding the survey. In line with expectations, breastfeeding is slightly more frequent in the daytime than at night, with the mean number of feeds in the daytime being 5.7 compared with 4.9 at night. The most frequent daytime breastfeeding occurs among children residing in rural areas, while the most frequent night feeds are observed in urban areas. The frequency of daytime feeds is slightly lower among children whose mothers have secondary education or higher than among other children, and the frequency of nighttime feeds is slightly higher among children of mothers with no or primary education than children of mothers with more education.

11.4. TYPES OF COMPLEMENTARY FOODS

UNICEF and WHO recommend the introduction of solid food to infants around the age of six months because by that age breast milk alone is no longer sufficient to maintain a child's optimal growth. In the transition to eating the family diet, children from the age of six months should be fed small quantities of solid and semisolid foods throughout the day. During this transition period (ages 6–23 months), the prevalence of malnutrition increases substantially in many countries because of increased infections and poor feeding practices.

Table 11.4 provides information on the types of food given to youngest children under three years of age living with their mother on the day and night preceding the survey, according to their breastfeeding status. Among breastfeeding children, 12 percent consumed infant formula while over one-third (34 percent) received other milk and over three in four (79 percent) received other liquids.

Between the ages of six and 23 months, children consumed foods made from grains more often than any other food group. Ninety-three percent of breastfeeding children and 99 percent of non-breastfeeding children in this age group ate foods made from grains in the day and night preceding the interview. The next most commonly consumed food group was meat, fish, poultry, and eggs. Around 83 percent of breastfeeding children and 94 percent of non-breastfeeding children ate meat, fish, poultry, and eggs. The third commonly consumed food group was fruits and vegetables rich in vitamin A, which was consumed by 61 percent of breastfeeding children and 69 percent of non-breastfeeding children.

Comparing dietary intake of children (6–23 months) by their breastfeeding status, as expected a higher proportion of non-breastfeeding children were consuming solid and semisolid foods than breastfeeding children (100 percent compared with 96 percent). Meanwhile, more non-breastfeeding children than breastfeeding children were consuming milk other than breast milk (63 percent compared with 36 percent). However, the percentage of non-breastfeeding children consuming other milk was still low, considering they were not benefiting from breast milk.

Table 11.4. Foods and liquids consumed by children in the day or night preceding the interview

Percentage of youngest children under three years of age who are living with the mother by type of foods consumed in the day or night preceding the interview, according to breastfeeding status and age, Marshall Islands 2007

	Liquids			Solid or semisolid foods											
Age in months	Infant formula	Other milk[1]	Other liquids[2]	Fortified baby foods	Food made from grains[3]	Fruits and vegetables rich in vitamin A[4]	Other fruits and vege-tables	Food made from roots and tubers	Food made from legumes and nuts	Meat, fish, poultry, and eggs	Cheese, yogurt, other milk product	Any solid or semisolid food	Foods made with oil, fat, or butter	Sugary foods	Number of children
BREASTFEEDING CHILDREN															
0–1	(7.2)	(21.1)	(46.4)	(0.0)	(41.7)	(32.4)	(26.6)	(1.1)	(11.8)	(38.2)	(9.0)	(41.7)	(16.8)	(23.5)	33
2–3	(25.0)	(29.6)	(54.2)	(0.0)	(53.7)	(28.0)	(15.1)	(10.4)	(9.5)	(51.6)	(9.8)	(54.2)	(24.6)	(42.1)	44
4–5	(25.5)	(22.0)	(48.2)	(6.6)	(43.3)	(25.3)	(24.2)	(0.5)	(3.1)	(40.8)	(8.7)	(43.3)	(18.0)	(27.8)	39
6–8	18.2	38.3	79.7	17.6	82.2	61.1	39.7	9.3	8.7	62.8	9.2	86.5	29.6	30.1	57
9–11	(10.1)	(25.3)	(96.4)	(1.4)	(94.1)	(49.2)	(35.1)	(6.1)	(0.0)	(88.3)	(8.6)	(95.5)	(38.1)	(41.8)	46
12–17	4.9	46.8	94.8	13.6	95.7	60.5	32.4	10.5	12.3	91.0	10.6	100.0	39.5	61.7	69
18–23	1.6	35.5	92.7	8.5	100.0	72.7	37.0	12.8	9.0	91.9	21.5	100.0	58.3	81.0	50
24–35	(6.1)	(37.7)	(96.3)	(1.9)	(98.4)	(63.3)	(44.4)	(4.4)	(1.6)	(90.4)	(30.1)	(100.0)	(46.2)	(66.0)	35
6–23	8.7	37.6	90.8	11.0	92.8	61.0	35.9	9.8	8.1	83.4	12.3	95.6	40.9	53.7	222
Total	12.0	33.6	78.6	7.4	79.0	51.1	32.2	7.6	7.5	71.8	13.0	80.9	34.9	48.1	373
NON-BREASTFEEDING CHILDREN															
0–11	*	*	*	*	*	*	*	*	*	*	*	*	*	*	18
12–17	(30.2)	(50.3)	(92.5)	(15.8)	(99.5)	(59.9)	(59.9)	(18.5)	(9.7)	(96.1)	(34.0)	(99.5)	(56.2)	(66.4)	40
18–23	(4.2)	(63.3)	(97.3)	(2.9)	(98.2)	(77.6)	(59.0)	(17.3)	(9.8)	(94.7)	(31.6)	(100.0)	(53.9)	(81.5)	47
24–35	7.6	59.7	98.8	7.8	96.7	76.5	55.7	14.1	14.6	95.8	35.4	98.8	65.3	80.6	74
6–23	20.5	62.7	95.7	10.2	99.0	69.1	56.6	19.3	12.7	94.4	34.5	99.8	56.4	74.5	99
Total	15.8	61.2	96.5	8.9	96.8	72.2	55.9	16.6	13.1	94.6	35.2	98.8	60.5	76.5	179

Note: Breastfeeding status and food consumed refer to a '24-hour' period (yesterday and last night). Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Other milk includes fresh, tinned and powdered cow or other animal milk.

[2] Does not include plain water

[3] Includes fortified baby food

[4] Includes [list fruits and vegetables included in the questionnaire such as pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, dark-green leafy vegetables, mango, papaya, and other locally grown fruits and vegetables that are rich in vitamin A]

11.5. INFANT AND YOUNG CHILD FEEDING (IYCF) PRACTICES

IYCF practices include timely initiation of feeding solid/semisolid foods from age six months and increasing the amount and variety of foods and frequency of feeding as the child gets older, while maintaining frequent breastfeeding. Guidelines have been established with respect to IYCF practices for children aged 6–23 months (PAHO/WHO 2003, WHO 2005).

Table 11.5 presents a summary indicator of IYCF practices. The indicator takes into account the percentages of children for whom feeding practices met minimum standards with respect to food diversity (i.e. the number of food groups consumed) and feeding frequency (i.e. the number of times the child was fed), as well the consumption of breast milk or other milk or milk products. Breastfed children are considered as being fed with the minimum standards if they consume at least three food groups and receive foods other than breast milk at least twice per day in the case of infants aged 6–8 months and at least three times per day in the case of children aged 9–23 months. Non-breastfed children are considered to be fed in accordance with the minimum standards if they consume milk or milk products, consume four food groups (including milk products), and are fed at least four times per day.

According to the results presented in Table 11.5, 91 percent of youngest children aged 6–23 months living with the mother received breast milk or other milk or milk products during the 24-hour period before the survey, 83 percent had a minimally diverse diet (i.e. they were fed foods from the minimum number of food groups depending on their age and breastfeeding status), and 65 percent were fed the minimum number of times appropriate for their age. In summary, over half (55 percent) of Marshallese children aged 6–23 months met the minimum standard with respect to all three IYCF practices.

Breastfed children were more likely to meet all three IYCF practices than non-breastfed children, only 19 percent of whom were receiving adequate nutrition according to WHO guidelines. Breastfed children were more likely than non-breastfed children to meet the recommendations for both diversity in food groups and frequency of feeding. Over 8 in 10 breastfed children (84 percent) consumed foods from the recommended number of food groups, as compared with 81 percent of non-breastfed children (Table 11.5). Seventy-one percent of non-breastfed children consumed any milk or milk products in the day and night preceding the interview. Over 8 in 10 (81 percent) breastfed children were fed the minimum number of times, as compared with 30 percent of non-breastfed children.

Surprisingly, children in urban areas were less likely than those in rural areas to meet the recommendations for all three IYCF practices (49 percent compared with 66 percent). The 2007 RMIDHS data show that there is very little variation by mother's level of education. Children 12–23 months old are less likely than those aged 6–11 months to meet the recommendations for all three IYCF practices. Meanwhile, male children are more likely to meet the recommendations for all three IYCF practices. Moreover, children from the poorest households are more likely than those from the wealthiest households to meet the recommendations for all three IYCF practices.

Table 11.5. Infant and young child feeding (IYCF) practices

Percentage of youngest children aged 6–23 months living with their mother who are fed according to three IYCF feeding practices based upon number of food groups and times they are fed during the day or night preceding the survey, by breastfeeding status and background characteristics, Marshall Islands 2007

Background characteristic	Among breastfed children 6–23 months, percentage fed[2]:			Number of breastfed children 5–23 months	Among non-breastfed children 6–23 months, percentage fed[3]:				Number of non-breastfed children 6–23 months	Among all children 6–23 months, percentage fed[6]:				Number of all children 6–23 months
	3+ food groups[1]	Minimum times or more	Both 3+ food groups1 and minimum times or more		Milk or milk products	4+ food groups	4+ times or more	With 3 IYCF practices[4]		Breast milk or milk products	3+ or 4+ food groups[5]	Minimum times or more	With all 3 IYCF practices	
Age in months														
6–8	67.2	80.7	62.6	57	*	*	*	*	4	100.0	66.7	77.6	60.6	61
9–11	(88.3)	(81.2)	(77.0)	46	*	*	*	*	9	100.0	90.3	71.4	67.9	55
12–17	86.3	85.2	73.6	69	(68.4)	(75.6)	(28.1)	(17.7)	40	88.4	82.4	64.3	53.0	109
18–23	94.7	76.1	73.8	50	(64.8)	(83.3)	(33.5)	(17.8)	47	82.9	89.2	55.5	46.7	96
Sex														
Male	84.1	80.0	72.6	110	(72.2)	(73.7)	(28.0)	(21.1)	48	91.5	81.0	64.1	56.9	158
Female	83.2	82.4	70.4	112	69.3	87.5	32.0	16.0	51	90.4	84.5	66.6	53.4	163
Residence														
Urban	83.4	76.3	68.6	118	77.1	83.2	27.2	19.2	81	90.7	83.3	56.4	48.6	199
Rural	83.9	86.8	74.8	104	(43.1)	(70.5)	(42.3)	(15.4)	19	91.3	81.9	80.0	65.7	122
Mother's education														
No education/ primary	83.2	82.2	70.6	55	*	*	*	*	19	89.8	79.9	68.0	55.5	74
Secondary	85.1	82.5	73.1	144	68.9	80.7	30.5	18.1	69	89.9	83.7	65.7	55.2	213
More than secondary	*	*	*	23	*	*	*	*	11	(100.0)	(83.2)	(57.9)	(53.5)	34
Wealth quintile														
Lowest	83.3	84.4	72.5	67	*	*	*	*	15	89.8	80.3	75.3	59.4	82
Second	84.2	84.6	73.6	52	*	*	*	*	23	90.7	82.8	64.5	54.9	75
Middle	(83.4)	(81.5)	(73.4)	44	*	*	*	*	22	91.2	83.0	68.7	59.7	66
Fourth	(83.8)	(82.7)	(74.3)	36	*	*	*	*	13	(92.3)	(83.0)	(68.2)	(56.7)	49
Highest	*	*	*	23	*	*	*	*	27	(91.4)	(86.4)	(43.1)	(40.7)	50
Total	83.6	81.2	71.5	222	70.7	80.8	30.1	18.5	99	90.9	82.8	65.4	55.1	321

[1] Food groups: a. infant formula, milk other than breast milk, cheese or yogurt or other milk products; b. foods made from grains, roots, and tubers, including porridge, fortified baby food from grains; c. vitamin A-rich fruits and vegetables (and red palm oil); d. other fruits and vegetables; e. eggs; f. meat, poultry, fish, and shellfish (and organ meats); g. legumes and nuts; h. foods made with oil, fat, butter.

[2] At least twice a day for breastfed infants 6–8 months and at least three times a day for breastfed children 9–23 months

[3] Includes commercial infant formula, fresh, tinned, and powdered animal milk, and cheese, yogurt, and other milk products

[4] Non-breastfed children aged 6–23 months are considered to be fed with a minimum standard of three IYCF practices if they receive other milk or milk products and are fed at least the minimum number of times per day with at least the minimum number of food groups.

[5] 3+ food groups for breastfed children and 4+ food groups for non-breastfed children

[6] Fed solid or semisolid food at least twice a day for infants 6–8 months, 3+ times for other breastfed children, and 4+ times for non-breastfed children

11.6. MICRONUTRIENT INTAKE AMONG CHILDREN

A serious contributor to childhood morbidity and mortality is micronutrient deficiency. Children can receive micronutrients from foods, food fortification, and direct supplementation. Table11.6 looks at the measures relating to intake of several key micronutrients among children.

Vitamin A is an essential micronutrient for the immune system and plays an important role in maintaining the epithelial tissue in the body. Severe vitamin A deficiency (VAD) can cause eye damage. VAD can also increase the severity of infections such as measles and diarrhea diseases in children and cause slow recovery from illness. Vitamin A is found in breast milk, other milk, liver, eggs, fish, butter, red palm oil, mango, papaya, carrots, pumpkins, and dark-green leafy vegetables. The liver can store an adequate amount of the vitamin for 4–6 months. Periodic dosing (usually every six months) of vitamin A supplements is one method of ensuring that children at risk do not develop VAD.

The 2007 RMIDHS collected information on the consumption of foods rich in vitamin A. Table 11.6 shows that 93 percent of youngest children aged 6–35 months living with their mother consumed foods rich in vitamin A in the 24-hour period before the survey. Consumption of foods rich in vitamin A increases from 72 percent among children aged 6–8 months to 97 percent among children aged 12–35 months. Not surprisingly, breastfeeding children are less likely to consume foods rich in vitamin A than non-breastfeeding children (91 percent compared to 96 percent). Urban children are more likely to consume foods rich in vitamin A than rural children (47 percent compared to 33 percent). The level of education of a child's mother is directly related to the consumption of foods rich in vitamin A.

Iron is essential for cognitive development. Low iron intake can also contribute to anemia. Iron requirements are greatest between the ages of six and 11 months, when growth is extremely rapid. Over 8 in 10 children (87 percent) consumed foods rich in iron during the 24 hours preceding the interview. Differences by background characteristics are similar to those seen for the consumption of foods rich in vitamin A. The difference in consumption of foods rich in iron is especially large between children who are breastfeeding and not breastfeeding (84 percent versus 95 percent).

The 2007 RMIDHS also collected data on vitamin A supplementation. According to Table 11.6, 53 percent of children aged 6–59 months received a vitamin A supplement in the six months before the survey. Age is associated with the probability of having received a vitamin A supplement in the past six months. Generally, as age increases the proportion of children receiving a vitamin A supplement is likely to increase too. Breastfeeding children are more likely to have received a recent supplement than non-breastfeeding children: 56 percent compared with 53 percent. Similarly, children living in urban areas are more likely than those in rural areas to receive a vitamin A supplement (57 percent compared to 46 percent). The proportion of children who received a vitamin A supplement in the past six months is more likely to increase with mother's level of education, decrease with mother's age at birth, and increase with wealth.

Table 11.6. Micronutrient intake among children

Among youngest children aged 6–35 months who are living with their mother, the percentages who consumed vitamin A-rich and iron-rich foods in the day or night preceding the survey, and among all children 6–59 months, the percentages who were given vitamin A supplements in the six months preceding the survey, iron supplements in the last seven days, and de-worming medication in the six months preceding the survey, by background characteristics, Marshall Islands 2007

	Among youngest children aged 6–35 months living with the mother:			Among children aged 6–59 months:			
Background characteristic	Percentage who consumed foods rich in vitamin A in last 24 hours[1]	Percentage who consumed foods rich in iron in last 24 hours[2]	Number of children	Percentage given vitamin A supplements in last 6 months	Percentage given iron supplements in last 7 days	Percentage given de-worming medication in last 6 months[3]	Number of children
Age in months							
6–8	72.1	62.5	61	29.0	15.8	8.3	70
9–11	92.8	90.3	55	49.4	33.0	18.0	58
12–17	97.4	92.9	109	59.1	36.4	26.3	120
18–23	97.3	93.2	96	63.3	34.9	48.7	129
24–35	96.9	94.1	109	51.4	27.0	45.3	207
36–47	na	na	na	57.1	36.7	56.1	214
48–59	na	na	na	51.0	30.8	47.4	214
Sex							
Male	91.9	86.5	205	49.9	28.3	42.8	528
Female	94.2	90.6	225	57.0	35.1	41.3	483
Breastfeeding status							
Breastfeeding	91.0	84.3	256	55.7	33.3	31.4	288
Not breastfeeding	96.1	95.0	171	52.9	31.2	46.5	691
Residence							
Urban	92.5	89.1	273	57.3	34.4	47.4	649
Rural	94.1	87.9	157	46.1	26.5	32.6	363
Mother's education							
No education/primary	90.3	86.5	89	57.0	32.9	43.8	227
Secondary	94.4	90.1	293	53.3	31.6	43.1	686
More than secondary	(89.9)	(83.7)	48	44.4	28.4	30.7	98
Mother's age at birth							
15–19	82.7	81.2	68	42.7	23.7	32.4	178
20–29	94.2	88.7	255	53.9	32.6	44.5	600
30–39	96.8	94.0	101	59.7	35.6	44.3	224
40–49	*	*	6	*	*	*	10
Wealth quintile							
Lowest	95.4	89.5	105	45.8	21.6	33.6	255
Second	91.1	85.0	97	50.2	31.2	41.0	240
Middle	92.5	91.2	84	59.6	31.3	44.6	203
Fourth	92.9	91.1	71	57.2	43.9	49.4	167
Highest	93.2	87.0	73	58.2	35.6	46.9	148
Total	93.1	88.6	430	53.3	31.5	42.1	1,012

Notes: Information on vitamin A and iron supplements and de-worming medication is based on the mother's recall. Total includes two children aged 6–35 months and 28 children aged 6–59 months with missing information of breastfeeding status. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

na = not applicable

[1] Includes meat (and organ meat), fish, poultry, eggs, pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, dark-green leafy vegetables, mango, papaya, and other locally grown fruits and vegetables that are rich in vitamin A, and red palm oil [if data are collected]

[2] Includes meat (including organ meat)

[3] De-worming for intestinal parasites is commonly done for helminthes and for schistosomiasis.

Table 11.6 also presents information on iron supplementation in the last seven days among children aged 6–59 months. It shows that almost one-third of the children (32 percent) received iron supplementation throughout the Marshall Islands. Iron supplementation is lowest among children 6–8 months old but increases as the age of children increases. Iron supplementation is comparatively higher among female children, children who are breastfed, and children who live in urban areas. Iron supplementation decreases with the mother's level of education but increases with mother's age at birth. There does not appear to be any pattern by wealth status; however, the proportion of children receiving iron supplements is low among the poorest households compared to the wealthiest households. De-worming medication was given to 42 percent of children aged 6–59 months during the six months preceding the survey.

11.7. FOODS CONSUMED BY MOTHERS

The quality and quantity of food that mothers consume influences their health and that of their children, especially the health of breastfeeding children. The 2007 RMIDHS included questions on the type of foods consumed by mothers of children under age three during the day and night preceding the interview.

Table 11.7 shows that the staple diet of mothers of young Marshallese children consists of foods made from grains (96 percent) and food from the group meat, fish, shellfish, poultry, and eggs (96 percent). Almost three in four women (71 percent) consume fruits and vegetables rich in vitamin A, whereas 82 percent of women consume *other solid or semisolid food*. Forty-two percent of mothers drink milk while 71 percent drink tea and coffee and 93 percent drink other liquids. Meanwhile, over two-thirds (67 percent) of mothers eat sugary foods and over half (54 percent) consume foods made with oil, fat, or butter.

Table 11.7. Foods consumed by mothers in the day or night preceding the interview

Among mothers aged 15–49 with a child under age three years living with them, the percentage who consumed specific types of foods in the day or night preceding the interview, by background characteristics, Marshall Islands 2007

	Liquids			Solid or semisolid foods										
Background characteristic	Milk	Tea/ coffee	Other liquids	Foods made from grains	Foods made from roots/ tubers	Foods made from legumes	Meat/ fish/ shellfish/ poultry/eggs	Cheese/ yogurt	Vitamin A-rich fruits/ vegetables[1]	Other fruits/ vegetables	Other solid or semisolid food	Foods made with oil/ fat/ butter	Sugary foods	Number of women
Age														
15–19	34.5	60.9	96.4	98.0	21.4	13.5	97.3	23.7	66.7	46.5	87.4	47.6	63.7	57
20–29	42.0	68.1	92.2	94.2	13.7	13.2	94.2	23.2	69.4	47.4	82.8	55.1	68.1	327
30–39	43.5	81.8	93.8	98.2	19.8	24.4	98.8	26.1	74.1	47.3	79.9	54.9	66.8	152
40–49	*	*	*	*	*	*	*	*	*	*	*	*	*	15
Residence														
Urban	48.1	69.2	92.6	96.2	21.8	22.5	96.3	34.8	65.3	52.5	78.8	61.9	78.1	353
Rural	29.7	75.1	93.8	94.8	5.8	4.8	94.9	4.7	79.8	39.5	87.8	40.9	47.4	198
Education														
No education/ primary	34.1	65.3	92.1	93.8	12.1	9.2	94.5	13.6	66.3	37.2	82.4	45.8	52.8	124
Secondary	41.7	73.7	93.6	96.1	16.4	17.3	96.2	26.5	70.5	48.5	82.7	55.4	69.5	374
More than secondary	(56.9)	(69.2)	(91.1)	(97.6)	(22.9)	(23.7)	(96.1)	(30.2)	(79.8	66.9)	(76.3)	(67.0)	(82.8)	54
Wealth quintile														
Lowest	29.6	77.0	92.4	94.1	7.2	6.2	92.9	8.1	75.2	35.8	88.1	37.9	48.6	137
Second	34.0	72.3	98.6	96.0	12.0	16.0	93.8	12.9	76.1	43.0	91.5	54.0	55.2	132
Middle	50.0	60.8	84.6	95.9	23.8	20.4	97.9	26.2	61.7	51.8	74.8	62.1	78.2	108
Fourth	42.6	71.6	94.2	94.6	25.9	19.0	97.8	35.1	66.2	47.4	77.4	62.9	84.9	87
Highest	59.6	73.7	94.9	98.7	16.9	23.7	98.6	51.5	69.8	69.2	72.0	62.6	82.2	87
Total	41.5	71.3	93.0	95.7	16.1	16.1	95.8	24.0	70.5	47.8	82.0	54.4	67.1	552

Notes: Foods consumed in the last '24-hour' period (yesterday and last night). Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Includes [list fruits and vegetables included in the questionnaire such as pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, green leafy vegetables, mango, papaya, and other locally grown fruits and vegetables that are rich in vitamin A]

11.8. MICRONUTRIENT INTAKE AMONG MOTHERS

Adequate micronutrient intake by women has important benefits for both women and their children. Breastfeeding children benefit from micronutrient supplementation that their mothers receive, especially vitamin A. Iron supplementation of women during pregnancy protects mother and infant against anemia. It is estimated that one-fifth of prenatal mortality and one-tenth of maternal mortality are attributable to iron-deficiency anemia. Anemia also results in increased risk of premature delivery and low birth weight. Finally, iodine deficiency is also related to a number of adverse pregnancy outcomes.

Table 11.8 includes a number of measures that are useful in assessing the extent to which women are receiving adequate intake of vitamin A, iron during pregnancy, and iodine. The first indicators focus on the percentages of women with children under age three who reported that they consumed foods rich in vitamin A and iron during the 24-hour period prior to the interview. The results indicate that 98 percent of mothers of young children consumed vitamin A-rich fruits and vegetables while 96 percent consumed iron-rich foods (i.e. meat, poultry, fish, and eggs) in the 24 hours preceding the survey. Consumption of foods rich in vitamin A is more common among mothers in rural areas, mothers with higher education, and mothers in the highest wealth quintile.

As observed for consumption of foods rich in iron among children discussed earlier, mothers are more likely to have consumed foods rich in iron in the 24 hours preceding the survey if they live in urban areas, if they have higher education, and if they belong to one of the higher wealth quintiles.

Table 11.8. Micronutrient intake among mothers

Among women aged 15–49 with a child under age three years living with them, the percentages who consumed vitamin A-rich and iron-rich foods in the 24 hours preceding the survey; among women aged 15–49 with a child born in the last five years, the percentage who received a vitamin A dose in the first two months after the birth of the last child; among mothers aged 15–49 who during the pregnancy of the last child born in the five years prior to the survey, the percentage who suffered from night-blindness, the percentage who took iron tablets or syrup for specific numbers of days, and the percentage who took de-worming medication, by background characteristics, Marshall Islands 2007

	Among women with a child under three years living with them			Among women with a child born in the last five years									
					Percentage who suffered night-blindness during pregnancy of last birth		Number of days women took iron tablets or syrup during pregnancy of last birth						
Background characteristic	Percentage consumed vitamin A-rich foods[1]	Percentage consumed iron-rich foods[2]	Number of women	Percentage who received vitamin A dose postpartum[3]	Reported	Adjusted[4]	None	<60	60–89	90+	Don't know/ missing	Percentage of women who took de-worming[5] medication during pregnancy of last birth	Number of women
Age													
15–19	97.3	97.3	57	48.2	20.9	9.2	28.3	22.0	1.5	36.1	12.1	1.7	67
20–29	96.8	94.2	327	57.6	26.0	12.9	26.0	19.2	7.3	35.0	12.6	5.4	433
30–39	100.0	98.8	152	59.1	17.2	7.1	31.9	14.7	2.8	32.8	17.9	5.2	241
40–49	*	*	15	(47.9)	(13.8)	(0.6)	(45.5)	(12.8)	(6.1)	(33.7)	(2.0)	(10.6)	33
Residence													
Urban	97.0	96.3	353	61.4	20.4	9.9	37.0	16.6	4.9	25.7	15.9	6.0	502
Rural	99.3	94.9	198	48.5	25.9	11.0	13.9	19.9	6.1	50.4	9.7	3.8	272
Education													
No education/ primary	95.4	94.5	124	52.5	32.6	12.5	30.5	20.8	2.3	35.3	11.0	4.2	178
Secondary	98.3	96.2	374	58.2	19.5	9.8	29.3	17.2	6.6	33.7	13.1	5.5	515
More than secondary	(99.6)	(96.1)	54	57.9	17.6	8.1	22.5	14.3	3.5	36.3	23.3	5.6	81
Wealth quintile													
Lowest	98.4	92.9	137	44.9	26.7	11.5	21.8	19.1	3.9	42.8	12.4	2.2	189
Second	94.7	93.8	132	58.6	27.6	11.7	32.4	22.4	5.5	32.8	7.0	7.6	188
Middle	97.9	97.9	108	61.1	24.5	11.8	24.6	15.8	6.1	31.7	21.8	7.7	150
Fourth	99.2	97.8	87	55.0	14.5	6.6	44.0	12.3	5.3	30.1	8.3	5.8	132
Highest	100.0	98.6	87	70.1	12.6	7.9	22.9	16.8	6.4	31.5	22.5	2.4	116
Total	97.8	95.8	552	56.9	22.3	10.2	28.9	17.7	5.3	34.4	13.7	5.2	774

Notes: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Includes meat (and organ meat), fish, poultry, eggs, pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, mango, papaya, and other locally grown fruits and vegetables that are rich in vitamin A, and red palm oil [if data are collected]

[2] Includes meat (and organ meat), fish, poultry, eggs

[3] In the first two months after delivery

[4] Women who reported nightblindness but did not report difficulty with vision during the day

[5] De-worming for intestinal parasites is commonly done for helminthes and for schistosomiasis.

Table 11.8 also looks at the extent to which women receive vitamin A supplements following delivery. Over half the women (57 percent) with a child born in the last five years reported that they had received a vitamin A capsule in the two-month period following the delivery of their last live birth. Ages of the women, urban residence, level of education, and wealth status of households are associated with higher rates of postpartum vitamin A supplementation. Postpartum vitamin A supplementation increases steadily with education and wealth quintile. Twenty-two percent of women reported difficulty seeing during the day, with 1 percent reporting nightblindness.

With regard to iron supplementation during pregnancy, almost 6 in 10 women who gave birth during the five-year period before the 2007 RMIDHS reported that they had taken iron tablets or syrup during the pregnancy preceding their last live birth. Among women reporting that they took iron supplements, the majority said that they took the supplements for more than 90 days. A little more than 1 in 20 women (5 percent) said they received de-worming medication during the pregnancy of their most recent birth in the last five years.

11.9. MALNUTRITION EXAMINATION FOR CHILDREN

Maintaining good health is essential for children to grow and develop at normal rates. Diarrhea disease is common among children and has the most marked effect on anthropometric status of children. Infections may reduce a child's appetite, decrease nutrient absorption by the body, increase metabolic requirements, or cause direct nutrient loss; all of these outcomes of disease may adversely affect a child's growth.

The 2007 RMIDHS also produced information on malnutrition examination conducted on children less than five years old to assess their malnutrition status. Table 11.9 shows the proportion of children aged 0–5 years for whom swelling was observed in the hands, abdomen, or lower legs and the percentage where after pressing the top of a foot for 30–40 seconds a dent remained in the area of the skin.

Overall, 17 percent of the children who were tested for swelling on top of feet had a dent remaining in the area of the skin: there is no clear pattern by age of children but there are certainly variations, with the lowest observed among 6–11-month-olds (13 percent) and the highest among children less than six months old
(19 percent). The biggest difference is among urban and rural residents, where 23 percent of urban children had a dent remaining in the area of the skin after testing compared to only 3 percent in rural areas.

Differentials by mother's level of education and age at birth both show that as education level and age increase the proportion of children with a dent remaining in the area of the skin after testing also increases. Children in the wealthiest households are more likely than children from poor households to have a dent remaining in the area of the skin after testing.

Table 11.9 also shows that 4 percent of children were observed to have swollen hands, 6 percent had swelling of the abdomen, and another 4 percent had swelling of the lower legs.

Table 11.9. Malnutrition examination for children aged 0–5

The percentage of children aged 0–5 for whom swelling was observed in the hands, abdomen or lower legs and the percentage where after pressing the top of a foot for 30–40 seconds a dent remained in the area of the skin, Marshall Islands 2007

Background characteristics of children and mothers	Percentage with observed swelling of:			Test for swelling on top of feet:	Number of children
	Hands	Abdomen	Lower legs	After testing a dent remained in the area of the skin	
Age of child in months					
<6	4.9	4.6	4.6	19.2	143
6–11	3.7	4.7	2.1	13.3	133
12–23	3.6	7.4	5.2	15.7	275
24–35	4.3	5.4	3.8	17.7	247
36–47	2.7	5.1	3.3	16.8	249
48–59	6.4	7.5	6.1	16.0	234
Sex					
Male	4.6	5.1	3.7	15.9	646
Female	3.9	6.9	5.0	17.2	633
Residence					
Urban	4.7	5.5	4.7	22.9	872
Rural	3.2	7.1	3.5	2.8	408
Mother's educational level					
No education/primary	5.2	8.4	4.4	10.6	272
Secondary	4.6	6.1	4.8	16.4	698
More than secondary	0.0	2.1	1.7	28.0	105
Mother died/not in the household[1]	3.8	4.5	4.1	18.7	205
Age at birth					
<20	4.5	8.5	3.4	13.1	155
20–34	4.5	6.2	4.8	16.6	815
35–49	2.5	3.6	2.5	16.6	106
Mother died/not in the household	3.8	4.5	4.1	18.7	205
Wealth quintile					
Lowest	5.3	8.1	5.4	4.6	172
Second	4.1	8.4	3.2	5.1	193
Middle	6.5	11.6	7.7	17.8	238
Fourth	4.7	4.3	4.8	21.6	383
Highest	1.2	0.8	1.2	23.2	294
Total	4.2	6.0	4.3	16.5	1,280

Note: Total includes one child whose sex was not stated.

[1] Malnutrition examination of children aged 0–5 was conducted for all children aged 0–5 listed in the household schedule, and not children aged 0–5 whose mothers were interviewed with the individual questionnaire. Therefore, information on mothers' background characteristics cannot be available for all children.

Table 11.10 summarizes the results of observed abnormalities during malnutrition examination for children aged 0–5 years. It shows the percentage of children for whom abnormalities of the hair or skin were observed.

Table 11.10. Observed abnormalities during malnutrition examination for children aged 0–5

The percentage of children aged 0–5 for whom abnormalities of the hair or skin were observed, Marshall Islands 2007

Background characteristics of children and mothers	Hair			Skin			Number of children
	Sparse	Thin	Yellow	Face puffy	Flaky	Sore	
Age of child in months							
<6	4.8	12.4	2.2	5.4	4.1	2.2	143
6–11	4.5	5.8	2.4	1.7	3.0	2.1	133
12–23	6.4	11.0	2.4	4.2	3.1	3.5	275
24–35	7.2	6.8	1.7	3.0	3.6	5.2	247
36–47	3.9	6.5	2.1	2.0	2.6	3.3	249
48–59	4.4	5.6	1.2	4.3	5.4	5.8	234
Sex							
Male	5.6	8.8	2.1	3.0	3.9	4.5	646
Female	5.0	7.1	1.9	3.9	3.3	3.3	633
Residence							
Urban	4.9	7.4	1.3	3.4	3.2	3.6	872
Rural	6.2	9.1	3.3	3.5	4.3	4.6	408
Mother's education							
No education/primary	7.6	10.2	3.1	3.8	4.0	5.3	272
Secondary	5.7	8.7	1.8	4.0	3.6	3.8	698
More than secondary	1.7	5.0	1.7	1.7	2.7	1.7	105
Mother died/not in the household[1]	2.8	3.8	1.1	1.8	3.5	3.6	205
Age at birth							
<20	5.6	8.9	0.3	1.8	2.8	5.3	155
20–34	6.3	8.9	2.8	4.4	4.2	3.9	815
35–49	2.1	7.4	0.0	1.5	0.0	2.2	106
Mother died/not in the household[1]	2.8	3.8	1.1	1.8	3.5	3.6	205
Wealth quintile							
Lowest	7.8	9.4	4.6	5.3	5.0	6.6	172
Second	8.9	10.2	3.0	3.9	6.7	6.2	193
Middle	8.8	13.9	2.3	6.7	6.0	7.1	238
Fourth	3.1	7.2	1.0	2.0	1.6	2.0	383
Highest	1.6	1.7	0.7	1.2	1.4	0.7	294
Total	5.3	7.9	2.0	3.4	3.6	3.9	1,280

Note: Total includes one child whose sex was not stated.

[1]Malnutrition examination of children aged 0–5 was conducted for all children aged 0–5 listed in the household schedule, and not children aged 0–5 whose mothers were interviewed with the individual questionnaire. Therefore, information on mothers' background characteristics is not available for all children.

Eight percent of the children aged 0–5 years observed had hair that was thinly spread on their head, while 5 percent had sparsely growing hair and 2 percent had yellow-colored hair, the latter obviously indicating the existing of malnutrition. These observed abnormalities, particularly the thinly spread hair growth, are likely to be found in children who are aged less than 6–23 months, in rural areas, whose mothers have no or primary education, born to mothers whose age at birth is less than 35 years, and born to mothers who are in the lowest to the middle wealth quintile households. Similar background characteristics patterns are observed for those with the abnormalities of sparsely growing hair and yellow-colored hair.

Table 11.10 also summarizes the percentage of children for whom abnormalities of the skin were observed during the 2007 DHS. Overall, 4 percent of the children observed had sores on their skin while another 4 percent had flaky skin and 3 percent had a puffy face.

The children who were observed to have sore skin were more likely to be aged 24–59 months, be in rural areas, have mothers with no or primary education, have mothers whose age at birth was less than 20 years, and have mothers who are in the lowest to the middle wealth quintile households.

11.9.1. Observations for stunting and wasting

In children, the most common anthropometric indices used to measure growth are height-for-age (HA), weight-for-age (WA), and weight-for-height (WH). Low HA is considered an indicator of shortness or stunting. It is frequently associated with poor overall economic conditions, which result in long-term inadequate calorie intake and/or repeated exposure to illness, and other adverse conditions. HA is the recommended indicator that best reflects the process of failure of a child to reach his or her linear growth potential.

Low WH for a child is considered an indicator of thinness or wasting and is generally associated with recent or ongoing severe weight loss. Weight loss in children presenting low WH is usually due to recent illness and/or insufficient calorie intake (caused by food shortage, weaning practices, or other events). WA is primarily a composite of WH and HA, and fails to distinguish tall, thin children from short, well-proportioned children. Because it is influenced by both the height and the weight of the child, it is more difficult to interpret. The results presented here should be used with caution as they are subject to personal interpretation.

Table 11.11 summarizes the results of observation made during the 2007 RMIDHS concerning thinness and wastage among children aged 0–5 years for whom wasting was observed for selected parts of their bodies. The results show that almost 1 in 10 children 0–5 years of age (7 percent) were observed to have low WA, indicating thinness in the child's head. Interestingly, among the children for whom WA was observed for selected parts of the body, about the same proportion had thinness in their observed body parts. The results indicate that about 10 percent of children aged 0–5 years have very low weight for their age. These Marshallese children are more likely than other children to be aged 12–35 months, be male, live in rural areas, have mothers with no or primary-level education, have mothers aged less than 20 years at the time of the child's birth, and be in the poorest households .

Table 11.11. Observed wasting during malnutrition examination for children aged 0–5

The percentage of children aged 0–5 for whom wasting was observed of selected parts of the body, Marshall Islands 2007

Background characteristics of children and mothers	Head		Face		Neck		Shoulders		Arms		Hands		Buttocks		Thighs		Number of children
	Thin	Wasted	Thin	Wasted	Thin	Wasted	Thin	Wasted	Thin	Wasted	Thin	Wasted	Thin	Wasted	Thin	Wasted	
Age of child in months																	
<6	5.1	2.0	6.3	1.0	9.1	0.1	9.1	0.1	8.1	1.0	8.1	1.0	6.8	2.3	6.8	2.3	143
6–11	6.2	0.5	6.8	1.1	8.1	1.1	8.7	0.5	7.6	2.1	6.2	3.4	6.4	1.5	6.9	1.5	133
12–23	9.1	1.9	10.3	1.2	11.9	0.5	10.9	1.4	12.7	1.5	11.4	1.7	11.6	1.4	11.8	1.1	275
24–35	8.9	0.2	8.6	1.0	11.3	1.1	12.9	1.0	11.8	3.0	12.9	3.5	10.7	2.1	10.2	2.4	247
36–47	6.0	0.3	6.0	0.8	8.1	0.3	8.3	0.8	8.0	0.8	8.3	0.8	7.4	0.8	7.4	0.8	249
48–59	5.7	2.1	7.2	1.6	9.9	2.1	8.8	2.6	10.5	3.2	10.6	3.3	9.4	2.6	9.4	2.6	234
Sex																	
Male	8.0	1.0	8.8	0.8	10.8	0.9	10.7	0.8	11.8	1.2	11.3	1.8	10.2	1.8	10.4	1.7	646
Female	6.2	1.3	6.8	1.4	9.1	0.9	9.2	1.6	8.5	2.8	8.7	2.8	8.1	1.7	7.9	1.9	633
Residence																	
Urban	5.9	1.2	6.1	1.0	8.3	0.7	7.5	1.2	7.6	2.3	7.8	2.2	6.9	2.0	7.1	1.8	872
Rural	9.7	1.2	11.3	1.4	13.6	1.4	15.2	1.2	15.6	1.3	14.8	2.5	13.9	1.4	13.6	1.6	408
Mother's education																	
No education/primary	8.2	2.3	8.8	2.4	12.2	1.5	13.0	1.7	13.0	2.7	11.7	3.3	11.9	3.3	11.5	3.1	272
Secondary	7.9	1.2	8.8	1.1	11.0	1.0	11.1	1.3	10.9	1.6	11.2	1.9	9.9	1.6	10.0	1.6	698
More than secondary	3.0	0.0	3.0	0.0	4.7	0.0	1.3	0.0	5.8	2.5	1.8	2.9	3.7	0.0	4.1	0.0	105
Mother died/not in the household[1]	5.0	0.1	5.3	0.1	6.1	0.1	6.5	0.9	6.0	2.1	8.0	2.1	5.6	1.3	5.6	1.3	205
Age at birth																	
<20	7.2	1.0	8.9	1.0	9.9	0.3	10.9	0.7	12.3	0.0	11.6	0.8	10.1	2.2	10.0	1.5	155
20–34	8.0	1.3	8.5	1.2	11.2	1.2	10.8	1.5	11.2	2.3	10.8	2.5	9.9	1.9	10.0	2.0	815
35–49	3.9	2.8	5.0	2.5	7.8	1.2	9.0	0.0	7.2	2.5	5.8	3.3	8.4	1.2	8.4	1.2	106
Mother died/not in the household[1]	5.0	0.1	5.3	0.1	6.1	0.1	6.5	0.9	6.0	2.1	8.0	2.1	5.6	1.3	5.6	1.3	205
Wealth quintile																	
Lowest	12.5	1.5	14.6	1.3	16.5	1.3	17.9	1.1	18.8	1.1	18.3	1.8	17.3	1.5	16.9	1.5	293
Second	8.9	1.5	8.2	2.0	14.9	1.6	16.3	1.0	16.4	1.6	16.9	2.6	14.5	2.3	14.8	2.2	283
Middle	5.7	0.8	7.3	0.8	6.9	0.8	6.7	1.4	6.2	3.5	5.8	3.7	5.7	1.9	5.7	1.9	270
Fourth	3.4	1.7	3.4	1.1	5.5	0.6	2.3	2.2	2.7	3.4	2.4	2.8	1.7	2.8	1.9	2.8	233
Highest	2.8	0.0	2.8	0.0	2.8	0.0	2.8	0.0	2.8	0.0	2.8	0.0	2.8	0.0	2.8	0.0	202
Total	7.1	1.2	7.8	1.1	10.0	0.9	10.0	1.2	10.2	2.0	10.0	2.3	9.1	1.8	9.1	1.8	1,280

Note: Total includes one child whose sex was not stated.

[1]Malnutrition examination of children aged 0–5 was conducted for all children aged 0–5 listed in the household schedule, and not children aged 0–5 whose mothers were interviewed with the individual questionnaire. Therefore, information on mothers' background characteristics cannot be available for all children.

Table 11.12 shows the result of foot pressing for children aged 0–5 years. It shows the percent distribution of children aged 0–5 by results of the foot pressing test – that is, those observed who were tested for swelling on top of their feet. Over 95 percent of children had their foot pressed, while about 2 percent of the children from the selected households were not present at the time of testing, and 0.3 percent refused.

Table 11.12. Result of foot pressing for children aged 0–5

Percent distribution of children aged 0–5 by result of foot pressing test, Marshall Islands 2007

Background characteristics of children and mothers	Result of foot pressing				Total	Number of children
	Foot pressed	Not present	Refused	Other/ missing		
Age of child in months						
<6	94.7	0.3	1.3	3.7	100.0	143
6–11	96.3	0.7	0.0	3.0	100.0	133
12–23	94.8	2.0	0.4	2.8	100.0	275
24–35	96.2	2.4	0.0	1.4	100.0	247
36–47	92.6	2.1	0.4	4.8	100.0	249
48–59	95.6	1.1	0.0	3.3	100.0	234
Sex						
Male	94.1	2.0	0.3	3.5	100.0	646
Female	96.0	1.2	0.3	2.6	100.0	633
Residence						
Urban	93.7	1.9	0.5	4.0	100.0	872
Rural	97.6	1.1	0.0	1.3	100.0	408
Mother's education						
No education/primary	95.0	1.9	0.0	3.1	100.0	272
Secondary	96.2	1.1	0.3	2.4	100.0	698
More than secondary	88.5	4.4	2.1	5.0	100.0	105
Mother died/not in the household[1]	93.7	1.7	0.0	4.6	100.0	205
Age at birth						
<20	94.5	0.8	0.0	4.6	100.0	155
20–34	95.3	2.0	0.5	2.2	100.0	815
35–49	95.1	0.0	0.0	4.9	100.0	106
Mother died/not in the household[1]	93.7	1.7	0.0	4.6	100.0	205
Wealth quintile						
Lowest	98.1	1.5	0.0	0.5	100.0	172
Second	96.1	0.9	0.0	3.0	100.0	193
Middle	97.1	1.2	0.8	0.9	100.0	238
Fourth	94.2	2.5	0.6	2.8	100.0	383
Highest	91.6	1.4	0.0	7.0	100.0	294
Total	94.9	1.6	0.3	3.1	100.0	1,280

Note: Total includes one child whose sex was not stated.

[1]Malnutrition examination of children aged 0–5 was conducted for all children aged 0–5 listed in the household schedule, and not children aged 0–5 whose mothers were interviewed with the individual questionnaire. Therefore, information on mothers' background characteristics cannot be available for all children.

Table 11.13 summarizes the results of the observed overall nutritional status for children aged 0–5 years at the time of the survey. Over 8 in 10 (83 percent) children aged 0–5 years were observed to be well nourished while 13 percent were observed to be malnourished after the various tests and targeted observations. The children who were observed to be malnourished were more likely to be aged 6–35 months, be male, live in rural areas, and have mothers with no or primary education, whose age at birth was less than 35 years, and who are in the lowest to the middle wealth quintile households.

Table 11.13. Observed overall nutritional status for children aged 0–5

The percent distribution of children aged 0–5 by observed nutritional status, Marshall Islands 2007

Background characteristics of children and mothers	Observed nutritional status			Total	Number of children
	Malnourished	Not malnourished	Don't know/ missing		
Age of child in months					
<6	11.1	85.2	3.7	100.0	143
6–11	14.3	81.5	4.2	100.0	133
12–23	14.6	81.1	4.3	100.0	275
24–35	14.8	81.1	4.1	100.0	247
36–47	9.3	85.4	5.3	100.0	249
48–59	12.4	82.9	4.7	100.0	234
Sex					
Male	14.0	81.6	4.4	100.0	646
Female	11.6	84.1	4.3	100.0	633
Residence					
Urban	10.0	84.3	5.7	100.0	872
Rural	18.8	79.4	1.8	100.0	408
Mother's education					
No education/primary	17.0	79.1	3.9	100.0	272
Secondary	12.8	84.2	3.0	100.0	698
More than secondary	6.0	80.4	13.6	100.0	105
Mother died/not in the household[1]	10.6	84.0	5.4	100.0	205
Age at birth					
<20	13.9	82.1	3.9	100.0	155
20–34	13.3	82.4	4.3	100.0	815
35–49	11.3	83.8	4.9	100.0	106
Mother died/not in the household[1]	10.6	84.0	5.4	100.0	205
Wealth quintile					
Lowest	20.2	78.6	1.3	100.0	172
Second	22.7	74.0	3.3	100.0	193
Middle	20.6	77.3	2.1	100.0	238
Fourth	6.3	86.6	7.1	100.0	383
Highest	4.1	90.3	5.6	100.0	294
Total	12.8	82.8	4.5	100.0	1,280

Note: Total includes one child whose sex was not stated.

[1]Malnutrition examination of children aged 0–5 was conducted for all children aged 0–5 listed in the household schedule, and not children aged 0–5 whose mothers were interviewed with the individual questionnaire. Therefore, information on mothers' background characteristics cannot be available for all children.

CHAPTER 12. HIV AND AIDS RELATED KNOWLEDGE, ATTITUDES AND BEHAVIOR

Acquired immunodeficiency syndrome (AIDS) is caused by a human immunodeficiency virus (HIV) that weakens the immune system, making the body susceptible to and unable to recover from other opportunistic diseases that lead to death through secondary infections. The predominant mode of HIV transmission is through heterosexual contact, followed in magnitude by perinatal transmission, in which a mother passes the virus to her child during pregnancy, delivery, or breastfeeding. Other modes of transmission are through infected blood and unsafe injections.

This chapter presents current levels of HIV and AIDS knowledge, attitudes, and related behavior for the general adult Marshallese population. It then focuses on HIV and AIDS knowledge and patterns of sexual activity among young people, as young adults are the main target of many HIV prevention efforts.

12.1. KNOWLEDGE OF AIDS

The 2007 RMIDHS collected information on knowledge of and behavior related to AIDS and other diseases that are transmitted through sexual contact. All eligible respondents were asked whether they had heard about the disease known as AIDS. Table 12.1 presents the proportion of women and men aged 15–49 years who had heard of AIDS according to their background characteristics.

The results show that knowledge about AIDS is almost universal among the adult Marshallese population. A very high proportion of both women and men have heard of the disease (96 percent and 97 percent respectively). The result also shows that the level of knowledge is quite high for both women and men at different ages and marital status categories, places of residence, education levels and household wealth quintiles.

Table 12.1. Knowledge of AIDS

Percentage of women and men aged 15–49 who have heard of AIDS, by background characteristics, Marshall Islands 2007

Background characteristic	Women		Men	
	Has heard of AIDS	Number	Has heard of AIDS	Number
Age				
15–24	93.3	640	94.9	400
15–19	91.6	306	92.7	209
..20–24	94.9	334	97.2	190
25–29	98.3	293	100.0	137
30–39	97.1	418	98.1	221
40–49	97.0	274	96.1	156
Marital status				
Never married	93.2	383	95.2	329
..Ever had sex	95.6	254	96.3	263
..Never had sex	88.4	129	91.1	67
Married/living together	96.8	1,145	97.5	534
Divorced/separated/widowed	94.8	97	(96.7)	50
Residence				
Urban	97.0	1,106	96.0	631
Rural	93.4	519	98.0	283
Education				
No education/primary	91.1	427	95.1	245
Secondary	97.0	1,016	96.8	524
More than secondary	100.0	182	98.8	145
Wealth quintile				
Lowest	91.1	350	98.5	182
Second	97.3	353	94.4	220
Middle	95.4	319	94.1	188
Fourth	97.1	306	98.6	159
Highest	98.7	298	98.5	164
Total 15–49	95.8	1,625	96.6	913
50+	na	na	99.3	93
Total men 15+	na	na	97.0	1,055

na = not applicable

Note: Figures in parentheses are based on 25–49 unweighted cases.

12.2. KNOWLEDGE OF HIV PREVENTION METHODS

HIV among adults is mainly transmitted through heterosexual contact between an infected partner and a non-infected partner. Consequently, HIV prevention programs have mainly sought to reduce further sexual transmission through three programmatically important ways – namely, promotion of sexual abstinence, mutually faithful monogamy among uninfected couples, and condom use by those who cannot abstain.

Table 12.2. Knowledge of HIV prevention methods

Percentage of women and men aged 15–49 who, in response to prompted questions, say that people can reduce the risk of getting the AIDS virus by using condoms every time they have sexual intercourse, by having one sex partner who is not infected and has no other partners, and by abstaining from sexual intercourse, by background characteristics, Marshall Islands 2007

	Women					Men				
	Percentage who say that HIV can be prevented by:					Percentage who say that HIV can be prevented by:				
Background characteristic	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Abstaining from sexual intercourse	Number of women	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Abstaining from sexual intercourse	Number of men
Age										
15–24	69.9	82.4	63.2	82.7	640	87.6	89.7	84.4	88.5	400
15–19	68.2	80.0	61.8	82.1	306	83.5	86.9	80.2	87.2	209
20–24	71.5	84.6	64.5	83.3	334	92.1	92.8	89.1	90.0	190
25–29	70.9	86.3	64.7	86.9	293	91.5	92.0	85.9	85.1	137
30–39	76.5	89.2	70.9	86.7	418	91.2	95.1	90.2	91.5	221
40–49	78.0	87.6	72.5	88.1	274	91.2	92.0	88.3	90.0	156
Marital status										
Never married	67.9	82.2	62.0	82.3	383	87.5	87.6	81.9	87.5	329
..Ever had sex	72.6	87.1	67.7	85.1	254	90.7	90.8	86.5	88.4	263
..Never had sex	58.7	72.7	50.8	76.6	129	74.7	75.4	63.9	83.9	67
Married/living together	74.9	86.9	68.9	86.8	1,145	91.0	94.3	89.6	89.8	534
Divorced/separated/widowed	72.3	85.3	65.4	80.7	97	(89.9)	(91.7)	(87.0)	(89.7)	50
Residence										
Urban	76.5	86.2	69.4	85.6	1,106	90.8	92.2	87.4	88.1	631
Rural	66.0	84.7	62.1	84.9	519	87.1	90.7	85.2	90.8	283
Education										
No education/primary	69.7	81.1	63.9	83.1	427	86.6	88.0	82.7	87.9	245
Secondary	74.3	86.0	67.6	85.2	1,016	90.3	91.9	87.1	88.9	524
More than secondary	74.5	95.2	71.0	91.9	182	92.6	97.5	92.1	90.9	145
Wealth quintile										
Lowest	70.8	82.4	65.7	83.4	350	87.1	88.7	83.0	91.8	182
Second	67.9	88.7	63.4	86.6	353	86.4	90.0	84.8	86.1	220
Middle	76.2	85.6	69.6	86.4	319	90.2	90.6	86.6	88.3	188
Fourth	73.5	83.9	66.2	83.9	306	93.9	94.8	90.1	89.7	159
Highest	78.3	88.1	71.0	86.6	298	92.3	96.1	90.2	89.7	164
Total 15–49	73.1	85.7	67.0	85.4	1,625	89.7	91.8	86.7	89.0	913
50+	na	na	na	na	na	90.4	94.1	88.3	93.3	93
Total men 15+	na	na	na	na	na	89.9	92.0	87.1	89.5	1,055

na = not applicable

Note: Figures in parentheses are based on 25–49 unweighted cases.

[1] Using condoms every time they have sexual intercourse

[2] Partner who has no other partners

In the 2007 RMIDHS, men and women were specifically asked if one can reduce the risk of acquiring HIV through consistently using condoms, limiting sexual intercourse to one uninfected partner who has no other sex partners, and abstaining from sexual intercourse. As shown in Table 12.2, 73 percent of women and 90 percent of men agree that using a condom at every sexual intercourse can reduce the risk of getting the AIDS virus, while 86 percent of women and 92 percent of men agree that limiting sexual intercourse to one uninfected partner is a way to avoid contracting HIV.

Table 12.2 presents the results of the level of knowledge about HIV prevention methods for women and men in the age group 15–49 years by their background characteristics. Generally, most women and men are aware of reducing the chance of getting HIV through the specified prevention methods: limiting sex with one uninfected partner (86 percent and 92 percent respectively), abstaining from sex (85 percent and 89 percent), using a condom (73 percent and 90 percent), and using condoms and limiting sex to one uninfected partner (67 percent and 87 percent). The result also shows a high level of knowledge of HIV prevention methods for women and men with their different backgrounds.

UNAIDS Indicator 1, 'Knowledge of HIV prevention methods', is shown in columns 3 and 8 of Table 12.2. Sixty-seven percent of women know that both using condoms consistently and limiting sexual intercourse to one uninfected partner who has no other partners can reduce risk, while the comparable proportion for men is 87 percent. Finally, 85 percent of women and 89 percent of men agree that abstaining from sexual intercourse is an effective way to reduce the risk of becoming infected with HIV.

Generally, knowledge of HIV prevention methods is higher among urban than rural residents. Considering age, knowledge of ways to prevent HIV tends to generally increase with age for both women and men. Knowledge of HIV prevention methods increases with educational attainment and wealth quintile. Meanwhile, knowledge of HIV prevention methods is lower among never-married women and men compared to those who have ever been married.

12.3. REJECTION OF MISCONCEPTIONS ABOUT HIV AND AIDS

In addition to knowing about effective ways to avoid contracting HIV, it is useful to be able to identify incorrect beliefs about AIDS to eliminate misconceptions. Common misconceptions about AIDS include the idea that HIV-infected people always appear ill and the belief that the virus can be transmitted by sharing food with someone who is infected, or by witchcraft or other supernatural means. Respondents were asked about these three misconceptions, and the findings are presented in tables 12.3.1 and 12.3.2.

Sixty-seven percent of women and 72 percent of men know that a healthy-looking person can have the virus that causes AIDS. Knowledge that people cannot get the AIDS virus by sharing food with a person who has AIDS is lower (61 percent of women and 65 percent of men) than knowledge that the AIDS virus cannot be transmitted by supernatural means (80 percent of women and 81 percent of men). That is, respondents were also asked if they thought that people could get the AIDS virus because of witchcraft or other supernatural means, and the majority of respondents rejected this idea.

Tables 12.3.1 and 12.3.2 also look at the proportion of respondents who reject common misconceptions about HIV and AIDS. Specifically, they show that 44 percent of women and 48 percent of men know that a healthy-looking person can be infected with HIV, that HIV cannot be transmitted by sharing food or utensils with an infected person, and that HIV cannot be transmitted by supernatural means.

Table 12.3.1. Comprehensive knowledge about AIDS: Women

Percentage of women aged 15–49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly reject local misconceptions about AIDS transmission or prevention, and the percentage with comprehensive knowledge about AIDS by background characteristics, Marshall Islands 2007

Background characteristic	Percentage of women who say that: A healthy-looking person can have the AIDS virus	A person cannot become infected by sharing food with a person who has AIDS	AIDS cannot be transmitted by supernatural means	Percentage who say that a healthy-looking person can have the AIDS virus and who reject the two most common local misconceptions[1]	Percentage with comprehensive knowledge about AIDS[2]	Number of women
Age						
15–24	58.7	56.1	75.0	35.8	26.6	640
15–19	58.8	54.3	69.6	36.2	26.7	306
20–24	58.5	57.7	80.0	35.4	26.6	334
25–29	72.8	62.4	84.8	47.4	35.2	293
30–39	72.0	68.1	83.4	50.2	37.4	418
40–49	74.7	62.8	80.4	48.1	38.7	274
Marital status						
Never married	62.0	58.7	75.6	39.3	29.5	383
Ever had sex	61.6	60.4	78.7	38.0	28.8	254
Never had sex	62.6	55.3	69.5	41.8	30.8	129
Married/living together	69.6	63.0	82.0	45.7	34.7	1,145
Divorced/separated/widowed	62.2	54.0	71.4	37.1	26.4	97
Residence						
Urban	69.7	68.4	82.7	49.9	38.6	1,106
Rural	62.4	46.6	73.6	30.4	21.0	519
Education						
No education/ primary	61.6	44.3	68.8	31.6	22.6	427
Secondary	66.4	65.5	82.1	44.5	34.4	1,016
More than secondary	86.1	79.3	93.0	67.2	49.3	182
Wealth quintile						
Lowest	59.0	44.0	72.4	27.9	19.8	350
Second	64.2	53.3	77.4	35.1	24.3	353
Middle	65.0	65.1	79.5	45.1	35.6	319
Fourth	71.4	72.5	86.8	56.6	44.9	306
Highest	79.3	76.3	84.6	57.6	43.6	298
Total 15–49	67.4	61.4	79.8	43.7	33.0	1,625

[1] The two most common local misconceptions involve transmission through sharing food and through supernatural means.

[2] Comprehensive knowledge means knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention.

As with many other indicators of HIV and AIDS knowledge, rejection of misconceptions regarding HIV and AIDS is higher among respondents in urban areas than rural areas. Among both men and women, rejection of misconceptions about HIV and AIDS increases with age. Educational attainment and increasing wealth quintile are positively associated with rejection of misconceptions, as shown in tables 12.3.1 and 12.3.2.

Table 12.3.2. Comprehensive knowledge about AIDS: Men

Percentage of men aged 15–49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly reject local misconceptions about AIDS transmission or prevention, and the percentage with comprehensive knowledge about AIDS by background characteristics, Marshall Islands 2007

Background characteristic	Percentage of men who say that: A healthy-looking person can have the AIDS virus	A person cannot become infected by sharing food with a person who has AIDS	AIDS cannot be transmitted by supernatural means	Percentage who say that a healthy-looking person can have the AIDS virus and who reject the two most common local misconceptions[1]	Percentage with comprehensive knowledge about AIDS[2]	Number of men
Age						
15–24	65.5	59.9	79.9	41.9	39.4	400
15–19	60.1	58.1	74.5	37.3	34.8	209
20–24	71.5	61.9	85.8	47.0	44.4	190
25–29	72.1	63.1	75.8	39.5	34.7	137
30–39	76.8	73.3	83.1	57.8	55.3	221
40–49	83.4	69.4	84.8	56.1	54.4	156
Marital status						
Never married	64.4	63.4	82.5	43.2	39.6	329
..Ever had sex	68.7	65.0	85.4	47.2	43.5	263
..Never had sex	47.2	57.2	71.1	27.4	24.4	67
Married/living together	77.1	67.8	81.2	51.7	49.4	534
Divorced/separated/widowed	(73.1)	(49.8)	(66.4)	(37.3)	(35.8)	50
Residence						
Urban	72.1	69.8	85.1	51.5	48.2	631
Rural	72.7	55.1	71.5	39.6	38.1	283
Education						
No education/primary	64.0	51.8	70.4	33.6	30.9	245
Secondary	73.8	65.6	83.9	49.2	46.5	524
More than secondary	80.8	86.9	87.5	66.7	64.0	145
Wealth quintile						
Lowest	72.4	57.9	76.8	40.7	38.9	182
Second	70.8	59.0	73.6	45.1	43.5	220
Middle	64.2	61.0	83.3	40.8	36.1	188
Fourth	70.4	73.3	86.6	47.6	46.5	159
Highest	85.2	78.8	87.0	67.5	63.0	164
Total 15–49	72.3	65.2	80.9	47.8	45.1	913
50+	77.1	74.8	77.8	58.9	55.9	93
Total men 15+	73.4	66.0	80.4	49.2	46.6	1,055

Note: Figures in parentheses are based on 25–49 unweighted cases.

[1] The two most common local misconceptions involve transmission through sharing food and through supernatural means.

[2] Comprehensive knowledge means knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention.

12.4. COMPREHENSIVE KNOWLEDGE ABOUT HIV AND AIDS

As the landscape of the HIV epidemic changes with time, it is necessary for people to have more comprehensive knowledge of HIV and AIDS. An indicator of comprehensive knowledge about HIV and AIDS combines several individual indicators previously discussed. It is the percentage of respondents aged 15–49 who say that: (a) people can reduce the chances of getting the AIDS virus by using a condom every time they have sex; (b) people can reduce the chances of getting the AIDS virus by having sex with just one partner who is not infected and who has no other partners; (c) people cannot get the AIDS virus from sharing food with a person who has AIDS; and (d) a healthy-looking person can have the AIDS virus; and (e) reject the two most common local misconceptions about AIDS transmission or prevention.

Tables 12.3.1 and 12.3.2 show the proportions of women and men who have comprehensive knowledge about HIV and AIDS. One in three women (33 percent) and 45 percent of men have such comprehensive knowledge.

According to the results of the 2007 RMIDHS, women in urban areas are more likely to have comprehensive knowledge than their rural counterparts (39 percent compared with 21 percent). Married women with more than secondary-level education and those in the fourth and highest wealth quintile are more likely to have comprehensive knowledge than other women.

Like women, comprehensive knowledge is more common among men in urban areas who are currently married, have higher education, and are in the fourth and highest wealth quintiles.

12.5. KNOWLEDGE OF PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV

Some of the preconditions for reducing mother-to-child transmission (MTCT) are knowing that HIV can be transmitted from mother to child, and knowing that the use of antiretroviral drugs by a mother can reduce the risk of transmission. The 2007 RMIDHS included questions that asked the respondents about their knowledge on whether a mother who has AIDS can pass on the disease to her baby in any of three ways: while she is pregnant with the baby, during delivery of the baby, or while breastfeeding her baby. This information is an important indicator of the respondent's knowledge of MTCT, and measures knowledge of methods to prevent transmission from mother to child through antiretroviral therapy and by avoiding breastfeeding.

All women and men interviewed were asked if the virus that causes AIDS can be transmitted from a mother to a child. If the answer was yes, they were further asked whether the virus could be transmitted during pregnancy, during delivery, and/or during breastfeeding. They were also asked if there were any special drugs that a doctor or nurse could give to a pregnant woman who was infected with the AIDS virus to reduce the risk of transmission to her baby.

Eighty-two percent of women and 78 percent of men know that HIV can be transmitted from a mother to her child by breastfeeding (Table 12.4). A very low proportion of women (18 percent) and an even lower percentage of men (12 percent) know that there are special drugs that a doctor or nurse can give to a pregnant woman infected with the AIDS virus to reduce the risk of transmitting the virus to the baby. About 1 in 10 women and men (15 percent and 11 percent respectively) aged 15–49 know that HIV can be transmitted through breastfeeding and that the risk of transmission can be reduced by special drugs.

Table 12.4. Knowledge of prevention of mother-to-child transmission of HIV

Percentage of women and men who know that HIV can be transmitted from mother to child by breastfeeding and that the risk of mother–to-child transmission (MTCT) of HIV can be reduced by the mother taking special drugs during pregnancy, by background characteristics, Marshall Islands 2007

	Women				Men			
	Percentage who know that:				Percentage who know that:			
Background characteristic	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by the mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and the risk of MTCT can be reduced by the mother taking special drugs during pregnancy	Number of women	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by the mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and the risk of MTCT can be reduced by the mother taking special drugs during pregnancy	Number of men
Age								
15–24	80.3	16.1	14.4	640	73.4	6.1	5.6	400
..15–19	77.7	16.5	15.4	306	68.7	5.0	5.0	209
..20–24	82.7	15.7	13.5	334	78.7	7.3	6.2	190
25–29	81.4	13.5	11.6	293	80.6	11.5	11.5	137
30–39	82.0	21.7	18.8	418	81.1	17.9	16.1	221
40–49	83.9	18.8	16.8	274	80.0	16.4	14.2	156
Marital status								
Never married	81.4	19.1	16.7	383	72.1	6.2	6.1	329
..Ever had sex	85.0	19.2	17.1	254	75.1	6.9	6.9	263
..Never had sex	74.2	18.9	15.9	129	60.2	3.2	3.2	67
Married/living together	81.7	17.4	15.5	1,145	80.3	13.8	12.0	534
Divorced/separated/widowed	80.6	12.3	10.2	97	(83.4)	(22.9)	(22.9)	50
Currently pregnant								
Pregnant	77.2	12.6	10.9	78	na	na	na	na
Not pregnant or not sure	81.8	17.7	15.7	1,547	na	na	na	na
Residence								
Urban	80.3	18.5	15.9	1,106	75.0	11.9	10.4	631
Rural	84.2	15.3	14.5	519	83.1	10.7	10.6	283
Education								
No education/primary	80.8	16.4	16.0	427	79.3	9.6	9.6	245
Secondary	81.2	17.2	14.6	1,016	77.9	10.2	9.5	524
More than secondary	85.0	22.0	19.1	182	73.1	19.6	15.6	145
Wealth quintile								
Lowest	82.1	14.6	14.1	350	83.3	10.4	10.4	182
Second	86.1	18.5	17.7	353	81.5	7.1	7.1	220
Middle	81.1	16.8	14.0	319	71.2	8.6	7.9	188
Fourth	78.3	18.0	14.9	306	77.3	18.1	17.3	159
Highest	79.3	19.9	16.4	298	73.0	15.7	11.5	164
Total 15–49	81.5	17.5	15.4	1,625	77.5	11.5	10.5	913
50+	na	na	na	na	73.6	22.4	20.0	93
Total men 15+	na	na	na	na	77.0	13.0	11.7	1,055

Note: Figures in parentheses are based on 25–49 unweighted cases.

na = not applicable

Except for the knowledge that HIV can be transmitted by breastfeeding, generally the levels of MTCT knowledge are higher among urban than rural residents. Surprisingly, rural residents are more likely to know that HIV can be transmitted by breastfeeding.

12.6. STIGMA ASSOCIATED WITH AND ATTITUDES TOWARD HIV AND AIDS

Knowledge about AIDS can affect people's opinions and attitudes toward people with AIDS. In order to measure respondents' attitudes toward people with AIDS, a number of questions were asked, including questions about willingness to care for a family member who has AIDS, not wanting to keep secret that a family member has AIDS, and willingness to buy vegetables from someone who has AIDS. They were also asked their opinion on whether a female teacher with the AIDS virus who is not sick should be allowed to continue teaching. Tables 12.5.1. and 12.5.2 show the proportion of women and men expressing positive attitudes toward people with AIDS according to their different background characteristics.

The results show that most women and men express positive attitudes and opinions toward family members having AIDS. For example, 74 percent of women and 72 percent of men report that they would not want to keep secret that a family member has the AIDS virus, while over half (56 percent) of the women and two in three men (66 percent) are willing to care for an HIV-infected family member. In contrast, only 28 percent of women and 21 percent of men report that they would buy vegetables from a shopkeeper who had the AIDS virus.

Overall, a very low percentage of women and men (4 percent and 7 percent respectively) expressed acceptance attitudes on all four indicators. Women and men in urban areas, with more than secondary-level education, and in the wealthiest households were highly likely to express acceptance attitudes on all four indicators compared to other women and men.

Table 12.5.1. Accepting attitudes toward those living with HIV and AIDS: Women

Among women aged 15–49 who have heard of AIDS, percentage expressing specific accepting attitudes toward people with AIDS, by background characteristics, Marshall Islands 2007

	Percentage of women who:					
Background characteristic	Are willing to care for a family member with the AIDS virus in the respondent's home	Would buy fresh vegetables from shopkeeper who had the AIDS virus	Say that a female teacher with the AIDS virus who is not sick should be allowed to continue teaching	Would not want to keep secret that a family member was infected with the AIDS virus	Percentage expressing acceptance attitudes on all four indicators	Number of women who have heard of AIDS
Age						
15–24	53.0	16.6	13.3	68.7	2.8	597
..15–19	52.0	18.4	13.8	67.5	3.0	280
..20–24	53.8	15.0	12.8	69.8	2.7	317
25–29	51.6	23.3	15.6	73.7	3.9	288
30–39	56.0	27.3	14.0	76.2	6.0	406
40–49	67.9	20.6	16.9	73.3	5.7	266
Marital status						
Never married	52.0	19.6	15.5	70.0	3.7	357
..Ever had sex	55.1	20.3	14.1	68.2	4.3	243
..Never had sex	45.5	18.2	18.6	73.9	2.3	114
Married/living together	57.6	21.6	14.6	73.5	4.7	1,108
Divorced/separated/widowed	52.8	23.9	9.5	68.0	2.4	92
Residence						
Urban	60.0	24.3	15.9	72.8	5.1	1,072
Rural	47.5	14.7	11.4	71.3	2.6	485
Education						
No education/primary	49.5	15.6	11.0	71.6	2.5	389
Secondary	56.0	19.8	13.1	71.9	4.1	985
More than secondary	70.3	41.8	29.5	76.5	9.5	182
Wealth quintile						
Lowest	42.2	14.5	8.2	69.4	1.2	318
Second	50.2	16.9	10.0	75.3	2.1	343
Middle	58.2	20.4	20.3	72.5	5.2	305
Fourth	63.6	19.4	13.1	73.1	4.3	297
Highest	68.2	36.7	21.9	71.2	9.5	294
Total 15–49	56.1	21.3	14.5	72.4	4.3	1,557

Table 12.5.2. Accepting attitudes toward those living with HIV and AIDS: Men

Among men aged 15–49 who have heard of HIV and AIDS, percentage expressing specific accepting attitudes toward people with HIV and AIDS, by background characteristics, Marshall Islands 2007

	Percentage of men who:					
Background characteristic	Are willing to care for a family member with the AIDS virus in the respondent's home	Would buy fresh vegetables from shopkeeper who had the AIDS virus	Say that a female teacher with the AIDS virus who is not sick should be allowed to continue teaching	Would not want to keep secret that a family member was infected with the AIDS virus	Percentage expressing acceptance attitudes on all four indicators	Number of men who have heard of AIDS
Age						
15–24	63.3	25.5	13.5	72.1	6.0	379
..15–19	62.8	29.2	13.0	69.8	6.2	194
..20–24	63.8	21.6	14.0	74.5	5.8	185
25–29	69.1	27.8	11.5	74.3	5.6	137
30–39	71.2	28.2	14.2	76.6	8.3	217
40–49	60.8	33.4	18.7	71.6	11.4	150
Marital status						
Never married	67.4	31.0	16.3	72.2	7.7	314
..Ever had sex	67.8	30.8	13.8	72.5	6.5	253
..Never had sex	65.8	31.7	26.6	70.9	12.6	61
Married/living together	65.9	26.6	13.2	74.2	7.3	520
Divorced/separated/widowed	(52.7)	(21.1)	(12.3)	(73.9)	(6.8)	48
Residence						
Urban	74.1	32.7	17.4	69.0	9.9	605
Rural	47.4	17.3	7.2	83.1	1.9	277
Education						
No education/primary	63.9	18.6	7.4	75.1	1.8	233
Secondary	63.6	27.3	12.6	72.8	7.0	507
More than secondary	76.4	45.1	31.3	73.4	17.9	143
Wealth quintile						
Lowest	52.1	21.6	8.7	76.0	3.9	179
Second	54.1	18.2	8.1	82.1	2.5	208
Middle	72.2	27.6	11.9	70.1	3.3	177
Fourth	73.1	35.0	18.6	68.2	12.1	156
Highest	81.4	40.6	26.6	68.3	17.6	161
Total 15–49	65.7	27.9	14.2	73.5	7.4	882
50+	61.6	32.9	21.7	77.2	8.7	92
Total men 15+	65.7	28.8	15.1	74.1	7.7	1,023

Note: Figures in parentheses are based on 25–49 unweighted cases.

12.7. ATTITUDES TOWARD NEGOTIATING SAFER SEX

The ability of women to negotiate safer sex with a husband or partner who has HIV is critical in order to reduce HIV transmission. In order to assess this situation, the 2007 RMIDHS asked two attitudinal questions to all respondents: (a) Is it justified for a wife to refuse to have sex with her husband if the wife thinks the husband has a sexually transmitted infection? and (b) Is it justified for a wife to insist that her husband wear a condom when she knows he has an infection that can be transmitted through sexual intercourse? Table 12.6 summarizes the results: it shows the proportion of men aged 15–49 years who believe that a wife is justified in refusing to have sex with her husband if the husband has a sexually transmitted disease or asking him to use a condom.

Table 12.6. Attitudes toward negotiating safer sexual relations with husband

Percentage of men aged 15–49 who believe that, if a husband has a sexually transmitted disease, his wife is justified in refusing to have sexual intercourse with him or asking him to use a condom, by background characteristics, Marshall Islands 2007

Background characteristic	Wife is justified in refusing to have sexual intercourse	Wife is justified in refusing sexual intercourse or asking husband to use a condom	Number of men
Age			
15–24	91.8	91.8	400
..15–19	90.6	90.6	209
..20–24	93.2	93.2	190
25–29	96.2	96.2	137
30–39	97.2	97.2	221
40–49	96.3	96.3	156
Marital status			
Never married	90.3	90.3	329
..Ever had sex	90.9	90.9	263
..Never had sex	87.8	87.8	67
Married/living together	97.1	97.1	534
Divorced/separated/ widowed	(96.0)	(96.0)	50
Residence			
Urban	95.8	95.8	631
Rural	91.9	91.9	283
Education			
No education/primary	89.9	89.9	245
Secondary	95.7	95.7	524
More than secondary	98.0	98.0	145
Total 15–49	94.6	94.6	913
50+	95.6	95.6	93
Total men 15+	94.6	94.6	1,055

Note: Figures in parentheses are based on 25–49 unweighted cases.

The results show that almost all men (95 percent) in the age group of 15–49 years agree that a wife is justified in refusing to have sexual intercourse with her husband if she knows that he has a sexually transmitted disease. The same proportion of men also agree that a wife is justified in refusing sexual intercourse or asking her husband to use a condom. Table 12.6 shows that this attitude is almost universal regardless of men's background characteristics.

12.8. EDUCATION ABOUT CONDOM USE TO PREVENT AIDS

HIV and AIDS programs and activities have been expanding in the areas of educating young people on how to prevent themselves from getting HIV. One of the areas these programs focus on is the use of condoms for prevention, since condoms are cost free or low cost, easily adaptable, safe and always available.

Table 12.7. Adult support of education about condom use to prevent AIDS

Percentage of women and men aged 18–49 who agree that children aged 12–14 years should be taught about using a condom to avoid AIDS, by background characteristics, Marshall Islands 2007

	Women		Men	
Background characteristic	Percentage who agree	Number	Percentage who agree	Number
Age				
18–24	89.3	477	88.1	262
..18–19	89.2	143	83.4	72
..20–24	89.4	334	89.8	190
25–29	92.4	293	91.5	137
30–39	91.1	418	90.8	221
40–49	89.8	274	90.0	156
Marital status				
Never married	91.4	237	90.5	196
Married or living together	91.1	1,131	90.1	530
Divorced/separated/widowed	81.7	94	(84.8)	49
Residence				
Urban	91.5	987	91.5	526
Rural	88.6	474	86.3	249
Education				
No education/primary	84.2	367	90.5	177
Secondary	92.3	914	89.0	456
More than secondary	94.7	181	91.7	142
Wealth quintile				
Lowest	88.2	318	86.1	166
Second	89.2	322	88.1	191
Middle	90.1	282	86.7	153
Fourth	93.6	271	92.9	130
Highest	92.4	269	97.3	136
Total 18–49	90.6	1,462	89.8	775
50+	na	na	87.2	93
Total men 18+	na	na	89.4	917

na = not applicable

Note: Figures in parentheses are based on 25–49 unweighted cases.

The 2007 RMIDHS posed questions that sought adults' opinions on and support for educating children aged 12–14 years about condom use in order to protect them from AIDS. Table 12.7 presents the proportion of adult women and men aged 18–49 who agree with educating children aged 12–14 years about condom use to avoid AIDS, according to their background characteristics.

The results show that the majority of adult women and men agree that children aged 12–14 years should be taught about using condoms to avoid getting AIDS. Nine in 10 women and men (91 percent of women and 90 percent of men) support the idea of educating children about condom use to prevent AIDS. This attitude is common, meaning there is not much variation by background characteristics.

12.9. HIV AND AIDS AWARENESS AND COUNSELING

Public health agencies and other organizations offer programs on HIV prevention and testing as well as awareness and counseling. To assess HIV and AIDS knowledge, awareness, and counseling in the Marshall Islands, the 2007 DHS questionnaires included questions that asked respondents their opinion on the best way to raise awareness and discuss HIV and AIDS with the people. This information is crucial for health programmers and organizations to be able to identify areas that need to be improved, especially in the field of HIV and AIDS awareness and counseling.

Most Marshallese women and men believe that the best way to raise HIV and AIDS awareness is through radio programs. About 62 percent of women and 53 percent of men suggest that HIV and AIDS awareness programs are best carried out through radio services. This can be attributed to the fact that more people in RMI have access to radio than to other communication services. Nineteen percent of women and 22 percent of men believe that community seminars and meetings are the best way to raise HIV and AIDS awareness on RMI. Only a few women and men believe in other ways of raising HIV and AIDS awareness: television programs (3 percent and 5 percent respectively); newsletters, booklets and other reading materials (3 percent and 9 percent); and private individual counseling (8 percent and 8 percent).

In terms of differences by background characteristics, men in rural areas and in the lowest wealth quintile households are the least likely to agree that the best way to raise awareness about HIV and AIDS is through radio programs, compared to all other categories of men and women, where 50 percent or more agree that the best way to raise awareness about HIV and AIDS is through radio programs. The second most agreed way to raise HIV and AIDS knowledge and awareness among married women and men is community seminars and meetings.

Table 12.8. Best way to raise awareness and discuss HIV and AIDS with people

Percent distribution of women and men aged 15–49 who know of HIV and AIDS by their perception of the best way to raise awareness and discuss HIV and AIDS in the population, by background characteristics, Marshall Islands 2007

	Women									Men								
	Percent distribution by perception of the best way to raise awareness about HIV and AIDS:									Percent distribution by perception of the best way to raise awareness about HIV and AIDS:								
Background characteristic	Radio programs	Television programs	Community seminars/ meetings	Newsletters/ booklets/ reading materials	Private/individual counseling	Other	Don't know	Total	Number of women who have heard of AIDS	Radio programs	Television programs	Community seminars/ meetings	Newsletters/ booklets/ reading materials	Private/ individual counseling	Don't know	Missing	Total	Number of men who have heard of AIDS
Age																		
15–24	59.8	2.6	20.0	3.2	6.8	0.9	6.7	100.0	597	52.0	8.3	18.7	10.0	6.0	4.9	0.0	100.0	379
..15–19	59.4	2.5	19.1	4.7	5.3	0.6	8.4	100.0	280	49.7	11.6	15.7	12.1	5.4	5.6	0.0	100.0	194
..20–24	60.2	2.7	20.9	1.9	8.1	1.1	5.2	100.0	317	54.5	4.9	22.0	7.9	6.6	4.1	0.0	100.0	185
25–29	62.0	3.6	13.2	3.6	9.9	0.3	7.3	100.0	288	51.0	3.6	33.2	6.2	4.1	1.9	0.0	100.0	137
30–39	67.0	2.5	15.5	2.2	6.4	0.8	5.6	100.0	406	54.2	1.8	22.3	6.5	9.6	5.6	0.0	100.0	217
40–49	58.7	1.4	27.2	0.7	9.3	0.0	2.7	100.0	266	55.9	5.0	20.8	5.6	11.5	1.1	0.0	100.0	150
Marital status																		
Never married	60.6	3.4	17.8	3.4	7.0	0.8	7.1	100.0	357	51.5	9.2	18.3	11.0	6.0	4.1	0.0	100.0	314
..Ever had sex	59.4	3.1	19.2	3.9	8.1	0.4	5.8	100.0	243	51.6	8.6	17.4	10.7	7.1	4.6	0.0	100.0	253
..Never had sex	63.0	4.2	14.8	2.3	4.5	1.5	9.7	100.0	114	50.8	11.4	22.0	12.2	1.4	2.2	0.0	100.0	61
Married/living together	63.0	2.3	19.0	2.4	7.4	0.6	5.4	100.0	1,108	53.7	3.5	25.3	6.1	8.3	3.0	0.0	100.0	520
Divorced/separated widowed	54.1	3.0	20.9	1.5	14.4	0.0	6.2	100.0	92	(56.4)	(2.7)	(13.9)	(5.8)	(8.4)	(12.8)	(0.0)	100.0	48
Residence																		
Urban	61.9	3.3	20.0	3.0	7.0	0.9	3.9	100.0	1,072	59.6	7.8	18.8	5.4	6.2	2.1	0.0	100.0	605
Rural	61.9	1.1	16.1	1.6	9.2	0.0	10.1	100.0	485	38.8	0.2	29.7	13.1	10.3	8.0	0.0	100.0	277
Education																		
No education/ primary	64.7	2.0	17.2	1.4	6.5	0.0	8.2	100.0	389	57.1	4.9	17.9	7.5	6.2	6.2	0.0	100.0	233
Secondary	62.4	2.2	18.2	2.8	8.2	0.4	5.8	100.0	985	52.6	6.7	21.1	7.7	7.9	4.0	0.0	100.0	507
More than secondary	53.1	5.7	25.3	3.9	7.7	3.2	0.9	100.0	182	48.1	1.8	33.1	8.7	8.3	0.0	0.0	100.0	143
Wealth quintile																		
Lowest	64.0	0.5	18.7	1.1	6.1	0.0	9.5	100.0	318	44.4	0.7	29.0	10.3	8.3	7.4	0.0	100.0	179
Second	61.6	2.6	16.7	2.3	10.1	0.0	6.6	100.0	343	52.0	4.0	20.9	10.7	7.9	4.3	0.0	100.0	208
Middle	59.1	2.3	21.2	4.7	5.0	1.2	6.6	100.0	305	59.1	8.5	18.5	3.0	6.1	4.9	0.0	100.0	177
Fourth	68.5	3.0	17.0	1.4	6.8	0.3	3.0	100.0	297	55.6	10.7	20.0	7.6	6.1	0.0	0.0	100.0	156
Highest	56.2	4.6	20.7	3.5	10.3	1.7	3.0	100.0	294	54.9	4.1	22.6	6.8	9.0	2.6	0.0	100.0	161

Table 12.8. (Continued)

Background characteristic	Women: Percent distribution by perception of the best way to raise awareness about HIV and AIDS: Radio programs	Television programs	Community seminars/ meetings	Newsletters/ booklets/ reading materials	Private/individual counseling	Other	Don't know	Total	Number of women who have heard of AIDS	Men: Percent distribution by perception of the best way to raise awareness about HIV and AIDS: Radio programs	Television programs	Community seminars/ meetings	Newsletters/ booklets/ reading materials	Private/ individual counseling	Don't know	Missing	Total	Number of men who have heard of AIDS
Total 15–49	61.9	2.6	18.8	2.6	7.7	0.6	5.8	100.0	1,557	53.1	5.4	22.2	7.8	7.5	4.0	0.0	100.0	882
50+	na	na	na	na	na	na	na	na	na	49.1	2.9	22.4	7.7	13.8	2.2	1.8	100.0	92
Total men 15+	na	na	na	na	na	na	na	na	na	52.1	5.2	22.7	7.8	8.2	3.7	0.2	100.0	1,023

Note: Figures in parentheses are based on 25–49 unweighted cases. na = not applicable

12.10. BEST PERSON WITH WHOM TO DISCUSS HIV AND AIDS

The 2007 RMIDHS asked questions of respondents on who they thought would be the best person to discuss HIV- and AIDS-related issues with. Table 12.9 presents the distribution of women and men aged 15–49 years who have heard about AIDS and who they think is the best person to discuss AIDS with, whether a health worker, teacher, pastor, community leader, clan leader, politician, or other.

The results show that an equal proportion of women and men believe that health workers are the best person to discuss HIV and AIDS with (93 percent each). The results show that almost all Marshallese women and men are more likely to trust health workers to discuss HIV- and AIDS-related issues, which is an indication of a perception that HIV and AIDS are health issues and not socioeconomic or development ones.

Only a few women and men (less than 2 percent each) trust other people, such as teachers, pastors, community leaders, clan leaders, politicians, and others. There is not much variation in women's or men's background toward health workers as the best people to discuss HIV and AIDS with.

12.11. MULTIPLE SEXUAL PARTNERS AND HIGHER-RISK SEX

Higher-risk sex involves having sex with a person who is neither a spouse nor a cohabiting partner. In order to assess indicators on multiple sexual partners and higher-risk sex, the 2007 RMIDHS included questions that asked both women and men aged 15–49 years who had had sexual intercourse in the past 12 months about the number of partners they had, whether they had higher-risk sexual intercourse in the past 12 months, and whether a condom was used or not. Tables 12.10.1 and 12.10.2 summarize the important indicators on the proportion of women and men aged 15–49 who had sex with more than one partner in the last 12 months, the percentage of those who had higher-risk sex in the last 12 months, and the percentage of condom use at last higher-risk intercourse. The mean number of sexual partners is also provided for all women and men who have ever had sexual intercourse.

Among women and men who had sexual intercourse in the past 12 months, 3 percent of women had multiple partners compared to 9 percent of men. Having multiple sexual partners is more likely among younger women and men who are either 'never married' or divorced, separated, or widowed than among other groups. Meanwhile, 18 percent of women compared to 39 percent of men had higher-risk sex during the same 12-month period. Among those women and men who had higher-risk sex in the past 12 months, twice as many men as women used a condom (20 percent compared to 10 percent).

Information on the mean number of sexual partners in the lifetimes of women and men who have ever had sexual intercourse shows that men have three times more sexual partners in their lives than women (12 partners compared to four partners). As expected, the mean number of sexual partners increases with age of women and men. Interestingly, rural women and men are more likely to have more sexual partners than urban women and men.

Table 12.9. Best person with whom to discuss HIV and AIDS

Percent distribution of women and men aged 15–49 who have heard of AIDS, by who they believe is the most suitable person with whom to discuss HIV/AIDS, by background characteristics, Marshall Islands 2007

	Women										Men										
	The best people with whom to discuss HIV and AIDS:										The best people with whom to discuss HIV and AIDS:										
Background characteristic	Health workers	Teachers	Pastors / clergy	Community leaders	Clan leaders	Politi-cians	Other	Don't know	Total	Number of women	Health workers	Teachers	Pastors / clergy	Community leaders	Clan leaders	Politi-cians	Other	Don't know	Missing	Total	Number of men
Age																					
15–24	93.7	1.1	0.6	1.0	0.5	0.5	0.9	1.7	100.0	597	89.7	6.1	1.4	1.0	0.0	0.5	0.6	0.6	0.0	100.0	379
..15–19	92.8	1.2	0.5	1.4	0.5	0.4	1.2	1.9	100.0	280	86.0	10.2	0.8	0.4	0.0	1.0	0.3	1.2	0.0	100.0	194
..20–24	94.4	0.9	0.8	0.7	0.4	0.6	0.7	1.5	100.0	317	93.5	1.9	2.0	1.7	0.0	0.0	1.0	0.0	0.0	100.0	185
25–29	93.9	0.9	0.0	1.1	0.0	1.9	1.3	0.9	100.0	288	93.5	1.9	0.0	0.5	0.0	0.0	4.2	0.0	0.0	100.0	137
30–39	93.8	1.0	0.2	1.4	0.0	0.4	3.0	0.3	100.0	406	94.3	1.2	1.5	0.6	0.0	0.8	1.2	0.3	0.0	100.0	217
40–49	91.8	0.0	0.5	0.6	0.0	0.0	7.1	0.0	100.0	266	96.4	1.3	0.0	1.4	0.4	0.0	0.5	0.0	0.0	100.0	150
Marital status																					
Never married	93.3	1.0	0.1	0.9	0.4	1.1	1.4	1.9	100.0	357	89.4	7.1	1.3	0.2	0.0	0.6	0.6	0.7	0.0	100.0	314
..Ever had sex	95.0	1.0	0.1	0.3	0.6	1.1	1.0	1.0	100.0	243	93.3	3.6	1.0	0.3	0.0	0.4	0.8	0.7	0.0	100.0	253
..Never had sex	89.7	0.9	0.0	2.2	0.0	1.0	2.1	4.1	100.0	114	73.3	21.6	2.7	0.0	0.0	1.3	0.0	1.1	0.0	100.0	61
Married/living together	93.4	0.9	0.5	1.2	0.1	0.3	3.0	0.6	100.0	1,108	94.1	1.2	0.9	1.4	0.1	0.3	1.9	0.1	0.0	100.0	520
Divorced/separated/widowed	93.9	0.0	0.0	0.0	0.0	2.8	2.6	0.7	100.0	92	(95.8)	(4.2)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	100.0	48
Residence																					
Urban	91.9	0.9	0.3	1.2	0.1	0.8	3.4	1.3	100.0	1,072	92.4	2.7	1.4	1.2	0.1	0.6	1.2	0.3	0.0	100.0	605
Rural	96.8	0.7	0.5	0.7	0.3	0.2	0.8	0.0	100.0	485	92.7	5.0	0.0	0.2	0.0	0.0	1.5	0.5	0.0	100.0	277
Education																					
No education/ primary	93.2	1.0	0.2	1.3	0.4	1.4	1.4	1.1	100.0	389	88.9	6.9	0.4	1.0	0.0	0.5	2.4	0.0	0.0	100.0	233
Secondary	94.8	0.6	0.5	0.5	0.1	0.2	2.5	0.9	100.0	985	94.8	2.5	1.1	0.5	0.0	0.4	0.6	0.3	0.0	100.0	507
More than secondary	86.4	1.9	0.4	3.7	0.0	1.3	5.9	0.5	100.0	182	90.4	1.4	1.5	2.4	0.4	0.6	2.2	1.2	0.0	100.0	143
Wealth quintile																					
Lowest	96.2	0.7	0.7	1.0	0.7	0.0	0.8	0.0	100.0	318	93.6	4.6	0.0	0.4	0.3	0.0	1.1	0.0	0.0	100.0	179
Second	95.9	0.5	0.6	0.4	0.2	0.8	0.9	0.6	100.0	343	92.5	4.1	0.8	0.0	0.0	0.0	1.9	0.6	0.0	100.0	208
Middle	91.4	0.0	0.4	1.5	0.0	1.1	3.7	1.8	100.0	305	91.9	1.8	1.5	0.4	0.0	1.0	2.3	0.9	0.0	100.0	177
Fourth	95.4	0.9	0.0	0.8	0.0	0.0	2.4	0.5	100.0	297	93.3	2.7	1.0	2.0	0.0	0.0	1.0	0.0	0.0	100.0	156
Highest	87.6	2.1	0.0	1.7	0.0	1.3	5.6	1.6	100.0	294	91.3	3.9	1.6	2.1	0.0	1.2	0.0	0.0	0.0	100.0	161
Total 15–49	93.4	0.8	0.4	1.1	0.2	0.6	2.6	0.9	100.0	1,557	92.5	3.5	1.0	0.9	0.1	0.4	1.3	0.3	0.0	100.0	882
50+	na	na	na	na	na	na	na	na	na	na	92.9	2.9	0.0	0.0	1.2	0.1	1.1	0.0	1.8	100.0	92
Total men 15+	na	na	na	na	na	na	na	na	na	na	92.7	3.4	0.8	0.8	0.2	0.4	1.2	0.3	0.2	100.0	1,023

Note: Figures in parentheses are based on 25–49 unweighted cases.

na = not applicable

Table 12.10.1. Multiple sexual partners and higher-risk sexual intercourse in the past 12 months: Women

Among women aged 15–49 who had sexual intercourse in the past 12 months, the percentage who had intercourse with more than one partner and the percentage who had higher-risk sexual intercourse in the past 12 months; among those having more than one partner in the past 12 months, the percentage reporting that a condom was used at last intercourse; among those having higher-risk intercourse in the past 12 months, the percentage reporting that a condom was used at last higher-risk intercourse; and the mean number of sexual partners during their lifetime for women who have ever had sexual intercourse, by background characteristics, Marshall Islands 2007

	Among women who had sexual intercourse in the past 12 months:			Among women who had 2+ partners in the past 12 months:		Among women who had higher-risk intercourse in the past 12 months:		Among women who have ever had sexual intercourse:	
Background characteristic	Percentage who had 2+ partners in the past 12 months	Percentage who had higher-risk intercourse in the past 12 months[1]	Number of women	Percentage who reported using a condom during last sexual intercourse	Number of women	Percentage who reported using a condom at last higher-risk intercourse[1]	Number of women	Mean number of sexual partners in lifetime	Number of women
Age									
15–24	6.9	38.7	435	8.8	30	8.9	168	3.5	508
..15–19	9.8	59.9	161	*	16	9.8	96	2.9	196
..20–24	5.2	26.3	274	*	14	7.6	72	3.9	312
25–29	3.3	12.8	250	*	8	(18.3)	32	4.4	281
30–39	0.7	5.9	386	*	3	(15.9)	24	4.3	410
40–49	1.0	6.1	245	*	2	*	15	5.7	268
Marital status									
Never married	12.3	95.1	179	*	22	9.5	171	3.6	248
Married or living together	1.4	1.8	1,077	*	16	*	19	4.4	1,127
Divorced/separated/widowed	10.2	80.9	59	*	6	12.2	50	5.3	91
Residence									
Urban	3.3	17.2	863	*	29	10.0	150	3.7	969
Rural	3.3	19.8	453	*	15	10.8	90	5.5	498
Education									
No education/primary	3.6	15.9	340	*	12	11.6	56	5.0	381
Secondary	3.4	19.4	834	11.7	28	8.4	162	4.0	923
More than secondary	2.2	15.6	142	*	3	*	22	4.4	162
Wealth quintile									
Lowest	3.5	19.3	308	*	11	14.2	59	5.4	336
Second	2.3	15.5	297	*	7	11.5	46	4.5	325
Middle	3.5	16.7	245	*	9	7.8	41	3.8	283
Fourth	4.1	21.2	229	*	9	7.3	50	3.6	259
Highest	3.5	18.3	238	*	8	9.5	43	3.8	264
Total 15–49	3.3	18.1	1,316	(10.6)	44	10.3	240	4.3	1,467

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Sexual intercourse with a partner who was neither a spouse nor living with the respondent

Table 12.10.2. Multiple sexual partners and higher-risk sexual intercourse in the past 12 months: Men

Among men aged 15–49 who had sexual intercourse in the past 12 months, the percentage who had intercourse with more than one partner and the percentage who had higher-risk sexual intercourse in the past 12 months; among those having more than one partner in the past 12 months, the percentage reporting that a condom was used at last intercourse; among those having higher-risk intercourse in the past 12 months, the percentage reporting that a condom was used at last higher-risk intercourse; and the mean number of sexual partners during their lifetime for men who have ever had sexual intercourse, by background characteristics, Marshall Islands 2007

	Among men who had sexual intercourse in the past 12 months:			Among men who had 2+ partners in the past 12 months:		Among men who had higher risk intercourse in the past 12 months:		Among men who have ever had sexual intercourse	
Background characteristic	Percentage who had 2+ partners in the past 12 months	Percentage who had higher-risk intercourse in the past 12 months[1]	Number of men	Percentage who reported using a condom during last sexual intercourse	Number of men	Percentage who reported using a condom at last higher-risk intercourse[1]	Number of men	Mean number of sexual partners in lifetime	Number of men
Age									
15–24	13.1	71.8	295	(22.6)	39	21.7	212	8.4	331
..15–19	16.5	95.8	129	*	21	21.2	123	6.0	150
..20–24	10.5	53.2	167	*	17	22.6	89	10.4	181
25–29	10.6	33.1	117	*	12	(21.4)	39	13.2	128
30–39	7.3	13.3	197	*	14	(11.3)	26	13.3	212
40–49	1.1	11.1	131	*	1	*	15	14.9	136
Marital status									
Never married	14.1	100.0	219	(21.0)	31	19.2	219	6.9	259
Married or living together	5.4	7.1	481	(22.3)	26	(45.4)	34	13.3	499
Divorced/separated/widowed	25.2	94.7	41	*	10	(5.0)	39	17.9	49
Residence									
Urban	8.6	41.6	489	(22.7)	42	23.7	203	10.0	546
Rural	9.8	35.0	252	(14.0)	25	12.6	88	14.7	261
Education									
No education/primary	9.3	42.8	179	*	17	21.6	77	9.0	211
Secondary	8.1	40.5	441	(14.9)	36	16.4	179	12.2	474
More than secondary	12.3	30.1	120	*	15	(37.2)	36	13.2	121
Wealth quintile									
Lowest	12.6	33.8	160	(9.9)	20	11.9	54	14.2	172
Second	5.4	37.2	187	*	10	12.7	70	12.3	200
Middle	8.9	42.6	148	*	13	31.1	63	9.4	164
Fourth	8.8	48.2	119	*	11	22.1	57	11.0	131
Highest	10.2	37.5	127	*	13	24.8	48	10.2	140
Total 15–49	9.0	39.4	740	19.5	67	20.3	291	11.5	807
50+	5.1	7.1	67	*	3	*	5	21.7	79
Total men 15+	8.6	36.3	832	18.3	71	20.7	302	13.2	931

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Sexual intercourse with a partner who was neither a spouse nor living with the respondent

12.12. PAYMENT FOR SEXUAL INTERCOURSE - MEN

Male respondents were asked whether they had paid anyone for having sexual intercourse. These questions determine the prevalence of commercial sex in the society, which is considered to be a higher-risk sexual behavior. Table 12.11 show the percentage of men aged 15–49 reporting payment for sexual intercourse in the last 12 months, by background characteristics.

Table 12.11. Payment for sexual intercourse and condom use at last paid sexual intercourse: Men

Percentage of men aged 15–49 reporting payment for sexual intercourse in the past 12 months, by background characteristics, Marshall Islands 2007

	Payment for sexual intercourse in the past 12 months	
Background characteristic	Percentage who paid for sexual intercourse	Number of men
Age		
15–24	0.6	400
..15–19	0.8	209
..20–24	0.4	190
25–29	0.5	137
30–39	0.6	221
40–49	0.0	156
Marital status		
Never married	0.7	329
Married or living together	0.1	534
Divorced/separated/widowed	(2.6)	50
Residence		
Urban	0.5	631
Rural	0.5	283
Education		
No education/primary	0.5	245
Secondary	0.4	524
More than secondary	0.5	145
Wealth quintile		
Lowest	0.4	182
Second	0.3	220
Middle	1.1	188
Fourth	0.5	159
Highest	0.0	164
Total 15–49	0.5	913
50+	0.0	93
Total men 15+	0.4	1,055

Note: Figures in parentheses are based on 25–49 unweighted cases.

The results show that, overall, less than 1 percent of men aged 15–49 had commercial sex in the 12 months prior to the survey. Men who are divorced, separated or widowed and who are in middle wealth quintile homes are more likely to engage in commercial sex. There is also evidence of younger men (age 15–19 years) being involved in commercial sex activity.

Please note that the percentage of men who reported condom use during last paid sexual intercourse could not be presented due to the small number of men who had paid sexual intercourse in the past 12 months.

12.13. HIV TESTING

The coverage of HIV testing and other services related to HIV and AIDS is crucial to examine because it provides the information that is necessary to determine whether these services achieve their aims of providing care and support and promoting safe behavior among the target population so that the people remain disease free.

Table 12.12.1. Coverage of prior HIV testing: Women

Percentage of women aged 15–49 who know where to get an HIV test, percent distribution of women aged 15–49 by testing status, percentage of women ever tested, and percentage of women aged 15–49 who received counseling with an AIDS test in the last 12 months, according to background characteristics, Marshall Islands 2007

Background characteristic	Percentage who know where to get an HIV test	Percent distribution of women by testing status			Asked for the test or were offered and accepted last time	Percentage who were tested for HIV in last 12 months	Number of women	Percentage who received counseling with AIDS test in last 12 months	Number of women tested in last 12 months
		Ever tested	Never tested	Total					
Age									
15–24	84.3	33.7	66.3	100.0	14.3	22.7	640	70.5	145
..15–19	79.8	24.2	75.8	100.0	9.6	17.7	306	61.4	54
..20–24	88.5	42.3	57.7	100.0	18.5	27.3	334	75.9	91
25–29	94.2	48.9	51.1	100.0	16.2	24.1	293	60.0	71
30–39	92.4	44.7	55.3	100.0	19.5	22.1	418	68.2	92
40–49	93.7	34.0	66.0	100.0	20.5	17.3	274	(63.8)	47
Marital status									
Never married	82.3	26.5	73.5	100.0	13.6	17.4	383	67.9	67
..Ever had sex	87.7	35.3	64.7	100.0	16.5	23.6	254	64.2	60
..Never had sex	71.6	9.1	90.9	100.0	8.1	5.3	129	*	7
Married/living together	92.5	43.8	56.2	100.0	18.6	23.1	1,145	68.3	265
Divorced/separated/widowed	87.9	37.3	62.7	100.0	11.2	24.8	97	(49.0)	24
Residence									
Urban	90.8	38.5	61.5	100.0	16.8	20.2	1,106	69.3	224
Rural	87.6	41.1	58.9	100.0	17.4	25.4	519	63.0	132
Education									
No education/primary	83.2	31.3	68.7	100.0	11.4	16.4	427	65.6	70
Secondary	91.3	38.9	61.1	100.0	17.8	22.4	1,016	69.8	227
More than secondary	97.1	60.2	39.8	100.0	25.6	31.9	182	(57.4)	58
Wealth quintile									
Lowest	85.3	37.0	63.0	100.0	15.8	23.2	350	65.4	81
Second	90.8	42.3	57.7	100.0	17.3	24.4	353	59.2	86
Middle	91.1	35.7	64.3	100.0	12.6	21.9	319	76.3	70
Fourth	89.3	35.5	64.5	100.0	18.3	17.3	306	(89.2)	53
Highest	92.9	46.3	53.7	100.0	21.5	22.0	298	51.1	65
Total 15–49	89.8	39.3	60.7	100.0	17.0	21.9	1,625	66.9	356

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

In order to determine the prevalence of HIV testing in the Marshall Islands, respondents were asked if they knew where to get an HIV test and whether they had been tested for HIV. If they had, they were asked if they had seen the result of that test. Tables 12.12.1 and 12.12.2 summarize the results, showing the percentage of women and men aged 15–49 years who know where to get an HIV test, percentage of women and men by testing status, and percentage of those who received counseling with an AIDS test in the last 12 months.

Table 12.12.2. Coverage of prior HIV testing: Men

Percentage of men aged 15–49 who know where to get an HIV test, percent distribution of men aged 15–49 by testing status, percentage of men ever tested, and percentage of men aged 15–49 who received counseling with an AIDS test in the last 12 months, according to background characteristics, Marshall Islands 2007

Background characteristic	Percentage who know where to get an HIV test	Percent distribution of men by testing status: Ever tested	Never tested	Total	Asked for the test or was offered and accepted last time	Percentage who were tested for HIV in last 12 months	Number of men	Percentage who received counseling with AIDS test in last 12 months	Number of men tested in last 12 months
Age									
15–24	84.1	30.7	69.3	100.0	16.9	19.6	400	44.9	78
..15–19	80.3	22.9	77.1	100.0	10.5	17.0	209	(44.5)	36
..20–24	88.4	39.3	60.7	100.0	23.9	22.5	190	(45.2)	43
25–29	92.1	41.9	58.1	100.0	22.1	26.0	137	(65.3)	36
30–39	94.0	45.9	54.1	100.0	21.2	28.2	221	56.4	62
40–49	92.8	35.0	65.0	100.0	15.9	14.5	156	*	23
Marital status									
Never married	86.1	26.0	74.0	100.0	12.6	18.1	329	47.7	60
..Ever had sex	87.2	28.6	71.4	100.0	13.6	19.7	263	43.6	52
..Never had sex	81.5	15.6	84.4	100.0	8.6	11.9	67	*	8
Married/living together	91.1	43.5	56.5	100.0	22.0	24.5	534	57.5	131
Divorced/separated/widowed	(89.9)	(36.1)	(63.9)	100.0	(20.0)	(17.0)	50	*	8
Residence									
Urban	91.5	31.3	68.7	100.0	12.9	20.8	631	62.8	131
Rural	84.1	49.0	51.0	100.0	31.0	24.1	283	40.1	68
Education									
No education/primary	82.3	28.7	71.3	100.0	17.5	21.3	245	48.8	52
Secondary	90.3	36.2	63.8	100.0	17.8	19.1	524	54.9	100
More than secondary	96.7	52.6	47.4	100.0	22.8	32.2	145	(62.4)	47
Wealth quintile									
Lowest	89.9	44.3	55.7	100.0	26.8	23.4	182	39.6	43
Second	81.5	33.9	66.1	100.0	21.0	17.9	220	63.9	40
Middle	86.3	27.4	72.6	100.0	12.5	17.2	188	*	32
Fourth	95.5	37.7	62.3	100.0	16.2	28.5	159	(46.9)	45
Highest	96.1	42.4	57.6	100.0	15.2	23.9	164	(76.4)	39
Total 15–49	89.2	36.8	63.2	100.0	18.5	21.8	913	55.1	199
50+	90.9	39.4	60.6	100.0	11.3	9.9	93	*	9
Total men 15+	89.4	37.0	63.0	100.0	17.5	20.7	1,055	55.8	218

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

The results show that most Marshallese women and men are likely to know where to go for an HIV test (90 percent and 89 percent respectively). Even though most people know where to get tested, only a little over one in three had been tested (39 percent of women and 37 percent of men) compared to over half the women and men never having had an HIV test. Almost an equal proportion of women and men were tested for HIV in the last 12 months before the DHS (22 percent and 21 percent respectively). Of these who were tested in the last 12 months, 67 percent of women and 56 percent of men *received counseling with the AIDS test.*

Knowledge of the place to get an HIV test generally increases with age for both women and men. Those in urban areas are more likely to know where to seek assistance than those in rural areas. Similarly, the level of knowledge of the place to get an HIV test increases with the level of education and wealth status of households.

12.14. HIV COUNSELING AND TESTING DURING ANTENATAL CARE

HIV testing and counseling of pregnant women is an essential element of programs designed to reduce transmission of HIV from mother to child. To assess coverage of such interventions, the 2007 RMIDHS asked women who gave birth in the last two years preceding the survey about any HIV testing and counseling during antenatal care, delivery, and postnatal care.

Table 12.13. Pregnant women counseled and tested for HIV

Among all women aged 15–49 who gave birth in the two years preceding the survey, the percentage who received HIV counseling during antenatal care for their most recent birth, were offered an HIV test, and received HIV testing, and among women who gave birth in the last two years and were tested for HIV during an ANC visit, the percentage who received post-test counseling, according to background characteristics, Marshall Islands 2007

Background characteristic	Percentage who received HIV counseling during ANC[1]	Percentage who were offered an HIV test during ANC	Percentage who were tested for HIV during ANC	Percentage who were counseled, offered an HIV test, and received an HIV test	Number of women who gave birth in last two years[2]	Percentage who received post-test counseling	Number of women who gave birth in last two years and were tested for HIV during ANC
Age							
15–24	39.6	45.1	36.7	18.7	222	69.7	81
..15–19	25.7	32.0	37.9	15.2	58	*	22
..20–24	44.6	49.7	36.2	19.9	164	76.1	59
25–29	41.1	55.8	47.1	28.1	134	75.3	63
30–39	39.8	42.8	39.2	27.0	116	(68.8)	45
40–49	59.0	66.0	30.5	30.5	9	*	3
Residence							
Urban	50.0	56.2	43.4	28.3	303	74.2	132
Rural	24.3	33.8	34.4	15.4	178	66.6	61
Education							
No education/ primary	25.9	36.5	27.3	12.9	117	(55.5)	32
Secondary	45.1	49.8	40.8	25.2	319	74.3	130
More than secondary	(45.3)	(64.6)	(68.8)	(39.5)	44	(78.2)	31
Total 15–49	40.5	47.9	40.1	23.5	481	71.8	193

[1] In this context, 'counseled' means that someone talked with the respondent about all three of the following topics: 1) babies getting the AIDS virus from their mother; 2) preventing the virus; and 3) getting tested for the virus.

[2] Denominator for percentages includes women who did not receive ANC for their last birth in the past two years

Table 12.13 shows that 41 percent of women received HIV counseling during ANC, 48 percent were offered an HIV test during ANC, and 40 percent were tested for HIV during ANC. Overall, 24 percent of women were counseled, were offered an HIV test and received an HIV test, and almost three in four women (72 percent) reported that they received post-test counseling. These results show that less than half the women were tested for HIV during an ANC visit, while 7 in 10 women received post-test counseling.

Women in rural areas and those with no or primary-level education are least likely to receive these services. The rural–urban differential could be explained by the fact that most ANC services are available and concentrated in urban areas.

12.15. SEXUALLY TRANSMITTED INFECTION PREVALENCE AND SYMPTOMS

Sexually transmitted infections (STIs) are closely associated with HIV because they increase the likelihood of contracting HIV and share similar risk factors. In the 2007 Marshallese DHS, all respondents

who had ever had sex were asked if they had had an STI or symptoms of an STI (including a bad-smelling/abnormal genital discharge and a genital sore or ulcer) in the 12 months preceding the survey.

According to Table 12.14, 10 percent of women and 3 percent of men reported that they had an STI or symptoms of an STI in the 12 months preceding the survey. Women aged 25–29 and men aged 15–29 had the highest likelihood of reporting symptoms of an STI. Never-married women and married men were less likely to report symptoms of an STI. Women and men in rural areas were more likely to report symptoms of an STI than their counterparts in urban areas. Women with the lowest level of education were more likely to report symptoms of an STI, while there is no meaningful difference by level of education for men; however, men with secondary education were more likely to report symptoms of an STI than men with other levels of education.

Table 12.14. Self-reported prevalence of sexually transmitted infections (STIs) and STI symptoms

Among women and men aged 15–49 who have ever had sexual intercourse, the percentage reporting having an STI and/or symptoms of an STI in the past 12 months, by background characteristics, Marshall Islands 2007

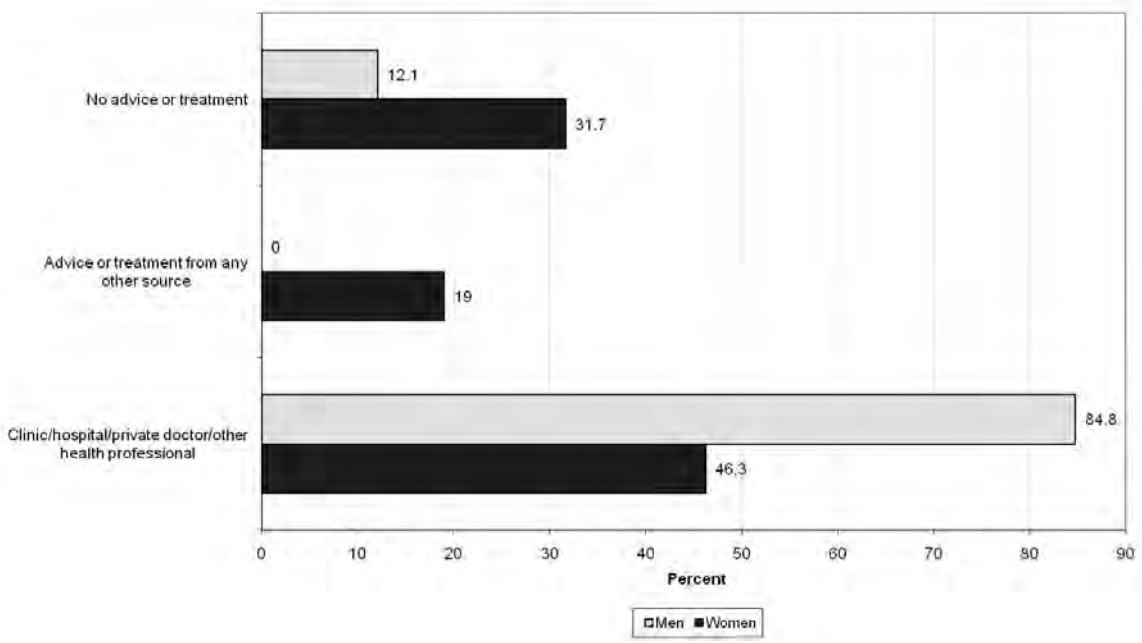
	Women					Men				
	Percentage of women who reported having in the past 12 months:					Percentage of men who reported having in the past 12 months:				
Background characteristic	STI	Bad-smelling/ abnormal genital discharge	Genital sore/ulcer	STI/genital discharge/ sore or ulcer	Number of women who ever had sexual intercourse	STI	Bad-smelling/ abnormal genital discharge	Genital sore/ulcer	STI/genital discharge/sore or ulcer	Number of men who ever had sexual intercourse
Age										
15–24	3.5	6.3	1.5	8.7	513	2.9	2.9	1.6	3.5	335
..15–19	3.3	7.4	0.7	8.4	200	2.3	2.8	0.8	3.6	151
..20–24	3.7	5.6	2.1	8.8	314	3.4	2.9	2.2	3.5	184
25–29	6.3	8.2	3.1	15.1	289	1.7	3.2	2.3	3.2	135
30–39	0.8	5.6	2.2	7.4	418	1.4	1.7	0.6	2.3	221
40–49	1.4	5.2	3.0	8.5	274	0.0	0.0	0.1	0.1	156
Marital status										
Never married	3.0	4.5	1.7	7.7	254	2.9	3.2	1.3	3.6	263
Married or living together	2.9	6.6	2.6	10.0	1,145	1.2	1.3	1.0	1.8	534
Divorced/separated/widowed	3.3	6.2	0.0	7.9	95	(2.2)	(4.8)	(2.2)	(4.8)	50
Residence										
Urban	2.4	6.0	2.4	9.0	993	1.1	1.9	0.5	1.9	580
Rural	3.8	6.7	2.0	10.5	502	3.3	2.6	2.6	3.9	266
Education										
No education/primary	2.9	9.3	2.8	11.6	385	0.5	1.5	0.9	2.0	214
Secondary	3.1	5.1	2.3	9.2	939	2.3	2.3	1.3	2.8	495
More than secondary	1.6	5.6	1.0	6.7	170	2.3	2.4	0.9	2.4	137
Total 15–49	2.9	6.3	2.3	9.5	1,495	1.8	2.1	1.2	2.5	847
50+	na	na	na	na	na	1.1	0.0	0.0	1.1	93
Total men 15+	na	na	na	na	na	1.7	1.8	1.0	2.3	988

Note: Figures in parentheses are based on 25–49 unweighted cases.

na = not applicable

Respondents in the 2007 Marshallese DHS who reported having an STI or symptoms of an STI in the 12 months preceding the survey were asked if they sought treatment. Figure 12.1 shows that 46 percent of women and 85 percent of men sought treatment from a clinic/hospital/private doctor or other health professional, while 19 percent of women sought advice or treatment from sources other than modern medical science. Thirty-two percent of women and 12 percent of men did not seek treatment or advice from any source.

Figure 12.1. Women and men seeking treatment for STIs



12.16. HIV AND AIDS KNOWLEDGE AND SEXUAL BEHAVIOR AMONG YOUNG ADULTS

This section addresses HIV- and AIDS-related knowledge and behavior among young adults aged 15–24. Special attention is paid to this group because of the youthfulness of the Marshallese population. In addition to knowledge of HIV transmission, data are presented on age at first sex, condom use, age difference between sexual partners, forced sex, sex related to alcohol use, and voluntary counseling and testing for HIV.

12.16.1. HIV- and AIDS-related knowledge among young adults

Young respondents were asked the same set of questions on facts and beliefs about HIV transmission as other respondents. Information on the overall level of knowledge of major methods of avoiding HIV and rejection of major misconceptions are shown in earlier tables in this chapter. In general, the results indicate that young adults are as likely as older adults to have knowledge of HIV prevention and to reject common misconceptions about HIV transmission.

Table 12.15 shows the level of the composite indicator, ‘Comprehensive knowledge,’ among young people by background characteristics. Twenty-seven percent of young women and 39 percent of young men have comprehensive knowledge of HIV and AIDS. The young women most likely to have comprehensive knowledge are those who have never married but who have never had sex, those who live in urban areas, those with higher education, and those in higher wealth quintiles. In contrast, the young men most likely to have comprehensive knowledge are those who are married, those who live in urban areas, those with higher education, and those in higher wealth quintiles.

12.16.2. Knowledge of condom sources among young adults

Condom use among young adults plays an important role in the prevention of transmission of HIV and other STIs, as well as the prevention of unwanted pregnancies. Knowledge of a source of condoms helps young adults to obtain and use condoms. Table 12.15 shows that 8 in 10 young women (82 percent) and 9 in 10 young men (91 percent) know of a place to obtain condoms. Ever-married young adults, women in rural areas, men in urban areas, young adults with secondary or higher level of education, and young adults in the higher wealth quintiles are more likely to know of a place to obtain condoms.

Table 12.15. Comprehensive knowledge about AIDS and of a source of condoms among youth

Percentage of young women and young men aged 15–24 with comprehensive knowledge about AIDS and percentage with knowledge of a source of condoms, by background characteristics, Marshall Islands 2007

	Women			Men		
Background characteristic	Percentage with comprehensive knowledge of AIDS[1]	Percentage who know a condom source[2]	Number of women	Percentage with comprehensive knowledge of AIDS[1]	Percentage who know a condom source[2]	Number of men
Age						
15–19	26.7	74.4	306	34.8	88.6	209
..15–17	26.0	67.8	163	31.7	86.4	138
..18–19	27.6	82.1	143	40.8	92.8	72
20–24	26.6	89.5	334	44.4	93.3	190
..20–22	23.7	87.3	188	42.4	96.4	104
..23–24	30.2	92.3	146	46.9	89.6	86
Marital status						
Never married	27.1	75.5	333	38.4	89.3	284
..Ever had sex	24.8	84.0	207	42.6	91.3	220
..Never had sex	31.0	61.3	125	24.0	82.3	64
Ever married	26.1	89.7	307	41.9	94.6	115
Residence						
Urban	33.2	81.8	439	43.1	92.2	278
Rural	12.4	83.4	201	31.0	87.6	122
Education						
No education/primary	15.2	71.8	161	32.2	80.7	134
Secondary	28.7	84.4	428	39.6	95.6	222
More than secondary	(44.9)	(97.5)	51	(61.0)	(98.1)	43
Wealth quintile						
Lowest	12.0	83.5	144	37.0	84.9	65
Second	16.4	80.1	133	34.9	85.4	103
Middle	31.5	80.0	137	33.4	92.8	88
Fourth	39.1	84.5	127	38.8	100.0	79
Highest	39.1	83.8	98	57.6	91.5	65
Total	26.6	82.3	640	39.4	90.8	400

Note: Figures in parentheses are based on 25–49 unweighted cases.
[1] Comprehensive knowledge means knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention. The components of comprehensive knowledge are presented in tables 12.2, 12.3.1, and 12.3.2.
[2] For this table, the following responses are not considered sources for condoms: friends, family members, and home.

12.17. AGE AT FIRST SEXUAL INTERCOURSE AMONG YOUTH

Early engagement in sexual behavior is an indication of exposure to the risk of early pregnancy (especially for young women) and the risk of STI and HIV contraction and transmission among young women and men. Early pregnancy contributes to a high level of fertility and maternal, infant and child deaths among young mothers, while early-age HIV infection contributes to a high level of mortality in the country. Since HIV transmission occurs predominantly through heterosexual intercourse between an infected and a non-infected person, age at first intercourse marks the time at which most individuals first risk exposure to the virus.

Table 12.16 shows the percentage of young women and men who had sexual intercourse before reaching age 15 and age 18, by background characteristics. About 14 percent of young women and 27 percent of young men in the 15–24 age group had their first sex very early in life, i.e. before the age of 15. About 60 percent of young women and 73 percent of young men had sex before they turned age 18.

Among women, 15 percent of those aged 15–19 had sex before age 15, compared with 12 percent among women aged 20–24. Among men, a different pattern prevails, with 25 percent of those aged 15–19 having sex before age 15 compared to 29 percent of those aged 20–24.

Regarding marital status, ever-married women aged 15–24 are more likely to initiate sexual activity before age 15 than those who have never married. For young men, the pattern is the same. With regard to initiating sex before age 18, both women and men who have ever married are more likely to have had sex before 18 than those who have never married.

Early sexual initiation is more likely among young adults who know where to obtain condoms than those who do not know a source of condom supply.

Early sexual initiation varies by urban–rural residence, where young women and men in rural areas are more likely than those in urban areas to initiate sex before ages 15 and 18. Early sex also varies by educational attainment and household wealth quintile. For young women, educational attainment is associated with a lower likelihood of having sex at an early age than young men. For example, among women aged 15–24 with more than secondary-level education, only 7 percent had sex before age 15, compared with 21 percent among those with no or primary-level education. Young men aged 15–24 with more than secondary-level education were more likely than those with no or primary-level education to have initiated sex by age 15. Similarly, early sexual initiation is more likely among young women and men in low wealth quintiles.

Table 12.16. Age at first sexual intercourse among youth

Percentage of young women and young men aged 15–24 who had sexual intercourse before age 15 and percentage of young women and young men aged 18–24 who had sexual intercourse before age 18, by background characteristics, Marshall Islands 2007

	Women				Men			
	Women aged 15–24		Women aged 18–24		Men aged 15–24		Men aged 18–24	
Background characteristic	Percentage who had sexual intercourse before age 15	Number of women 15–24	Percentage who had sexual intercourse before age 18	Number of women 18–24	Percentage who had sexual intercourse before age 15	Number of men 15–24	Percentage who had sexual intercourse before age 18	Number of men 18–24
Age								
15–19	15.0	306	na	na	24.6	209	na	na
..15–17	13.5	163	na	na	25.6	138	na	na
..18–19	16.6	143	71.2	143	22.6	72	83.2	72
20–24	12.3	334	55.8	334	28.5	190	69.7	190
..20–22	14.4	188	61.0	188	26.0	104	69.3	104
..23–24	9.7	146	49.1	146	31.5	86	70.1	86
Marital status								
Never married	10.1	333	51.4	187	24.4	284	72.4	151
Ever married	17.3	307	66.2	290	31.5	115	74.7	111
Knows condom source[1]								
Yes	13.8	527	61.8	416	27.5	363	72.5	244
No	12.7	113	50.5	61	(16.2)	37	*	18
Residence								
Urban	8.7	439	52.5	321	24.4	278	70.4	173
Rural	24.2	201	76.6	156	31.1	122	79.2	89
Education								
No education/primary	20.8	161	65.3	101	24.6	134	63.4	67
Secondary	11.8	428	62.7	326	26.1	222	80.8	154
More than secondary	(6.5)	51	(35.7)	50	33.9	43	(61.7)	41
Wealth quintile								
Lowest	30.4	144	75.4	113	32.9	65	84.3	49
Second	13.9	133	60.1	102	26.3	103	71.2	73
Middle	5.2	137	62.5	100	27.4	88	(65.6)	52
Fourth	9.8	127	51.1	93	22.1	79	(70.1)	50
Highest	5.3	98	46.0	69	24.3	65	(78.8)	37
Total	13.6	640	60.4	477	26.5	400	73.4	262

Note: Figures in parentheses are based on 25–49 unweighted cases.

na = not available

[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

12.18. CONDOM USE AT FIRST SEXUAL INTERCOURSE AMONG YOUTH

In order to measure the extent of condom use at first sexual intercourse among youth, the 2007 RMIDHS included questions that asked young women and men aged 15–24 whether they used a condom the first time they had sex. The results in Table 12.17 show that 10 percent of young women and 16 percent of young men used a condom during their first sexual intercourse.

Table 12.17. Condom use at first sexual intercourse among youth

Among young women and young men aged 15–24 who have ever had sexual intercourse, percentage who used a condom the first time they had sexual intercourse, by background characteristics, Marshall Islands 2007

Background characteristic	Women		Men	
	Percentage who used a condom at first sexual intercourse	Number of respondents who have ever had sexual intercourse	Percentage who used a condom at first sexual intercourse	Number of respondents who have ever had sexual intercourse
Age				
15–19	8.6	200	20.3	151
..15–17	6.4	85	18.5	87
..18–19	10.2	115	22.8	65
20–24	10.7	314	12.9	184
..20–22	14.5	172	15.8	102
..23–24	6.1	141	9.2	82
Marital status				
Never married	7.0	207	16.4	220
Ever married	11.9	306	15.8	115
Knows condom source[1]				
Yes	10.9	450	16.8	310
No	3.1	64	(9.3)	25
Residence				
Urban	10.3	330	21.5	230
Rural	9.2	184	4.7	106
Education				
No education/primary	11.7	119	22.2	104
Secondary	9.0	352	12.5	194
More than secondary	(12.1)	42	(18.9)	38
Wealth quintile				
Lowest	9.2	134	8.0	56
Second	11.1	112	7.9	89
Middle	9.2	106	31.4	74
Fourth	8.5	88	15.7	63
Highest	12.0	74	(18.5)	53
Total	9.9	513	16.2	335

Note: Figures in parentheses are based on 25–49 unweighted cases.

[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

Young women aged 20–22, who have ever married, know a source from which to get condoms, reside in urban areas, have more than secondary-level education, and are in the highest wealth quintile homes are more likely to use a condom at first sexual encounter. For young men, those aged 18–19, who are single, who know a source from which to get condoms, who reside in urban areas, who have no or primary-level education, and who are in the middle wealth quintile homes are more likely to use a condom at first sexual encounter.

12.19. PREMARITAL SEXUAL INTERCOURSE AND CONDOM USE

This section examines premarital sexual intercourse – i.e. sexual relationships that occur among never-married women and men – and the extent to which condoms are used or not used during these sexual encounters. Table 12.18 shows the proportion of never-married women and men aged 15–24 who have never had sexual intercourse and those who had sexual intercourse in the last 12 months (premarital sexual intercourse). Among those who had premarital sexual intercourse, the proportion who used a condom at the last sexual intercourse is provided according to their background characteristics.

Among never-married women and men aged 15–24 years, 38 percent of young women and 23 percent of young men reported that they had never had sexual intercourse. Those who had sexual intercourse in the last 12 months accounted for 45 percent of young women and 67 percent of young men. From this cohort of young women and young men who had sexual intercourse, only 8 percent of women and 20 percent of men used a condom at their last sexual intercourse.

Comparison by background characteristics shows that young women and men who know a source of obtaining condoms, reside in rural areas, are educated to secondary level, and are in low wealth quintile homes are more likely to have had sexual intercourse in the last 12 months. The results show quite a low proportion of these young women and men used condom at their last sexual intercourse.

Table 12.18. Premarital sexual intercourse and condom use during premarital sexual intercourse among youth

Among never-married women and men aged 15–24, the percentage who have never had sexual intercourse and the percentage who had sexual intercourse in the past 12 months, and, among those who had premarital sexual intercourse in the past 12 months, the percentage who used a condom at the last sexual intercourse, by background characteristics, Marshall Islands 2007

	Never-married women aged 15–24					Never-married men aged 15–24				
				Among women who had sexual intercourse in the past 12 months:					Among men who had sexual intercourse in the past 12 months:	
Background characteristic	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the past 12 months	Number of never-married women	Percentage who used condom at last sexual intercourse	Number of women	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the past 12 months	Number of never-married men	Percentage who used condom at last sexual intercourse	Number of men
Age										
15–19	45.4	41.6	231	9.2	96	29.5	59.6	196	19.3	117
..15–17	53.8	37.8	146	5.5	55	38.2	49.8	133	14.9	66
..18–19	31.1	48.1	85	(14.2)	41	11.3	80.1	63	25.0	51
20–24	20.1	53.8	102	6.1	55	7.0	82.1	88	20.3	72
..20–22	21.0	59.2	75	6.1	44	4.1	83.1	57	(23.3)	47
..23–24	(17.5)	(38.8)	27	*	10	(12.4)	(80.3)	31	*	25
Knows condom source[1]										
Yes	30.6	51.1	251	7.7	128	20.8	68.7	254	20.1	174
No	59.4	27.7	82	*	23	(37.2)	(48.5)	30	15.2	15
Residence										
Urban	43.5	40.1	247	8.1	99	22.4	65.6	213	24.8	140
Rural	20.7	60.5	85	7.9	51	23.0	69.3	71	5.3	49
Education										
No education/ primary	47.0	34.4	89	(15.2)	31	31.9	54.6	95	21.2	52
Secondary	33.9	51.3	219	5.9	112	17.5	73.6	162	14.5	120
More than secondary	(37.0)	(31.5)	24	*	8	(20.4)	(65.8)	27	*	18
Wealth quintile										
Lowest	17.7	60.3	57	(12.9)	34	22.0	69.5	37	(4.9)	26
Second	37.8	51.6	56	(9.7)	29	22.1	70.8	64	10.9	45
Middle	40.8	33.7	77	*	26	20.9	68.3	67	(40.1)	46
Fourth	47.3	42.5	81	(4.5)	35	25.3	66.6	63	(18.6)	42
Highest	39.2	44.1	62	*	27	(22.5)	(57.0)	53	(15.8)	30
Total	37.7	45.3	333	8.1	151	22.6	66.5	284	19.7	189

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

12.20. HIGHER-RISK SEX AMONG YOUTH

Higher-risk sex among youth is one common way of HIV transmission since at this stage young women and men are more engaged in temporary sexual relationships that expose them to STIs and HIV infection. Higher-risk sex is a sexual relationship with a partner who is neither a spouse nor a cohabiting partner. Condom use among young adults plays an important role in the prevention of transmission of HIV and other STIs, as well as of unwanted pregnancies. Knowledge of a source of condoms helps young adults to obtain and use condoms.

Table 12.19 shows the percentage of young women aged 15–24 who had sexual intercourse in the past 12 months, the percentage who had higher-risk sexual intercourse in the past 12 months, and among those having higher-risk intercourse in the past 12 months, the percentage reporting that a condom was used at last higher-risk intercourse, by background characteristics of the respondents.

Over one-third (39 percent) of young women aged 15–24 who had sexual intercourse in the past 12 months had higher-risk sexual intercourse. This sexual practice is high among women aged 15–19 years, and over half (54 percent) of these young women did not know a source from which to get condoms. Of those young women who had higher-risk sexual intercourse in the last 12 months, less than 1 in 10 (9 percent) reported using a condom at their last high-risk intercourse, which is more likely to be the group of young women who know a source from which to obtain condoms. Surprisingly, young girls in urban areas are less likely than rural girls to use a condom in their last high-risk sexual intercourse (8 percent compared to 10 percent).

Table 12.20 shows the percentage of young Marshallese men aged 15–24 who had sexual intercourse in the past 12 months, the percentage who had higher-risk sexual intercourse in the past 12 months, and among those having higher-risk intercourse in the past 12 months, the percentage reporting that a condom was used at last higher-risk intercourse, by background characteristics of the respondents.

Almost three in four (72 percent) young men aged 15–24 who had sexual intercourse in the past 12 months had higher-risk sexual intercourse. This is much higher than the report on girls of the same age. Like girls, this sexual practice is high among men aged 15–19 years and is almost universal in this age group, ranging from 93 percent to 98 percent. Of the young men who had higher-risk sexual intercourse in the last 12 months, almost one in four (22 percent) reported using a condom at their last higher-risk intercourse, which is higher than the level for young women in the same age group. As expected, young boys in urban areas are more likely than rural boys to have not used a condom in their last higher-risk sexual intercourse (26 percent compared to 11 percent).

Table 12.19. Higher-risk sexual intercourse among youth and condom use at last higher-risk intercourse in the past 12 months: Women

Among young women aged 15–24 who had sexual intercourse in the past 12 months, the percentage who had higher-risk sexual intercourse in the past 12 months, and among those having higher-risk intercourse in the past 12 months, the percentage reporting that a condom was used at last higher-risk intercourse, by background characteristics, Marshall Islands 2007

	Among women aged 15–24 who had sexual intercourse in the past 12 months:		Among women aged 15–24 who had sexual intercourse in the past 12 months:	
Background characteristic	Percentage who had higher-risk intercourse in the past 12 months[1]	Number of women	Percentage who reported using a condom at last higher-risk intercourse[1]	Number of women
Age				
15–19	59.9	161	9.8	96
..15–17	76.9	72	5.5	55
..18–19	46.3	89	(15.6)	41
20–24	26.3	274	7.6	72
..20–22	34.1	150	9.5	51
..23–24	16.9	124	*	21
Marital status				
Never married	95.0	151	8.5	143
Ever married	8.9	284	11.2	25
Knows condom source[2]				
Yes	36.9	386	8.9	142
No	53.6	49	(8.8)	26
Residence				
Urban	39.4	275	8.0	109
Rural	37.6	159	10.4	60
Education				
No education/primary	36.0	99	13.0	36
Secondary	41.0	302	6.7	124
More than secondary	(26.0)	33	*	9
Wealth quintile				
Lowest	36.9	116	(13.0)	43
Second	28.8	100	(13.1)	29
Middle	34.7	82	(7.8)	28
Fourth	50.3	77	(5.7)	39
Highest	(49.6)	60	(4.0)	30
Total 15–24	38.7	435	8.9	168

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Sexual intercourse with a partner who was neither a spouse nor living with the respondent

[2] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

Table 12.20. Higher-risk sexual intercourse among youth and condom use at last higher-risk intercourse in the past 12 months: Men

Among young men aged 15–24 who had sexual intercourse in the past 12 months, the percentage who had higher-risk sexual intercourse in the past 12 months, and among those having higher-risk intercourse in the past 12 months, the percentage reporting that a condom was used at last higher-risk intercourse, by background characteristics, Marshall Islands 2007.

	Among men aged 15–24 who had sexual intercourse in the past 12 months:		Among men aged 15–24 who had sexual intercourse in the past 12 months:	
Background characteristic	Percentage who had higher-risk intercourse in the past 12 months[1]	Number of men	Percentage who reported using a condom at last higher-risk intercourse[1]	Number of men
Age				
15–19	95.8	129	21.2	123
..15–17	98.4	71	17.8	70
..18–19	92.6	58	25.5	54
20–24	53.2	167	22.6	89
..20–22	58.2	89	23.2	52
..23–24	47.4	77	(21.7)	37
Marital status				
Never married	100.0	189	19.7	189
Ever married	21.6	106	(38.9)	23
Residence				
Urban	75.5	196	26.4	148
Rural	64.4	99	11.1	64
Education				
No education/primary	63.6	88	24.2	56
Secondary	75.6	176	15.9	133
More than secondary	(73.3)	31	*	23
Wealth quintile				
Lowest	63.9	52	(14.7)	34
Second	62.2	84	11.0	52
Middle	(80.8)	60	(40.6)	48
Fourth	(77.8)	57	(23.3)	44
Highest	(79.5)	43	(16.4)	34
Total 15–24	71.8	295	21.7	212

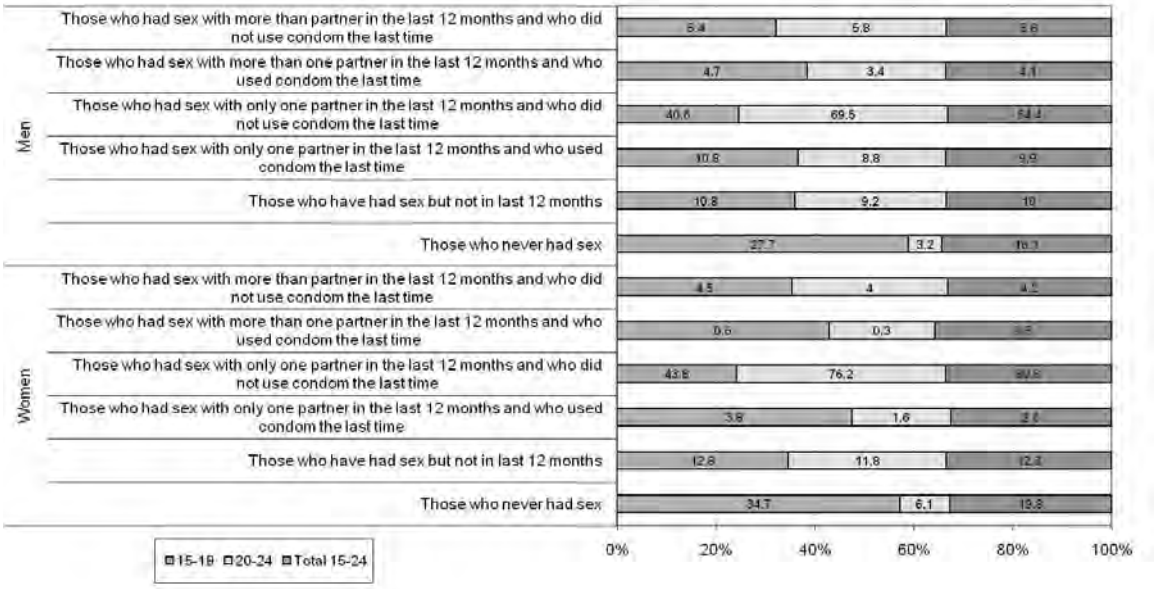
Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Sexual intercourse with a partner who was neither a spouse nor living with the respondent

12.21. ABSTINENCE, BEING FAITHFUL, AND CONDOM USE AMONG YOUNG ADULTS

Internationally, a commonly adopted approach to HIV prevention is the ABC approach (promoting abstinence, being faithful and condom use). This approach is particularly pertinent for young adults. Figure 12.2 presents data on the practice of ABC behaviors among young Marshallese men and women. Thirty-five percent of women aged 15–24 and 28 percent of men aged 15–24 are abstaining. The percentage of young women and men who have not had sex drops sharply between the 15–19 age group and the 20–24 age group.

Figure 12.2. Abstinence, being faithful and condom use (ABC) among young women and



men, Marshall Islands 2007

12.22. AGE-MIXING IN SEXUAL RELATIONSHIPS

To examine age differences between sexual partners (so-called cross-generational sexual partners), women aged 15–19 who had higher-risk sex in the 12 months preceding the survey were asked the age of all their partners. In the event they did not know a partner's exact age, they were asked if the partner was older or younger than they were, and if older, whether the partner was 10 or more years older. Four percent of women aged 15–19 had higher-risk sex with a partner who was 10 or more years older in the past 12 months (Table 12.21). Age mixing in sexual relationships is more common among young women who know a condom source, those in rural areas, those aged 18–19 years, and those with no or primary-level education.

Table 12.21. Age-mixing in sexual relationships among women aged 15–19

Percentage of women aged 15–19 who had higher-risk sexual intercourse in the last 12 months with a man who was 10 or more years older than themselves, by background characteristics, Marshall Islands 2007

Background characteristic	Percentage of women who had higher-risk intercourse with a man 10+ years older[1]	Number of women who had higher-risk intercourse in the last 12 months[1]
Age		
15–17	2.1	55
18–19	(6.2)	41
Marital status		
Never married	4.1	91
Ever married	*	5
Knows condom source[2]		
Yes	4.7	78
No	*	18
Residence		
Urban	3.6	66
Rural	(4.4)	30
Education		
No education/primary	(4.3)	27
Secondary	3.8	66
More than secondary	*	3
Total 15–19	3.8	96

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Sexual intercourse with a partner who was neither a spouse nor living with the respondent

[2] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

12.23. DRUNKENNESS DURING SEXUAL INTERCOURSE

Engaging in sex under the influence of alcohol can impair judgment, compromise power relations, and increase risky sexual behavior. Respondents who had sex in the past 12 months were asked for each partner if they or their partner drank alcohol the last time they had sex with that partner, and whether they or their partner were drunk. As shown in Table 12.22, 7 percent of women and 20 percent of men aged 15–24 reported that they or their partner were drunk the last time they had sex with any partner in the 12 months preceding the survey.

Table 12.22. Drunkenness during sexual intercourse among youth

Among all young women and young men aged 15–24, the percentage who had sexual intercourse in the past 12 months while being drunk and the percentage who had sexual intercourse in the past 12 months when drunk or with a partner who was drunk, by background characteristics, Marshall Islands 2007

	Women			Men		
Background characteristic	Percentage who had sexual intercourse in the past 12 months when drunk	Percentage who had sexual intercourse in the past 12 months when drunk or with a partner who was drunk	Number of women	Percentage who had sexual intercourse in the past 12 months when drunk	Percentage who had sexual intercourse in the past 12 months when drunk or with a partner who was drunk	Number of men
Age						
15–19	2.6	7.4	306	20.8	22.0	209
..15–17	0.4	6.3	163	15.5	16.7	138
..18–19	5.0	8.7	143	31.0	32.1	72
20–24	1.9	6.8	334	16.0	17.2	190
..20–22	2.6	7.8	188	16.1	16.1	104
..23–24	1.1	5.6	146	15.9	18.6	86
Marital status						
Never married	2.8	8.6	333	21.2	21.7	284
Ever married	1.6	5.5	307	12.2	14.8	115
Knows condom source[1]						
Yes	2.5	7.6	527	19.7	20.7	363
No	1.2	4.9	113	(7.7)	(9.9)	37
Residence						
Urban	2.6	6.9	439	23.8	25.5	278
Rural	1.5	7.6	201	6.7	6.7	122
Education						
No education/primary	0.8	7.8	161	13.3	14.5	134
Secondary	2.6	7.1	428	21.8	23.2	222
More than secondary	(3.5)	(5.1)	51	(18.3)	(18.3)	43
Wealth quintile						
Lowest	0.5	7.4	144	8.1	8.1	65
Second	1.8	7.2	133	17.1	17.9	103
Middle	2.3	6.6	137	27.8	30.4	88
Fourth	2.0	6.8	127	20.9	21.9	79
Highest	5.7	7.7	98	16.0	17.2	65
Total 15–24	2.2	7.1	640	18.6	19.7	400

Note: Figures in parentheses are based on 25–49 unweighted cases.

[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

Having sex under the influence of alcohol is more common among females in rural areas than those in urban areas, but the opposite is true among males. Women aged 23–24, those with no or primary education, and those across all wealth quintiles are more likely to be drunk during sex. Among men, those in the middle to the fourth wealth quintiles are more likely to be drunk during sex. Both women and men who know a source of condoms are more likely than those who do not know a condom source to be drunk during sex.

12.24. RECENT HIV TESTS AMONG YOUTH

Knowledge of an individual's own HIV status can motivate him or her to practice safer sexual behavior thereafter, to avoid transmitting the virus to others. Table 12.23 shows that women aged 15–24 are slightly more likely (27 percent) than men of the same age (19 percent) to have been tested for HIV in the 12 months preceding the survey.

Among young women and men, testing is more common among those who have ever been married. Urban female respondents are more likely to have received an HIV test in the past 12 months, whereas in rural areas, male respondents are more likely to have been tested. Female and male respondents with higher educational attainment are more likely to have been tested for HIV in the past 12 months. Among women, HIV testing behavior is most common in the second and middle wealth quintiles, while among men, it is likely to be in the lowest and fourth wealth quintiles.

Table 12.23. Recent HIV tests among youth

Among young women and young men aged 15–24 who have had sexual intercourse in the past 12 months, the percentage who have had an HIV test in the past 12 months, by background characteristics, Marshall Islands 2007

	Among women aged 15–24 who have had sexual intercourse in the past 12 months:		Among men aged 15–24 who have had sexual intercourse in the past 12 months:	
Background characteristic	Percentage who have been tested for HIV in the past 12 months	Number of women	Percentage who have been tested for HIV in the past 12 months	Number of men
Age				
15–19	23.2	161	16.8	129
..15–17	16.2	72	15.4	71
..18–19	28.8	89	18.5	58
20–24	28.7	274	21.4	167
..20–22	27.4	150	22.7	89
..23–24	30.2	124	19.9	77
Marital status				
Never married	24.0	151	17.0	189
Ever married	28.1	284	23.8	106
Knows condom source[1]				
Yes	27.7	386	19.7	274
No	18.6	49	*	21
Residence				
Urban	27.3	275	14.3	196
Rural	25.6	159	29.5	99
Education				
No education/primary	19.5	99	21.1	88
Secondary	28.0	302	17.1	176
More than secondary	(36.4)	33	(27.8)	31
Wealth quintile				
Lowest	22.2	116	29.8	52
Second	29.9	100	15.6	84
Middle	34.3	82	(11.1)	60
Fourth	23.7	77	(29.3)	57
Highest	(23.1)	60	(12.4)	43
Total 15–24	26.7	435	19.4	295

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

CHAPTER 13. WOMEN'S EMPOWERMENT AND DEMOGRAPHIC HEALTH OUTCOMES

The study of women's empowerment has raised a lot of concerns and issues that are associated with other demographic and health outcomes. Understanding women's status and empowerment will contribute to and provide better explanations of other related demographic and health outcomes. The DHS women's questionnaire collects not only data on general background characteristics (e.g. age, education, wealth quintile, and employment status) of female respondents but also data that are more specific to women's empowerment. This chapter examines women's empowerment through types of earnings, the magnitude of women's earnings relative to those of their husband/partner, and women's control over the use of their own earnings and those of their husband/partner.

The women's questionnaire also collects data on a woman's participation in household decision-making, the circumstances under which she feels that a woman is justified in refusing to have sexual intercourse with her husband/partner, and her attitude toward violence against women. For this report, two separate indices of empowerment are developed, based on the number of household decisions in which the respondent participates and her opinion on reasons that justify violence against women. The ranking of women on these two indices is then related to selected demographic and health outcomes, including contraceptive use, ideal family size and unmet need for contraception, and receipt of health care services during pregnancy, childbirth, and the postnatal period.

13.1. EMPLOYMENT AND FORMS OF EARNINGS

Like education, employment can be a source of empowerment for both women and men. It may be particularly empowering for women if it puts them in control of income. Currently married respondents were asked whether they were employed at the time of the survey, and if not, whether they were employed in the 12 months that preceded the survey. Table 13.1 shows the distribution of currently married women and men aged 15–49 who were employed in the last 12 months by type of earnings according to their age group. It shows that 35 percent of currently married women and almost 80 percent of currently married men were employed at some time in the year prior to the DHS.

The percentage of currently employed women and men is lowest in the 15–19 age group and generally increases with age. The low employment rate at young ages is expected, because part of the labor force in those ages is students at secondary and higher learning institutions who are not available for work.

For those who are working, most women and men are likely to be paid in cash (87 percent and 94 percent respectively). Women are more likely to work but not receive payment (3 percent) than men (0.2 percent). Similarly, women are more likely to be paid in cash and in kind than working men (9 percent and 5 percent respectively).

Table 13.1. Employment and cash earnings of currently married women

Percentage of currently married women and men aged 15–49 who were employed at any time in the last 12 months and the percent distribution of currently married women and men employed in the last 12 months by type of earnings, according to age, Marshall Islands 2007

	Currently married respondents:		Percent distribution of currently married respondents employed in the last 12 months, by type of earnings					
Age	Percentage employed	Number of women	Cash only	Cash and in-kind	In-kind only	Not paid	Total	Number of women
				WOMEN				
Age								
15–19	12.7	65	57.7	20.4	13.9	8.0	100.0	8
20–24	22.3	217	87.3	9.4	0.0	3.3	100.0	48
25–29	33.7	240	89.5	7.6	2.1	0.8	100.0	81
30–34	42.9	196	83.4	10.8	1.6	4.2	100.0	84
35–39	39.9	185	90.2	8.0	0.9	0.9	100.0	74
40–44	46.9	141	83.4	8.3	1.6	6.6	100.0	66
45–49	39.5	102	91.7	8.3	0.0	0.0	100.0	40
Total 15–49	35.1	1,145	86.6	9.0	1.5	2.9	100.0	402
				MEN				
Age								
15–19	34.9	11	100.0	0.0	0.0	0.0	100.0	4
20–24	62.3	97	95.5	2.1	2.4	0.0	100.0	61
25–29	76.3	96	98.2	0.7	1.1	0.0	100.0	73
30–34	81.1	97	94.4	3.3	1.0	1.3	100.0	78
35–39	88.9	95	89.3	10.7	0.0	0.0	100.0	84
40–44	96.9	76	93.2	6.8	0.0	0.0	100.0	73
45–49	82.8	62	97.5	2.5	0.0	0.0	100.0	51
Total 15–49	79.7	534	94.4	4.6	0.7	0.2	100.0	425
50+	84.8	82	93.5	2.8	1.8	1.8	100.0	70
Total men 15+	79.5	654	94.4	4.2	1.0	0.4	100.0	519

13.2. CONTROL AND RELATIVE MAGNITUDE OF WOMEN'S EARNINGS

Currently married and employed women who earned cash for their work were asked the relative magnitude of their earnings in comparison to their husband/partner's earnings. In addition, they were asked who the main decision-maker is with regard to the use of their earnings. This information may provide some insight into women's empowerment in the family and the extent of their control over decision-making in the household. It is expected that employment and earnings are more likely to empower women if women themselves control their own earnings and perceive their earnings as significant relative to those of their husband/partner. The 2007 RMIDHS asked about cash earnings of married women only.

Table 13.2.1 shows, for currently married women who had cash earnings in the past 12 months, their control over their own earnings and their perception of the magnitude of their earnings relative to those of their husband/partner. Overall, about one in four women (25 percent) mainly decide by themselves how their earnings are to be spent. Almost 6 in 10 women (58 percent) report that they make the decision jointly with their husband/partner, while 15 percent report that the decision is mainly made by their husband/partner.

Younger women are more independent in making their own decisions on how their cash earnings are spent than older women. Similarly, urban women are twice as likely to make their own decisions as rural women (32 percent and 16 percent respectively). Joint decisions are more frequent in rural areas than urban areas (71 percent versus 41 percent) and are more likely to involve older women than younger ones. In contrast, more urban than rural women are likely to involve their husbands in the household decision-making process (18 percent urban compared to 12 percent rural).

The proportion of women who independently decide how to use their earnings generally increases with education as well as wealth, while less educated women and women from poor households are more likely to be involved in a joint household decision-making process. Meanwhile, an interesting scenario is observed in relation to parity and decisions on using earnings, where women with low parity are more independent in making their own decisions than women with higher parity, who are more dependent on their husbands to decide how their earnings should be used. Joint decision-making among couples increases with parity.

Regarding the magnitude of a woman's earnings relative to those of her husband/partner, over one in three working women reported that their earnings are either more or less than those of their husband/partner (39 percent and 37 percent respectively), and over 1 in 10 (13 percent) women report that their husband/partner does not bring in any money. The proportion of women who earn more than their husband/partner generally decreases with age, while those who earn less than their husband/partner increases with age. Women who have a higher number of living children are more likely to earn more money than their husbands than women with fewer living children.

By place of residence, urban women are less likely to earn more than their husband/partner than rural women, while rural women are less likely to earn less than their husband/partner.

Table 13.2.1. Control over women's cash earnings and relative magnitude of women's earnings: Women

Percent distribution of currently married women aged 15–49 who received cash earnings for employment in the 12 months preceding the survey, by person who decides how wife's cash earnings are used and by whether she earned more or less than her husband, according to background characteristics, Marshall Islands 2007

	Person who decides how the wife's cash earnings are used:						Women's cash earnings compared with husband's cash earnings:						
Background characteristic	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	More	Less	About the same	Husband/ partner has no earnings	Don't know/ missing	Total	Number of women
Age													
15–19	*	*	*	*	*	100.0	*	*	*	*	*	100.0	6
20–24	32.8	52.9	10.1	4.2	0.0	100.0	39.7	27.6	7.3	21.2	4.2	100.0	47
25–29	30.8	60.1	9.1	0.0	0.0	100.0	40.7	36.3	7.4	13.1	2.4	100.0	78
30–34	19.8	58.3	20.4	0.0	1.4	100.0	38.5	30.5	9.4	18.3	3.1	100.0	79
35–39	24.3	50.5	23.5	0.0	1.6	100.0	35.9	43.9	7.8	5.9	6.4	100.0	73
40–44	21.5	61.6	14.5	0.0	2.4	100.0	35.1	42.1	7.8	10.8	4.3	100.0	61
45–49	(22.9)	(69.3)	(7.8)	(0.0)	(0.0)	100.0	(36.3)	(35.3)	(17.8)	(8.2)	(2.5)	100.0	40
Number of living children													
0	(33.2)	(48.4)	(14.4)	(0.0)	(4.0)	100.0	(34.2)	(47.2)	(7.9)	(6.7)	(4.0)	100.0	37
1–2	26.5	58.0	13.4	2.1	0.0	100.0	34.8	36.8	8.5	16.1	3.7	100.0	128
3–4	23.0	58.8	16.3	0.0	1.9	100.0	37.5	31.5	12.6	11.8	6.5	100.0	121
5+	22.7	60.5	16.8	0.0	0.0	100.0	43.6	38.0	5.2	11.6	1.5	100.0	99
Residence													
Urban	31.5	49.1	18.2	0.0	1.2	100.0	30.8	41.9	8.4	15.9	3.0	100.0	226
Rural	15.8	70.7	11.1	1.7	0.7	100.0	48.0	28.7	9.7	8.1	5.5	100.0	158
Education													
No education/ primary	20.9	64.9	11.1	1.6	1.4	100.0	41.3	37.6	8.7	7.5	4.9	100.0	81
Secondary	25.8	57.8	14.6	0.6	1.2	100.0	34.8	35.8	8.8	15.6	5.0	100.0	218
More than secondary	27.0	52.0	21.0	0.0	0.0	100.0	42.3	37.1	9.5	10.2	1.0	100.0	85
Wealth quintile													
Lowest	14.0	71.7	11.9	1.3	1.1	100.0	46.8	28.0	9.8	8.9	6.6	100.0	103
Second	23.6	67.4	7.2	1.8	0.0	100.0	45.1	34.7	7.2	7.6	5.4	100.0	72
Middle	(37.7)	(48.7)	(13.6)	(0.0)	(0.0)	100.0	(28.6)	(34.8)	(8.1)	(25.1)	(3.5)	100.0	42
Fourth	31.9	41.2	23.2	0.0	3.7	100.0	29.2	40.1	5.2	20.4	5.0	100.0	70
Highest	27.5	52.5	20.0	0.0	0.0	100.0	33.2	44.9	12.4	9.6	0.0	100.0	97
Total	25.1	58.0	15.3	0.7	1.0	100.0	37.9	36.5	8.9	12.7	4.1	100.0	384

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

13.2.1. Control over men's cash earnings

Table 13.2.2 shows men's reports versus women's reports on who decides how men's cash earnings are spent, by background characteristics.

Table 13.2.2. Control over men's cash earnings

Percent distributions of currently married men aged 15–49 who receive cash earnings and of currently married women aged 15–49 whose husbands receive cash earnings, by person who decides how men's cash earnings are used, according to background characteristics, Marshall Islands 2007

	Women							Men						
	Person who decides how husband's cash earnings are used:							Person who decides how husband's cash earnings are used:						
Background characteristic	Mainly wife	Husband and wife jointly	Mainly husband	Other	Missing	Total	Number of women	Mainly wife	Husband and wife jointly	Mainly husband	Other	Missing	Total	Number of men
Age														
15–19	*	*	*	*	*	100.0	5	*	*	*	*	*	100.0	4
20–24	(12.8)	(66.3)	(19.1)	(1.8)	(0.0)	100.0	36	(11.6)	(36.7)	(42.2)	(7.4)	(2.2)	100.0	59
25–29	12.5	66.3	21.2	0.0	0.0	100.0	67	10.3	43.9	45.8	0.0	0.0	100.0	72
30–34	11.4	68.5	20.0	0.0	0.0	100.0	62	21.9	36.6	41.5	0.0	0.0	100.0	76
35–39	13.0	57.5	27.8	0.3	1.4	100.0	67	7.0	56.5	36.6	0.0	0.0	100.0	84
40–44	12.0	62.3	25.7	0.0	0.0	100.0	53	11.6	65.3	23.0	0.0	0.0	100.0	73
45–49	10.2	70.8	17.2	0.0	1.8	100.0	37	4.9	61.8	33.2	0.0	0.0	100.0	51
Number of living children														
0	(18.1)	(49.0)	(30.7)	(2.1)	(0.0)	100.0	32	(24.8)	(38.0)	(25.7)	(11.5)	(0.0)	100.0	32
1–2	7.7	70.0	21.7	0.0	0.6	100.0	106	6.2	40.5	52.4	0.0	0.9	100.0	145
3–4	11.9	66.3	20.7	0.2	0.9	100.0	104	18.2	50.6	30.7	0.5	0.0	100.0	127
5+	15.5	61.6	22.9	0.0	0.0	100.0	86	6.9	63.0	30.2	0.0	0.0	100.0	117
Residence														
Urban	16.4	55.7	27.4	0.0	0.5	100.0	187	15.3	55.8	28.9	0.0	0.0	100.0	265
Rural	6.4	76.3	16.2	0.6	0.5	100.0	141	4.8	39.0	52.5	2.8	0.8	100.0	156
Education														
No education/ primary	9.2	69.3	20.7	0.9	0.0	100.0	74	16.5	36.5	47.0	0.0	0.0	100.0	96
Secondary	11.1	66.6	21.3	0.1	0.9	100.0	177	9.8	53.7	34.7	1.8	0.0	100.0	239
More than secondary	17.4	55.2	27.4	0.0	0.0	100.0	76	10.2	52.7	35.6	0.0	1.5	100.0	86
Wealth quintile														
Lowest	7.9	75.8	15.4	0.9	0.0	100.0	93	5.9	35.1	55.1	2.6	1.2	100.0	103
Second	7.1	75.1	17.8	0.0	0.0	100.0	64	10.5	42.5	45.5	1.6	0.0	100.0	106
Middle	(11.9)	(55.5)	(30.4)	(0.0)	(2.2)	100.0	30	16.4	54.2	29.4	0.0	0.0	100.0	79
Fourth	(17.2)	(50.7)	(30.3)	(0.0)	(1.8)	100.0	54	(14.6)	(62.1)	(23.2)	(0.0)	(0.0)	100.0	50
Highest	17.1	56.7	26.2	0.0	0.0	100.0	87	12.9	64.6	22.5	0.0	0.0	100.0	84
Total 15–49	12.1	64.6	22.6	0.3	0.5	100.0	328	11.4	49.6	37.6	1.0	0.3	100.0	421
50+	Na	na	na	na	na	na	na	1.7	68.8	29.5	0.0	0.0	100.0	67
Total men 15+	Na	na	na	na	na	na	na	9.9	52.7	36.1	1.0	0.3	100.0	512

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

na = not applicable

The data show that almost one in four (23 percent) married women whose husbands receive cash earnings report that their husband/partner is the main decision-maker on the use of his cash earnings, compared with over one in three married men (38 percent) who report themselves as being so. A larger percentage of women (65 percent) than men (50 percent) report that decision-making is joint between the husband and wife. There are generally some variations in men's and women's reports of decision-making by background characteristics. For example, men aged 15–34, living in rural areas, who have 1–2 children, who have no or primary education, and who are in the poorest households are more likely to report that they make their own decisions on how to use their earnings than other groups. Similarly, women aged 35–44, living in urban areas, who have zero children, who have more than secondary-level education, and who are in the middle to fourth wealthiest households are more likely to report that they make decisions on how to use their husband's earnings than other groups of women.

13.3. WOMEN'S CONTROL OVER THEIR OWN EARNINGS AND OVER THOSE OF THEIR HUSBAND

The 2007 RMIDHS included questions that addressed women's control over their own earnings and over those of their husband. The information may help to provide further insight into women's empowerment within the family directly, and indirectly in the community.

Table 13.3. Women's control over their own earnings and over those of their husband

Percent distributions of currently married women aged 15–49 with cash earnings in the last 12 months by person who decides how the woman's cash earnings are used and of currently married women aged 15–49 whose husbands have cash earnings by person who decides how the husband's cash earnings are used, according to the relation between woman's and husband's cash earnings, Marshall Islands 2007

	Person who decides how the wife's cash earnings are used:							Person who decides how husband's cash earnings are used:						
Woman's earnings relative to husband's earnings	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	Number of women	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	Number of women
More than husband/partner	24.6	59.7	14.4	0.5	0.8	100.0	145	16.0	62.6	20.9	0.5	0.0	100.0	139
Less than husband/partner	24.0	58.3	17.7	0.0	0.0	100.0	140	9.0	63.1	28.0	0.0	0.0	100.0	140
Same as husband/partner	(17.6)	(60.8)	(18.3)	(0.0)	(3.3)	100.0	34	(8.7)	(75.5)	(15.3)	(0.6)	(0.0)	100.0	33
Husband/ partner has no cash earnings/ did not work	(37.5)	(52.5)	(7.4)	(2.7)	(0.0)	100.0	49	na	na	na	na	na	na	na
Woman has no cash earnings	na	na	na	na	na	na	na	*	*	*	*	*	100.0	14
Woman did not work in last 12 months	na	na	na	na	na	na	na	13.5	62.7	23.1	0.6	0.2	100.0	531
Don't know/ missing	*	*	*	*	*	100.0	16	*	*	*	*	*	100.0	16
Total[1]	25.1	58.0	15.3	0.7	1.0	100.0	384	13.0	63.4	22.8	0.4	0.3	100.0	872

na = not applicable

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Excludes cases where a woman or her husband/partner had no earnings and includes cases where a woman did not know whether she earned more or less than her husband/partner

Table 13.3 shows, for currently married women who earned cash in the past 12 months, the person who decides how these cash earnings are used, and for all currently married women, the person who decides how their husband/partner's cash earnings are used according to the relative magnitude of the earnings of women and their husbands/partners.

Over one in three women (38 percent) are more likely to decide mainly themselves how their cash earnings are used if their husband/partner has no earnings or did not work in the preceding 12 months, compared to over half (53 percent) who make joint decisions with their husband/partner. Women are only slightly more likely to make decisions about the use of their earnings on their own if they earn more than their husband/partner (25 percent) than if they earn less (24 percent). Meanwhile, almost the same proportion of women and men make joint decisions about the use of the wife's and the husband's cash earnings regardless of who earns more. Over 6 in 10 women who have no earnings or did not work in the preceding 12 months reported that they jointly decide with their husband/partner on how to use the cash earnings of their husband/partner.

13.4. WOMEN'S EMPOWERMENT

Driven by gender inequalities in development initiatives, the Government of RMI emphasizes gender and gender mainstreaming in all its processes. The overall direction of the national gender policy is to mainstream gender concerns in the national development process in order to improve the social, legal/civic, political, economic, and cultural conditions of the Marshallese people, especially women.

In addition to educational attainment, employment status, and control over earnings, information was obtained on some direct measures of women's autonomy and status. Specifically, questions were asked on women's participation in household decision-making, their acceptance of violence against women, and their opinions about the conditions under which a wife should be able to deny sex to her husband. Such information provides insight into women's control over their environment and their attitudes toward gender roles, both of which are relevant to understanding women's demographic and health behavior.

The first measure – women's participation in decision-making – requires little explanation since the ability to make decisions about one's own life is of obvious importance to women's empowerment. The other two measures derive from the notion that gender equity is essential to empowerment. Responses that indicate a view that violence against wives by husbands is justified reflect low status of women. They signify acceptance of norms that give men the right to use force against women, which is a violation of women's human rights. Similarly, beliefs about whether and when a woman can refuse to have sex with her husband reflect issues of gender equity regarding sexual rights and bodily integrity. Besides yielding an important measure of empowerment, information about women's attitudes toward sexual rights is useful for improving and monitoring reproductive health programs that depend on women's willingness and ability to control their own sexual lives.

13.4.1. Women's participation in decision-making

To assess women's decision-making autonomy, information was sought on women's participation in four different types of household decisions: the respondent's own health care, making major household purchases, making household purchases for daily needs, and visiting her family or

relatives. In the 2007 RMIDHS, currently married women were asked about decision-making. Having a final say in decision-making processes is the highest degree of autonomy. Women are considered to participate in a decision if they alone or jointly with their husband/partner have the final say in that decision.

Table 13.4.1 shows that currently married women in RMI do not often make decisions on their own, and that who makes decisions in the household depends on what is being decided. While 19 percent of women say they make decisions regarding daily household purchases on their own, only 7 percent report that they make decisions about major household purchases by themselves. About 2 in 10 (18 percent) married women independently decide on their own health care. Some women report that their husband/partner is more likely to make independent decisions. Over 20 percent of women report that their husband/partner makes decisions about large household purchases by themselves, while almost one in four (24 percent) women report that their husband/partner makes decisions about the woman's health care. In terms of visits to the woman's family or relatives, women are most likely to report that they make these decisions jointly with their husband/partner (64 percent). Women are likely to report that all four decisions are made jointly with their husband/partner.

Table 13.4.1. Women's participation in decision-making

Percent distribution of currently married women aged 15–49 by person who usually makes decisions about four kinds of issues, Marshall Islands 2007

Decision	Mainly wife	Wife and husband jointly	Mainly husband	Someone else	Other	Missing	Total	Number of women
Own health care	17.8	52.0	23.7	3.3	2.9	0.2	100.0	1,145
Major household purchases	7.4	59.0	22.3	7.6	3.4	0.3	100.0	1,145
Purchases of daily household needs	18.6	55.5	16.2	5.8	3.7	0.3	100.0	1,145
Visits to her family or relatives	15.1	64.1	15.5	2.0	3.0	0.2	100.0	1,145

The 2007 RMIDHS also asked currently married men who they thought should have a greater say in making decisions about five different issues: making major household purchases, making household purchases for daily needs, visits to the wife's family or relatives, what to do with the money the wife earns, and how many children to have. Data in Table 13.4.2 show that 28 percent of men think that mainly husbands should make decisions about major household purchases, and 24 percent think that mainly husbands should make decisions about visits to the wife's family or relatives compared to 59 percent who think that it should be a joint decision. Almost half the men (47 percent) think that mainly the wives should make decisions relating to purchases of daily household needs compared to 37 percent who think it should be a joint decision. Only 14 percent of currently married men believe that the number of children to have should be decided mainly by the husband, while over 8 in 10 men (81 percent) say it should be a joint decision between husband and wife.

Table 13.4.2. Women's participation in decision-making according to men

Percent distribution of currently married men aged 15–49 by person who they think should have a greater say in making decisions about five kinds of issues, Marshall Islands 2007

Decision	Wife	Wife and husband equally	Husband	Don't know/ depends	Total	Number of men
Major household purchases	5.6	65.4	28.4	0.6	100.0	534
Purchases of daily household needs	46.9	37.2	15.8	0.2	100.0	534
Visits to wife's family or relatives	24.3	58.7	15.2	1.8	100.0	534
What to do with money the wife earns	27.0	58.6	14.4	0.0	100.0	534
How many children to have	3.0	81.0	14.0	2.0	100.0	534

Table 13.4.3 shows how women's participation in decision-making varies by background characteristics. Although 57 percent of currently married women participate in making all four types of decisions asked about, 15 percent have no say in any of the four.

Table 13.4.3. Women's participation in decision-making by background characteristics

Percentage of currently married women aged 15–49 who usually make specific decisions either by themselves or jointly with their husband, by background characteristics, Marshall Islands 2007

	Specific decisions:						
Background characteristic	Own health care	Making major household purchases	Making purchases for daily household needs	Visits to her family or relatives	Percentage who participate in all four decisions	Percentage who participate in none of the four decisions	Number of women
Age							
15–19	64.8	42.5	48.2	60.8	40.5	27.6	65
20–24	61.2	58.5	65.3	73.5	47.4	19.2	217
25–29	75.2	67.9	73.1	82.9	60.2	14.4	240
30–34	71.0	68.7	79.3	82.1	59.3	11.8	196
35–39	68.4	71.3	83.2	80.1	58.2	11.1	185
40–44	73.4	70.1	75.3	79.2	61.7	15.0	141
45–49	74.1	76.3	83.2	87.3	64.6	10.9	102
Employment (last 12 months)							
Not employed	68.0	62.6	70.4	76.4	55.0	17.1	744
Employed for cash	73.2	73.8	81.0	84.9	60.0	10.4	384
Employed not for cash	*	*	*	*	*	*	17
Number of living children							
0	66.9	60.0	70.3	78.8	50.8	16.7	119
1–2	67.2	64.4	71.1	77.0	53.8	15.7	384
3–4	69.8	68.1	73.5	79.4	58.7	16.4	333
5+	74.3	69.5	79.8	81.9	60.6	11.4	309
Residence							
Urban	69.3	65.5	73.2	78.2	57.1	16.1	762
Rural	71.0	68.2	75.9	81.3	56.2	12.3	383
Education							
No education/primary	72.1	64.7	74.3	78.2	56.5	14.4	293
Secondary	68.8	66.1	74.0	79.5	56.6	14.7	721
More than secondary	70.1	71.9	74.1	80.1	58.2	16.7	131
Wealth quintile							
Lowest	74.7	64.3	73.7	80.8	56.2	12.5	265
Second	63.5	61.9	71.9	77.4	49.4	14.9	255
Middle	62.3	61.3	71.0	75.7	48.5	16.2	220
Fourth	76.8	73.5	77.3	82.6	67.8	15.0	198
Highest	72.7	73.3	77.5	80.0	64.8	16.1	207
Total	69.8	66.4	74.1	79.2	56.8	14.8	1,145

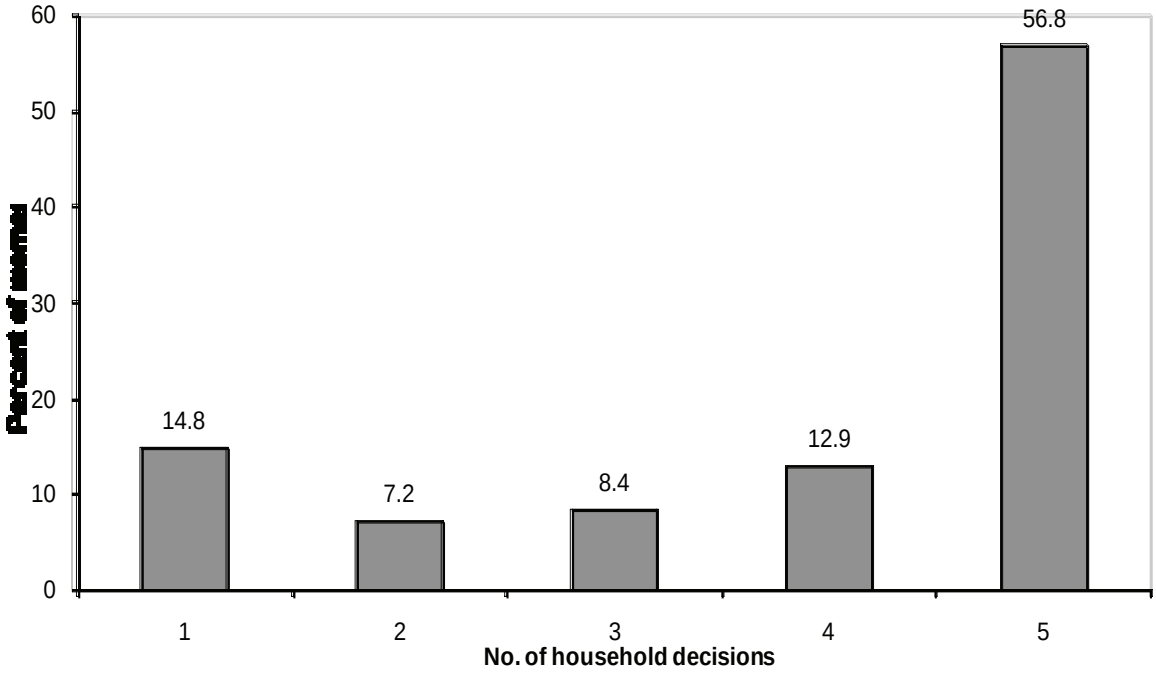
Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Women's participation in all four decisions generally increases with age, from 41 percent among women aged 15–19 to 65 percent among those aged 45–49. Women who are not employed are less likely than other women to participate in decision-making in the household. About 6 in 10 employed women participate in making all decisions at the household level, compared with over half (55 percent) of unemployed women. This implies that wage/salaried employment is associated with an increase in women's decision-making power. The percentage of women who have a say in all four areas of decision-making is almost the same in urban and rural areas

(57 percent compared to 56 percent). Similarly, there is not much variation in women's decision-making power by level of education. Women in the two richest household wealth quintiles are most likely to participate in all four types of decisions, followed by those in the lowest wealth households, compared to others.

Figure 13.1 gives the percentage of currently married women according to the number of decisions in which they participate, either alone or in conjunction with their husbands/partners. *The total number of women's decisions refers to the sum of the women's decisions made alone plus the women's decisions made jointly with the husband. The total number of women's decisions is a good indicator of the strength of women's empowerment.* The percentage of women who participate in decisions decreases from 57 percent participating in all five decisions to 7 percent participating in only two of the five decisions, before increasing again to 15 percent of women participating in only one of the five decisions.

Figure 13.1. Number of decisions in which women participate



13.4.2. Men's attitude toward wife's participation in decision-making

Table 13.4.4 shows the percentage of currently married men who believe that a wife should make decisions alone or jointly with her husband on five different issues: making major household purchases, making household purchases for daily needs, visits to the wife's family or relatives, what to do with money the wife earns, and how many children to have.

Table 13.4.4. Men's attitude toward wife's participation in decision-making

Percentage of currently married men aged 15–49 who think a wife should have the say alone or equal say with her husband on five specific kinds of decisions, by background characteristics, Marshall Islands 2007

Background characteristic	Specific decision					All five decisions	None of the five decisions	Number of men
	Making major household purchases	Making purchases for daily household needs	Visits to her family or relatives	What to do with money the wife earns	How many children to have			
Age								
15–19	*	*	*	*	*	*	*	11
20–24	66.4	83.4	83.1	80.9	78.8	44.8	1.5	97
25–29	74.7	84.8	81.0	84.7	90.1	51.3	3.7	96
30–34	83.4	87.8	81.8	92.6	84.3	61.7	2.4	97
35–39	64.1	84.4	81.0	84.9	82.4	49.3	2.5	95
40–44	78.5	80.5	81.8	84.2	80.6	56.9	3.1	76
45–49	60.3	85.1	91.5	90.4	95.3	43.7	0.0	62
Employment (last 12 months)								
Not employed	59.0	82.8	81.4	80.5	84.2	38.9	1.4	109
Employed for cash	73.9	84.3	83.5	86.8	83.8	53.6	2.5	421
Employed not for cash	*	*	*	*	*	*	*	4
Number of living children								
0	73.4	87.2	89.3	86.0	79.5	55.4	2.8	55
1–2	71.0	82.1	84.6	83.6	79.5	48.5	2.5	194
3–4	75.9	86.3	75.7	87.2	86.4	54.2	2.3	148
5+	64.9	83.2	86.0	86.6	89.6	48.2	1.7	137
Residence								
Urban	82.1	91.2	80.5	90.3	81.7	58.2	1.1	348
Rural	50.3	70.7	87.7	76.9	88.4	36.6	4.3	186
Education								
No education/ primary	73.0	82.2	76.9	82.7	80.0	47.2	3.0	122
Secondary	69.8	82.8	85.3	83.9	83.3	49.8	2.7	309
More than secondary	72.5	90.4	83.4	94.1	91.0	57.5	0.0	103
Wealth quintile								
Lowest	61.8	71.6	87.4	77.0	88.8	43.4	3.2	125
Second	58.3	80.7	84.4	75.1	82.5	38.1	3.0	135
Middle	81.7	89.3	72.2	92.5	80.5	53.2	0.8	103
Fourth	81.0	93.4	85.0	96.9	82.2	59.3	1.1	76
Highest	81.8	92.2	85.2	95.3	85.1	68.5	2.5	95
Total 15–49	71.0	84.1	83.0	85.6	84.0	50.7	2.3	534
50+	79.1	86.5	85.0	85.0	92.2	62.1	3.7	82
Total men 15+	72.0	84.5	83.5	86.2	85.4	53.1	2.3	654

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

The results show that over half of the men are of the opinion that wives alone or jointly should participate in all five specified decisions, compared to only 2 percent of men who believe that a wife should not participate in any of the specified decisions. The proportion of men who feel that women should have a say in none of the specified decisions is smaller in urban areas than in rural areas (1 percent and 4 percent respectively).

Eight in 10 men think that a wife alone or jointly with her partner should make decisions about making purchases for daily household needs, how to use the money she earns, visits to her family

or relatives, and how many children to have, compared to 7 in 10 men who think that a wife alone or jointly with her partner should make decisions about making major household purchases.

Men with higher educational attainment are more likely to state that wives should be involved in household decision-making. Men who are employed, live in urban areas and are from the wealthiest households are more likely to think that a wife or partner should participate in all of the five specified decisions than other men.

13.4.3. Attitudes toward violence against women

Violence against women has serious consequences for their mental and physical well-being, including their reproductive and sexual health (WHO 1997). One of the most common forms of violence against women worldwide is abuse by a husband or partner (Heise et al. 1999).

The 2007 RMIDHS gathered information on women's attitudes toward violence against women – a proxy for women's perception of their status. Women who believe that a husband is justified in committing violence against his wife for any of the specified reasons may believe themselves to be low in status both absolutely and relative to men. Such a perception could act as a barrier to accessing health care for themselves and their children, affect their attitude toward contraceptive use, and impact their general well-being. Women were asked whether a husband is justified in hitting or beating his wife under a series of circumstances: if the wife burns the food, argues with him, goes out without telling him, neglects the children, and refuses sexual relations. Table 13.4.5 summarizes women's attitudes toward violence against women in these five specific circumstances.

Data show that most women find violence against women justified in certain circumstances. Over half of the women (56 percent) agree that at least one of reasons asked about in the RMIDHS is sufficient justification for violence against women. This indicates that Marshallese women generally accept violence as part of male–female relationships, which is not surprising as traditional norms teach women to accept, tolerate, and even rationalize battery.

The most widely accepted reasons for violence against women are neglecting the children (51 percent), arguing with husband/partner (44 percent), and going out without informing the husband (42 percent). One in four and 23 percent of women, respectively, feel that denying sex to the husband and burning food are justifications for violence against women.

Acceptance of violence against women for at least one of the specified reasons is generally lower among young women, women in urban areas, women in the highest wealth quintile, women with more than secondary-level education, women who are not married, and women who have zero children than others, who are more likely to agree with at least one of the reasons.

Table 13.4.5. Attitudes toward violence against women: Women

Percentage of all women aged 15–49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Marshall Islands 2007

Background characteristic	Husband is justified in hitting or beating his wife if she: Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him	Percentage who agree with at least one specified reason	Number of women
Age							
15–19	19.8	37.5	31.0	41.7	17.1	47.4	306
20–24	21.3	44.5	41.9	52.9	26.9	58.7	334
25–29	27.5	46.5	44.2	53.3	23.7	58.3	293
30–34	29.1	50.9	50.7	56.8	33.4	60.9	213
35–39	23.7	42.3	45.7	50.0	27.5	53.8	205
40–44	19.1	36.5	31.5	43.1	25.1	50.8	155
45–49	23.6	47.7	53.9	58.5	25.5	64.7	119
Employment (last 12 months)							
Not employed	23.1	43.2	39.9	49.0	23.8	53.9	1,117
Employed for cash	23.7	43.9	45.6	53.1	27.7	59.6	479
Employed not for cash	(33.1)	(53.6)	(51.3)	(62.9)	(34.3)	(71.4)	29
Marital status							
Never married	17.9	34.1	30.2	40.7	16.9	45.9	383
Married or living together	24.4	46.5	45.2	53.9	27.1	59.2	1,145
Divorced/separated /widowed	33.3	46.0	47.6	48.2	34.1	56.4	97
Number of living children							
0	18.2	36.1	32.4	42.0	17.7	47.5	419
1–2	23.0	44.4	40.1	50.2	26.3	55.9	496
3–4	25.4	44.8	46.4	54.3	25.5	60.3	370
5+	28.4	50.3	50.8	57.1	32.2	61.4	340
Residence							
Urban	17.7	33.5	33.0	42.3	17.0	47.9	1,106
Rural	35.7	65.1	60.5	67.9	42.5	72.9	519
Education							
No education/primary	32.0	54.9	48.8	57.4	33.2	62.6	427
Secondary	21.5	41.9	41.6	50.4	23.7	55.7	1,016
More than secondary	14.1	26.5	26.2	34.2	14.2	40.8	182
Wealth quintile							
Lowest	36.2	62.8	57.0	64.2	38.8	69.3	350
Second	30.7	57.5	56.3	64.3	36.4	69.6	353
Middle	18.5	36.5	35.0	44.7	19.4	48.7	319
Fourth	15.7	32.7	33.4	43.6	16.8	51.0	306
Highest	13.1	23.3	22.6	31.2	10.4	36.6	298
Total	23.4	43.6	41.8	50.5	25.1	55.9	1,625

Note: Figures in parentheses are based on 25–49 unweighted cases.

Men were also asked their opinions on the justification for violence against women under certain circumstances. As shown in Table 13.4.6, almost 6 in 10 men agree that it is justified for at least one of the specified reasons. It is interesting to note that this is about the same as the percentage of women who agree with at least one of the reasons (56 percent compared to 58 percent).

Similar reasons as women's are observed for men, where, except for neglecting the children, the proportions are lower for other reasons. The most widely accepted reasons for violence against women are neglecting the children (51 percent, which is the same as for women), arguing with husband/partner (34 percent), and going out without informing the husband (35 percent). Sixteen percent and 13 percent of men, respectively, feel that denying sex to the husband and burning food are justifications for violence against women.

Younger men and those who are unemployed, not married, have no children, are in urban areas, have no or primary-level education, and are in the middle wealth quintile households are more likely to agree than other groups that at least one of the specified reasons justifies violence against women. Men with more than secondary education (37 percent) and those in the highest wealth quintile (47 percent) are least likely to accept it. Thus, higher education and wealth tend to decrease the chances that a man will agree that one of the reasons justifies violence against women.

Table 13.4.6. Attitudes toward violence against women: Men

Percentage of all men aged 15–49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Marshall Islands 2007

Background characteristic	Husband is justified in hitting or beating his wife if she: Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him	Percentage who agree with at least one specified reason	Number of men
Age							
15–19	18.0	43.0	46.0	65.3	22.9	71.4	209
20–24	13.6	40.7	40.3	58.2	19.1	66.9	190
25–29	11.6	37.0	33.9	55.5	12.1	59.0	137
30–34	13.9	34.7	25.7	44.7	12.2	48.1	115
35–39	9.7	25.1	27.9	42.9	11.0	53.8	106
40–44	9.7	23.8	30.9	35.2	11.6	40.7	83
45–49	8.6	13.5	18.2	25.9	7.0	30.4	73
Employment (last 12 months)							
Not employed	12.5	41.4	39.2	55.0	18.4	63.5	359
Employed for cash	14.0	29.9	31.5	48.4	13.5	53.4	538
Employed not for cash	*	*	*	*	*	*	17
Marital status							
Never married	16.9	42.4	42.6	62.3	22.9	68.5	329
Married or living together	10.8	29.9	28.6	43.5	11.5	50.3	534
Divorced/separated/ widowed	(13.3)	(29.6)	(49.0)	(62.2)	(8.7)	(63.5)	50
Number of living children							
0	15.9	41.3	43.2	61.7	21.1	69.2	362
1–2	13.5	33.3	33.9	50.6	14.5	53.8	252
3–4	11.3	26.8	24.3	41.0	8.1	50.2	154
5+	7.6	27.2	26.4	37.3	10.7	42.8	145
Residence							
Urban	13.1	35.5	34.6	52.9	15.8	60.8	631
Rural	13.2	32.0	35.0	47.6	14.7	50.3	283
Education							
No education/ primary	18.4	42.0	43.6	58.8	21.8	66.9	245
Secondary	11.9	35.7	36.0	53.6	14.6	58.8	524
More than secondary	8.8	16.9	15.5	30.1	7.8	37.2	145
Wealth quintile							
Lowest	13.9	32.0	39.4	51.5	11.9	54.4	182
Second	14.6	35.0	35.1	51.7	18.4	56.0	220
Middle	18.7	45.6	44.7	61.0	22.7	70.8	188
Fourth	13.3	35.4	30.5	52.6	15.9	58.5	159
Highest	3.9	22.5	22.0	38.1	6.9	47.1	164
Total 15–49	13.1	34.4	34.8	51.3	15.5	57.6	913
50+	8.3	14.7	17.4	22.5	9.3	24.5	93
Total men 15+	12.6	31.6	32.2	47.1	14.6	53.4	1,055

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

13.4.4. Attitudes toward refusing sexual intercourse with husband

This section discusses the behavior and attitudes of women toward refusing to have sexual intercourse with their husband. Women's control and decision-making over when and with whom to have sex have important implications for women's health and that of their children. It is also a good indication of women's empowerment as it shows the extent of their acceptance of such perceptions in the society.

The 2007 RMIDHS included questions on the respondent's opinion as to whether a woman is justified in refusing to have sexual relations with her husband in certain situations: if she knows the husband has a sexually transmitted disease, if she knows the husband has intercourse with other women, and if she is tired or not in the mood. These three issues have been addressed because they are more related to women's rights and have consequences for women's health.

Table 13.4.7 shows the percentage of men who believe that a wife is justified in refusing to have sex with her husband under specific circumstances. The data show that over 8 in 10 men believe that a woman has the right to refuse to have sex with her husband for all the specified reasons. Younger men (15–19 years) and men who have never married, are unemployed, have zero children, are in rural areas, have no or primary-level education, and are from the poorest households are the least likely to agree with all of the reasons for a wife to refuse sex with her husband (Table 13.4.7).

Education, employment, and wealth are related to men's attitudes toward a wife refusing sexual intercourse with her husband. Men with more than secondary-level education, who are employed, and who are in the highest wealth quintile are more likely than other groups to think that a wife can refuse sex with her husband for all the reasons.

Table 13.4.7. Attitudes toward refusing sexual intercourse with husband: Men

Percentage of all men aged 15–49 who believe that a wife is justified in refusing to have sexual intercourse with her husband in specific circumstances, by background characteristics, Marshall Islands 2007

Background characteristic	Wife is justified in refusing intercourse with her husband if she: Knows husband has a sexually transmitted disease	Knows husband has intercourse with other women	Is tired or not in the mood	Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number of men
Age						
15–19	90.6	82.6	82.8	78.3	7.7	209
20–24	93.2	89.0	83.5	80.4	5.0	190
25–29	96.2	93.2	84.9	80.2	2.0	137
30–34	96.7	94.0	93.1	88.2	1.1	115
35–39	97.8	91.0	92.9	87.5	2.2	106
40–44	97.0	94.7	96.0	94.5	3.0	83
45–49	95.5	83.9	83.0	80.1	2.3	73
Employment (last 12 months)						
Not employed	91.0	84.5	82.2	78.1	6.7	359
Employed for cash	96.9	92.1	90.2	86.4	2.3	538
Employed not for cash	*	*	*	*	*	17
Marital status						
Never married	90.3	84.6	83.2	78.9	7.7	329
Married or living together	97.1	92.5	90.0	85.8	1.6	534
Divorced/separated /widowed	(96.0)	(82.3)	(78.9)	(78.9)	(4.0)	50
Number of living children						
0	91.2	84.4	82.6	78.9	7.2	362
1–2	97.3	92.3	87.5	83.7	1.8	252
3–4	95.9	91.8	90.6	83.9	1.7	154
5+	96.8	92.6	92.6	90.6	2.0	145
Residence						
Urban	95.8	90.6	89.9	84.6	2.4	631
Rural	91.9	85.7	80.2	79.3	7.5	283
Education						
No education/primary	89.9	83.5	80.4	77.0	8.0	245
Secondary	95.7	90.2	88.4	84.2	2.8	524
More than secondary	98.0	94.6	92.8	88.7	1.4	145
Wealth quintile						
Lowest	93.9	86.2	79.8	78.9	5.2	182
Second	89.7	83.9	81.9	79.0	8.8	220
Middle	98.5	90.4	90.6	85.2	1.1	188
Fourth	96.5	94.5	91.2	85.1	0.7	159
Highest	95.5	92.7	93.3	87.9	2.5	164
Total 15–49	94.6	89.1	86.9	82.9	4.0	913
50+	95.6	89.4	91.6	86.8	4.3	93
Total men 15+	94.6	89.4	87.3	83.3	3.9	1,055

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

The following findings examine men's attitudes toward a husband's rights to certain behaviors when his wife refuses to have sex with him. This is important because such attitudes existing in society determine cultural differences and behaviors toward women. The study of such behaviors contributes to understanding some aspects of women's lives that have an impact on their health and well-being.

Table 13.4.8 shows the percentage of men who believe that a husband has a right to certain behaviors when his wife refuses to have sex with him when he wants her to. These behaviors include: getting angry and reprimanding her, refusing her financial support, forcing her to have sex, and having sex with another woman. The results show that only 4 percent of men agree that a man may engage in all four of these actions if his wife refuses sex, while over half agree with none of the actions.

Men believe that the most acceptable response if a wife refuses to have sex with her husband is for the husband to have sex with another woman (31 percent). Almost the same proportion of men (30 percent) say that it is justifiable for a man to refuse to provide financial support to his wife. Twenty-four percent say that they would get angry and reprimand their wife while 8 percent say that it is justifiable for a husband to force his wife to have sex with him.

Men in the wealthiest households appear to be the most tolerant of women's sexual autonomy, with less than 1 percent agreeing that a man is justified in taking all of the specified actions when his wife refuses sex compared to other men.

Table 13.4.8. Men's attitudes toward a husband's rights when his wife refuses to have sexual intercourse

Percentage of men aged 15–49 who consider that a husband has the right to certain behaviors when a woman refuses to have sex with him when he wants her to, by background characteristics, Marshall Islands 2007

Background characteristic	When a woman refuses to have sex with her husband, he has the right to:				Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number of men
	Get angry and reprimand her	Refuse her financial support	Use force to have sex	Have sex with another woman			
Age							
15–19	32.8	42.2	8.5	42.2	5.6	43.5	209
20–24	24.3	33.0	10.1	34.8	3.8	48.8	190
25–29	23.9	32.5	12.2	30.0	6.1	56.4	137
30–34	15.5	24.3	2.0	28.9	1.4	63.3	115
35–39	22.8	25.9	10.8	28.2	6.4	60.0	106
40–44	18.6	23.1	4.4	14.7	1.9	63.8	83
45–49	14.4	7.2	6.1	15.2	2.5	74.8	73
Employment (last 12 months)							
Not employed	27.9	37.3	7.8	36.2	4.5	50.9	359
Employed for cash	21.0	24.6	8.6	26.8	4.2	58.6	538
Employed not for cash	*	*	*	*	*	*	17
Marital status							
Never married	31.0	40.9	10.2	41.3	5.9	44.9	329
Married or living together	18.9	22.2	7.4	21.9	3.3	63.5	534
Divorced/separated/ widowed	(24.4)	(44.3)	(4.0)	(58.8)	(4.0)	(36.2)	50
Number of living children							
0	28.0	40.6	9.6	41.3	4.9	44.2	362
1–2	21.7	22.2	6.2	23.1	2.7	64.1	252
3–4	20.9	28.0	10.4	28.1	5.9	57.4	154
5+	18.7	20.4	6.4	21.7	3.7	65.4	145
Residence							
Urban	24.1	31.8	8.3	32.5	3.6	51.4	631
Rural	22.5	26.5	8.2	27.5	5.8	64.0	283
Education							
No education/primary	34.7	39.1	9.8	35.2	5.6	46.5	245
Secondary	22.8	30.5	8.0	32.3	4.3	54.3	524
More than secondary	7.6	14.0	6.8	18.6	1.9	73.8	145
Wealth quintile							
Lowest	22.5	27.5	8.5	28.0	4.9	61.2	182
Second	25.7	30.2	8.3	36.5	5.6	52.7	220
Middle	33.8	38.7	10.8	36.5	4.8	41.7	188
Fourth	21.1	35.6	9.5	29.5	4.9	53.9	159
Highest	12.7	18.1	3.8	21.5	0.5	69.1	164
Total 15–49	23.6	30.2	8.3	30.9	4.3	55.3	913
50+	6.0	16.3	4.2	18.3	3.0	73.7	93
Total men 15+	21.4	27.9	7.9	29.3	4.0	58.0	1,055

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

13.4.5. Women's empowerment indicators

The two sets of empowerment indicators – namely, women's participation in making household decisions and their attitude toward violence against women – can be summarized into two separate indices. The first index shows the number of decisions (see Table 13.4.3 for the list of decisions) in which women participate alone or jointly with their husband/partner. This index ranges in value from 0 to 4 and is positively related to women's empowerment. It reflects the degree of decision-making control that women are able to exercise in areas that affect their own lives and environments.

The second index, which ranges in value from 0 to 5, is the total number of reasons (see Table 13.4.5 for the list of reasons) for which the respondent feels that a husband is justified in hitting or beating his wife. A lower score on this indicator is interpreted as reflecting a greater sense of entitlement and self-esteem and a higher status of women.

Table 13.4.9 shows how these three indicators relate to each other. In general, the expectation is that women who participate in making household decisions are also more likely to have gender-balanced, equal, open, and free beliefs.

Table 13.4.9. Indicators of women's empowerment

Percentage of women aged 15–49 who participate in all decision-making, percentage who disagree with all reasons for justifying violence against women, and percentage who agree with all reasons for refusing sexual intercourse with husband, by value on each of the indicators of women's empowerment, Marshall Islands 2007

	Currently married women			
Empowerment indicator	Percentage who participate in all decision-making[1]	Number of women	Percentage who disagree with all the reasons justifying violence against women[2]	Number of women
Number of decisions in which women participate				
0	na	170	66.6	170
1–2	na	178	30.3	178
3–4	na	797	37.7	797
Number of reasons for which violence against women is considered to be justified				
0	56.8	468	na	717
1–2	63.6	180	na	252
3–4	53.3	345	na	455
5	56.6	153	na	200

na = not applicable

[1] Restricted to currently married women. See Table 13.5.1 for the list of decisions.

[2] See Table 13.6.1 for the list of reasons.

The relationships between these indices are not as expected. Higher decision-making is not associated with disapproval of violence against women, and vice versa. It is surprising to observe that women who participate in zero decisions are more likely to disagree with all the reasons for justifying violence against women than women who participate in 3–4 decisions (67 percent compared to 38 percent). Interestingly, women who totally disagree (zero reasons) with violence against women are equally likely to participate in all decision-making as women who agree with five reasons for violence against women (57 percent).

13.5 CURRENT USE OF CONTRACEPTION BY WOMEN'S EMPOWERMENT STATUS

A woman's ability to control her fertility and the use of contraceptive methods really depends on her decision and on joint decisions with her husband or partner. A woman's status and sense of empowerment have strong implications for her decision-making processes in areas that affect her life. Women who have less control of other aspects of their life are less likely to have strong control of their fertility and less choice in applying contraceptive methods without their husband's knowledge and cooperation.

Table 13.5 shows the relationship of each of the two indicators of women's empowerment to current use of contraceptive methods by currently married women aged 15–49 in the Marshall Islands. It is evident from the data that women who participate in more household decisions are more likely to use any method of contraception or any modern method of contraception than other women. Regarding the number of reasons for which violence against women is considered to be justified, women with more approval of it are more likely to use a method of contraception.

Table 13.5. Current use of contraception by women's status

Percent distribution of currently married women aged 15–49 by current contraceptive method, according to selected indicators of women's status, Marshall Islands 2007

			Modern methods							
Empowerment indicator	Any method	Any modern method	Female steriliz-ation	Male steriliz-ation	Temporary modern female methods[1]	Male condom	Any traditional method	Not currently using	Total	Number of women
Number of decisions in which women participate[2]										
0	41.2	38.4	24.6	0.2	12.8	0.8	2.9	58.8	100.0	170
1–2	42.8	39.4	20.9	0.0	17.5	1.1	3.4	57.2	100.0	178
3–4	45.7	43.9	25.9	0.3	16.1	1.6	1.8	54.3	100.0	797
Number of reasons for which violence against women is considered to be justified[3]										
0	42.9	40.4	27.7	0.1	11.3	1.3	2.5	57.1	100.0	468
1–2	39.8	38.2	19.9	0.0	15.6	2.7	1.6	60.2	100.0	180
3–4	47.3	44.7	22.4	0.5	20.8	1.1	2.6	52.7	100.0	345
5	49.5	48.2	28.2	0.4	18.6	1.0	1.3	50.5	100.0	153
Total	44.6	42.4	25.0	0.2	15.8	1.4	2.2	55.4	100.0	1,145

Note: If more than one method is used, only the most effective method is considered in this tabulation.

[1] Pill, IUD, injectables, implants, female condom, diaphragm, foam/jelly and lactational amenorrhea method

[2] See Table 13.5.1 for the list of decisions.

[3] See Table 13.6.1 for the list of reasons.

13.6. IDEAL FAMILY SIZE AND UNMET NEED BY WOMEN'S STATUS

Women's status and empowerment are strong factors that can influence their decision-making about aspects of life that affect their well-being. Many studies prove that these indicators (women's status and empowerment) are important factors for controlling and reducing women's fertility through two main pathways: (1) the desire to reduce family size as more women become more empowered; and (2) empowerment increasing the ability of women to satisfy their desire for an ideal family size through the use of family planning methods.

Women's fertility preferences or the number of children she desires are commonly lower than those of their partners. As a woman becomes more empowered to negotiate fertility decision-making, she has more control over contraceptive use and thus her chances of becoming pregnant

and giving birth. Table 13.6 shows how women's ideal family size and unmet need for family planning vary by the two indicators of women's empowerment.

Table 13.6. Women's empowerment and ideal number of children and unmet need for family planning

Mean ideal number of children for women aged 15–49 and the percentage of currently married women aged
15–49 with an unmet need for family planning, by indicators of women's empowerment, Marshall Islands 2007

Empowerment indicator	Mean ideal number of children[1]	Number of women	Percentage of currently married women with an unmet need for family planning[2]			Number of currently married women
			For spacing	For limiting	Total	
Number of decisions in which women participate[3]						
0	3.7	169	3.6	4.7	8.2	170
1–2	3.6	174	4.4	10.4	14.8	178
3–4	3.5	766	2.6	4.0	6.6	797
Number of reasons for which violence against women is considered to be justified[4]						
0	3.2	696	3.7	4.5	8.2	468
1–2	3.3	250	4.3	3.7	7.9	180
3–4	3.3	442	1.7	6.6	8.3	345
5	3.2	190	2.3	5.3	7.6	153
Total	3.3	1,578	3.0	5.1	8.1	1,145

[1] Mean excludes respondents who gave non-numeric responses.

[2] See Table 7.3.1 for the definition of unmet need for family planning.

[3] Restricted to currently married women. See Table 13.5.1 for the list of decisions.

[4] See Table 13.6.1 for the list of reasons.

Table 13.6 shows that findings on the relationship between empowerment indicators and fertility issues are mixed. The data indicate that there is no relationship between decision-making power and ideal number of children. Although women who participate in 3–4 decisions have the lowest unmet need, women who participate in no decisions have lower unmet need than those who participate in 1–2 decisions. Similarly, attitudes toward violence against women are not associated with either ideal number of children or unmet need. Women who do not agree with any of the reasons to justify violence against women have the same mean ideal number of children (3.2 children) as those who agree with all five reasons. Furthermore, the distribution of total unmet need for family planning is about the same (8 percent) for all women regardless of the number of reasons for which a woman believes that violence against women is justified.

13.7. WOMEN'S STATUS AND REPRODUCTIVE HEALTH CARE

Table 13.7 examines whether women's use of antenatal, delivery, and postnatal care services from health workers varies by their level of empowerment as measured by the two indicators of empowerment. In societies where health care is widespread, women's empowerment may not affect their access to reproductive health services; in other societies, however, increased empowerment of women is likely to increase their ability to seek out and use health services to better meet their own reproductive health goals, including the goal of safe motherhood.

Table 13.7 indicates that none of the two indicators of empowerment is strongly associated with antenatal care, although the high coverage of ANC in the Marshall Islands may reduce the

importance of women's empowerment in receiving this service. Similarly, a woman's likelihood of receiving assistance from a skilled provider at childbirth is not related to either of the two empowerment indicators – the number of decisions in which she participates or her attitude toward violence against women. In contrast, women who do not participate in any decisions and those who disagree (zero reasons) with violence against women are more likely to receive postnatal care than other women.

Table 13.7. Reproductive health care by women's empowerment

Percentage of women aged 15–49 with a live birth in the five years preceding the survey who received antenatal care, delivery assistance, and postnatal care from health personnel for the most recent birth, by indicators of women's empowerment, Marshall Islands 2007

Empowerment indicator	Received ANC from health personnel	Received delivery assistance from health personnel	Received postnatal care from health personnel within the first two days of delivery[1]	Number of women with a child born in the last five years
Number of decisions in which women participate				
0	93.9	98.7	70.0	102
1–2	95.0	91.6	47.2	110
3–4	95.4	93.8	58.2	438
Number of reasons for which violence against women is considered to be justified				
0	93.9	96.0	65.7	315
1–2	91.9	93.8	49.2	122
3–4	96.4	92.7	56.5	236
5	97.6	93.2	50.6	101
Total	94.8	94.3	58.4	774

Note: 'Health personnel' includes doctor, nurse, midwife, or health assistant/personnel.

[1] Includes deliveries in a health facility and not in a health facility.

CHAPTER 14. DOMESTIC VIOLENCE

In recent years, there has been increasing concern about violence against women in general, and domestic violence in particular, in both developed and developing countries. Not only has domestic violence against women been acknowledged worldwide as a violation of the basic human rights of women, but an increasing amount of research highlights the health burdens, intergenerational effects, and demographic consequences of such violence (United Nations 1993; Heise et al. 1994, 1998; Jejeebhoy 1998). Gender-based violence occurs across all socioeconomic and cultural backgrounds, and in many societies in the Pacific, including RMI, women are socialized to accept, tolerate, and even rationalize domestic violence and to remain silent about such experiences (Zimmerman 1994). Violence of any kind has a serious impact on the economy of a country: because women bear the brunt of domestic violence, they bear the health and psychological burdens as well. Victims of domestic violence are abused inside what should be the most secure environment – their own home.

Worldwide, women experience many forms of violence to a greater extent than men. Violence against women is often referred to as gender-based violence. Gender is the term used to denote the social characteristics assigned to men and women, which interact with other factors such as age, religion, nationality, ethnicity, and social background. Gender-based violence is therefore violence targeted to women or girls on the basis of their subordinate status in society (Heise et al. 1995).

WHO defines violence as 'the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, mal-development or deprivation' (Krug et al. 2002). Violence can be self-directed, such as suicidal behavior; interpersonal, such as family or intimate partner violence or violence between individuals who are not related; or collective, including violence by states and organized groups of people. Furthermore, the nature of violent acts may be physical, sexual, or emotional, or may involve neglect or deprivation.

The 2007 RMIDHS included a module of questions that focus on specific aspects of violence within this broad realm. The module addresses women's and men's experience of interpersonal violence, including acts of physical, sexual, and emotional violence. Information was collected on both domestic violence (also known as spousal violence or intimate partner violence) and violence by other family members or unrelated individuals. Specifically, this chapter presents the prevalence of women and men who have ever experienced interpersonal violence (physical violence since the age of 15 and lifetime experience of sexual violence), and the prevalence of women and men who have ever experienced intimate partner violence, or experienced it in the past 12 months. In addition, detailed information is presented on intimate partner violence, including the physical consequences of violence and when the partner violence started.

14.1. MEASUREMENT OF VIOLENCE

Collecting valid, reliable, and ethical data on intimate partner violence poses particular challenges because:

a) what constitutes violence or abuse varies across cultures and individuals;

b) a culture of silence surrounds domestic violence that can affect reporting; and

c) the sensitivity of the topic, concerns for the safety of respondents and interviewers when asking about domestic violence in a familial setting, and the protection of women who disclose violence all raise specific ethical concerns.

The responses by the 2007 RMIDHS to these challenges are described below.

14.1.1. The use of valid measures of violence

The 2007 RMIDHS measures violence by spouses and by other household members. Accordingly, information was obtained from ever-married women on violence by spouses and by others, and from never-married women on violence by anyone, including boyfriends.

International research on violence shows that intimate partner violence is one of the most common forms of violence against women. Thus, spousal/partner violence was measured in more detail than violence by other perpetrators by using a greatly shortened and modified Conflict Tactics Scale (CTS) (Straus 1990). Specifically, spousal violence was measured using the following set of questions for women:

(Does/did) your (last) husband/partner ever do any of the following things to you?

a) Slap you?

b) Twist your arm or pull your hair?

c) Push you, shake you, or throw something at you?

d) Punch you with his fist or hit you with something that could hurt you?

e) Kick you, drag you or beat you up?

f) Try to choke you or burn you on purpose?

g) Threaten or attack you with a knife, gun, or any other weapon?

h) Physically force you to have sexual intercourse with him even when you did not want to?

i) Force you to perform any sexual acts you did not want to?

In cases where the answer was yes, women were asked about the frequency of the act in the 12 months preceding the survey. A ‘yes’ answer to one or more of items (a) to (g) above constitutes evidence of physical violence, while a ‘yes’ answer to items (h) or (i) constitutes evidence of sexual violence.

Emotional violence among ever-married women was measured in a similar way, using the following set of questions:

(Does/did) your (last) husband ever:

a) Say or do something to humiliate you in front of others?

b) Threaten to hurt or harm you or someone close to you?

c) Insult you or make you feel bad about yourself?

This approach of asking about specific acts to measure different forms of violence has the advantage of not being affected by different understandings of what constitutes a summary term such as violence. By including a wide range of acts, this approach has the additional advantage of giving the respondent multiple opportunities to disclose any experience of violence.

In addition to these questions asked only of ever-married women, all women were asked about physical violence from persons other than their current or most recent spouse/partner with the question: *From the time you were 15 years old, has anyone [other than your (current/last) husband] hit, slapped, kicked, or done anything else to hurt you physically?* Respondents who answered this question in the affirmative were asked who had done this to them and the frequency of such violence during the 12 months preceding the survey.

All women were also asked: *At any time in your life, as a child or as an adult, has anyone ever forced you in any way to have sexual intercourse or perform any other sexual acts?* Respondents who said yes were then asked questions about the age at which this first happened and the person who committed the act.

Although this approach to questioning is generally considered to be optimal, the possibility of underreporting of violence, particularly of sexual violence, cannot be entirely ruled out in any survey.

14.1.2. Ethical considerations

Three specific protections were built into the questionnaire, in accordance with WHO's ethical and safety recommendations for research on domestic violence (WHO 2001):

a) Only one eligible person in each household was administered the questions on violence. In households with more than one eligible woman, the respondent to participate in the module was randomly selected through a specially designed simple selection procedure (based on the 'Kish Grid') that was built into the household questionnaire. Interviewing only one person in each household using the violence module provides assurance to the selected respondent that other respondents in the household will not talk about the types of questions the selected respondent is asked.

b) Informed consent was obtained from the respondent for the survey at the start of the individual interview. In addition, at the start of the violence section, the respondents were read an additional statement informing them that the proceeding questions could be sensitive and reassuring them of the confidentiality of their responses.

c) The violence module was implemented only if privacy could be obtained. If privacy could not be obtained, the interviewer was instructed to skip the module, thank the respondent,

and end the interview. If a translator was needed to conduct the interview, in order to maintain privacy, respondents were not asked questions from the violence module.

14.1.3. Special training for implementing the domestic violence module

Complete privacy was also essential for ensuring the security of the respondent and the interviewer. Asking about or reporting violence, especially in households where the perpetrator may be present at the time of interview, carries the risk of further violence. Accordingly, interviewers were provided specific training for implementing the violence module to enable the field staff to collect violence data in a secure, confidential, and ethical manner.

Although most women interviewed do not necessarily ask for help, some abused women may ask the interviewer for assistance. To prepare for this possibility, interviewers were trained to instruct the respondents that they could seek help from a Police, Probation and Social Welfare Officer. These officers are responsible for handling social welfare matters, including the welfare of children and families.

14.2. EXPERIENCE OF VIOLENCE BY WOMEN AGED 15–49 AND MEN AGED 15–54

This section of the chapter discusses women's experience of violence from any individual. The section begins by examining experience of physical violence since age 15 and physical violence during pregnancy, and continues by presenting data on lifetime experience of sexual violence. Background characteristics associated with increased risk of violence are also discussed.

14.2.1. Physical violence since age 15

Table 14.1 shows the distribution of women and men who have experienced physical violence since age 15, ever and in the previous 12 months, by background characteristics. About 3 in 10 women have experienced physical violence since the age of 15. More than half of these women, or 22 percent of all women, have experienced physical violence in the past 12 months. Four percent of women experience physical violence often, while 18 percent experienced violence occasionally in the past 12 months.

The proportion of women who have experienced physical violence is highest among women aged 25–39. However, women aged 15–19 are most likely to report having experienced physical violence in the past 12 months (30 percent). Although there is very little difference between employed and unemployed women in their experiences, women who are employed are a little more likely to report having experienced physical violence since age 15, while unemployed women are more likely to have experienced physical violence often in the past 12 months than women who are employed for cash (5 percent compared to 3 percent).

Marshallese women who are married or living with their partner are less likely to have ever experienced physical violence (27 percent) than women who are currently divorced/widowed/separated (58 percent). The pattern for recent violence is the same, with currently married women less likely to have experienced physical violence in the past 12 months (20 percent) and currently divorced/widowed/separated women more likely (51 percent). Parity is also related to experience of physical violence. Women with one or two living children are less likely to have experienced physical violence since age 15 and in the past 12 months than other

women. Marshallese women with no children are the most likely to have experienced physical violence since age 15 and in the past 12 months.

Table 14.1. Experience of physical violence

Percentage of women aged 15–49 who have ever experienced physical violence since age 15 and percentage who have experienced physical violence during the 12 months preceding the survey, by background characteristics Marshall Islands 2007

Characteristics	Percentage who have ever experienced physical violence since age 15[1]	Percentage who have experienced physical violence in the past 12 months			Number of women
		Often	Sometimes	Often or sometimes	
Age					
15–19	(34.5)	(7.8)	(22.0)	(29.8)	31
20–24	24.7	3.1	19.3	22.4	122
25–29	32.8	2.3	23.9	26.2	178
30–39	28.3	4.7	15.7	20.4	315
40–49	25.8	4.4	13.9	18.4	213
Employed last 12 months					
Not employed	28.1	4.7	17.6	22.2	537
Employed	28.6	3.0	17.8	20.9	323
Marital status					
Married or living together	26.8	3.0	17.3	20.2	818
Divorced/separated/widowed	(57.8)	(24.7)	(25.9)	(50.6)	42
Number of living children					
0	35.5	4.1	17.4	21.5	64
1–2	23.5	2.7	17.8	20.5	248
3–4	27.0	3.8	17.0	20.8	262
5+	32.0	5.4	18.3	23.7	287
Residence					
Urban	28.8	4.3	17.7	22.0	635
Rural	27.0	3.3	17.6	20.9	225
Education					
No education/primary	29.3	3.1	16.2	19.3	209
Secondary	29.2	4.6	19.2	23.8	523
More than secondary	23.0	3.3	13.7	17.1	128
Wealth quintile					
Lowest	27.9	2.0	20.7	22.8	158
Second	34.7	6.5	20.5	27.1	163
Middle	28.3	4.7	18.7	23.4	187
Fourth	27.1	4.3	15.1	19.4	172
Highest	24.1	2.6	13.9	16.4	180
Total	28.3	4.0	17.7	21.7	860

Note: Figures in parentheses are based on 25–49 unweighted cases.

[1] Includes in the past 12 months

Physical violence is higher among Marshallese women in urban areas than in rural areas (29 percent compared with 27 percent). Women in rural areas are more likely to have experienced physical violence in the past 12 months, and to have experienced it often during that time.

Experiencing physical violence ever and in the past 12 months is highest among women with secondary-level education (29 percent and 24 percent respectively). Although women with no or primary education and those with secondary education are equally likely to have ever experienced

physical violence, women with secondary education are more likely to have experienced physical violence in the past 12 months (24 percent compared to 19 percent). Marshallese women with 'more than secondary' education are least likely to have experienced physical violence since age 15 and also least likely to have experienced physical violence in the 12 months before the 2007 DHS (23 percent and 17 percent respectively). By wealth quintile, there is no clear pattern in women ever experiencing physical violence. Nevertheless, information from Table 14.1 shows that Marshallese women in the highest wealth quintile are the least likely to have experienced physical violence since age 15 or in the past 12 months.

Among women who have ever experienced physical violence and among women who have experienced sexual violence, Table 14.2 shows the percentages who reported specific persons who committed the violence. Since respondents could have experienced violence at the hands of several people, the percentages do not sum to 100. Among women who have experienced physical violence since age 15, 72 percent report that a current husband or partner committed physical violence against them, while 21 percent report they experienced violence by a former husband/partner. Other perpetrators commonly reported by women are parents or stepparents (20 percent), and sisters and brothers (6 percent).

A similar pattern is observed among women who have ever experienced sexual violence. Half of them (50 percent) report that a current husband or partner committed that sexual violence against them, while 5 percent report that a former husband/partner committed the violence. Other perpetrators commonly reported by women include strangers (2 percent).

Table 14.2. Persons committing physical and sexual violence

Among women aged 15–49 who have experienced physical violence since age 15, and among women aged 15–49 who have experienced sexual violence, percentage who report specific persons who committed the violence, Marshall Islands 2007

Person	Physical violence	Sexual violence
Current husband/partner	71.5	50.2
Former husband/partner	21.4	5.3
Current boyfriend	1.9	na
Former boyfriend	2.4	na
Father/stepfather	7.0	0.4
Mother/stepmother	13.1	na
Sister/brother	5.6	na
Other relative	1.8	0.5
Mother-in-law	1.1	na
Family friend	na	0.3
Stranger	na	1.7
Other	0.8	na
Number of women	243	168

na = not applicable

14.2.2. Physical violence during pregnancy

Women who have ever been pregnant were asked about their experience of physical violence during pregnancy. The findings presented in Table 14.3 indicate that overall, 7 percent of Marshallese women have experienced physical violence while pregnant. Results by background characteristics reveal that the likelihood of having experienced violence during pregnancy decreases with increasing age but increases with the number of living children. For instance, 9 percent of women aged 15–19 years are likely to have experienced violence during pregnancy compared to 5 percent of women aged 45–49 years. In contrast, 5 percent of women who have ever been pregnant and have 1–2 living children have experienced violence compared to 10 percent of women who have five or more children. This relationship is not unexpected, because women with more living children have had more pregnancies and thus greater exposure to the risk of physical violence during pregnancy.

Table 14.3. Violence during pregnancy

Among women aged 15–49 who have ever been pregnant, percentage who have ever experienced physical violence during pregnancy, by background characteristics, Marshall Islands 2007

Characteristics	Percentage who have ever experienced physical violence during pregnancy	Number of women who have ever been pregnant
Age		
15–19	(8.9)	25
20–24	8.5	112
25–29	8.0	165
30–39	6.8	310
40–49	5.3	203
Marital status		
Married or living together	6.9	775
Divorced/separated/widowed	(8.5)	40
Number of living children		
0	*	19
1–2	5.2	248
3–4	5.0	262
5+	9.7	287
Residence		
Urban	7.5	603
Rural	5.6	212
Education		
No education/primary	6.4	199
Secondary	7.0	501
More than secondary	8.0	115
Wealth quintile		
Lowest	5.7	149
Second	4.6	160
Middle	9.8	179
Fourth	10.5	163
Highest	3.9	164
Total	7.0	815

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

There appears to be little difference by marital status; however, married women or those in a living-together arrangement are less likely to have experienced physical violence during pregnancy than those who are divorced, separated, or widowed (7 percent compared to 9 percent). Eight percent of urban women have experienced physical violence while pregnant compared with 6 percent of rural women. Obviously, this urban/rural experience of violence during pregnancy reflects the prevalence of ever having experienced physical violence (see Table 14.1), with women in urban areas being most at risk. Relatively higher levels of physical violence during pregnancy are also found among women in the middle to the fourth wealth quintiles. Women with secondary or higher levels of education are more likely to have experienced physical violence during pregnancy than those with lower education.

14.2.3. Lifetime sexual violence

The 2007 RMIDHS investigated women's experience of sexual violence, including a question on whether the respondent's first sexual intercourse was forced against his or her will. Table 14.4 shows that first sexual intercourse is much more common among women aged less than 15–29. Eight percent reported that their first sexual intercourse was forced against their will. These women are more likely to have experienced the forced sexual encounter before first marriage or first cohabitation than at the time of first marriage or first cohabitation (9 percent compared to 6 percent).

Table 14.4. Force at sexual initiation

Percentage of women aged 15–49 who have ever had sexual intercourse who say that their first experience of sexual intercourse was forced against their will, by age at first sexual intercourse and whether the first sexual intercourse was at the time of first marriage or before, Marshall Islands 2007

Characteristics	Percentage whose first sexual intercourse was forced against their will	Number of women who have ever had sex
Age at first sexual intercourse		
<15	10.9	102
15–19	7.2	648
20–24	15.9	64
25–29	*	3
Missing	(3.0)	42
First sexual intercourse was:		
At the time of first marriage/first cohabitation	6.3	236
Before first marriage/first cohabitation[1]	9.1	582
Missing	(3.1)	42
Total	8.0	860

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Includes never-married women

In addition to the question on whether first sexual intercourse was forced, the 2007 RMIDHS included two sets of questions on sexual violence. Sexual violence limits women's ability to practice safer sex and to protect themselves from STIs and unwanted pregnancies (WHO 1997). The first set of questions asked only ever-married respondents about sexual violence committed by their current spouse if they were currently married, and their most recent spouse if they were

currently divorced, separated, or widowed. The second set asked all respondents whether they had ever, as a child or as an adult, experienced sexual violence. *Sexual violence here includes being forced to have sexual intercourse or perform any other sexual act against one's will.* Tables 14.5 and 14.6 present the results on experiencing any sexual violence. The results on sexual violence by a spouse or intimate partner are explored in Section 14.3, 'Spousal/intimate partner violence'.

Table 14.5. Experience of sexual violence

Percentage of women aged 15–49 who have ever experienced sexual violence, by background characteristics, Marshall Islands 2007

Characteristics	Percentage who have ever experienced sexual violence[1]	Number of women
Age		
15–19	(33.2)	31
20–24	21.0	122
25–29	20.7	178
30–39	21.6	315
40–49	12.7	213
Employed last 12 months		
Not employed	19.3	537
Employed	19.9	323
Marital status		
Married or living together	18.4	818
Divorced/separated/widowed	(41.2)	42
Residence		
Urban	19.2	635
Rural	20.6	225
Education		
No education/primary	24.4	209
Secondary	20.0	523
More than secondary	9.9	128
Wealth quintile		
Lowest	20.2	158
Second	19.1	163
Middle	28.5	187
Fourth	13.7	172
Highest	15.7	180
Total	19.5	860

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Including those whose sexual initiation was forced against their will

As shown in Table 14.5, almost one in five women (20 percent) have experienced sexual violence. Women aged 15–19 are more likely to have experienced sexual violence. Women who are employed, are divorced/separated/widowed, and live in rural areas are more likely than other women to have experienced sexual violence. The likelihood of experiencing sexual violence decreases with a woman's educational attainment, and is higher among women in the middle wealth quintiles than those in the lowest, followed by those in the highest quintiles.

14.2.4. Physical or sexual violence

Table 14.6 shows the percentages of respondents who have received different combinations of physical and sexual violence, by age. Overall, 17 percent of women aged 15–49 have experienced only physical violence, while 8 percent have experienced only sexual violence. Over 1 in 10 women (12 percent) have experienced both physical and sexual violence, and almost 4 in 10 have experienced either physical or sexual violence (36 percent). The likelihood of having experienced either physical or sexual violence decreases with age, from 50 percent among women aged 15–19 to 30 percent among women aged 40–49.

Table 14.6. Experience of different forms of violence

Percentage of women aged 15–49 who have experienced different forms of violence by current age, Marshall Islands 2007

Age	Physical violence only	Sexual violence only1	Physical and sexual violence1	Physical or sexual violence[1]	Number of women
15–19	(16.7)	(15.4)	(17.8)	(49.9)	31
20–24	14.7	10.9	10.1	35.6	122
25–29	16.6	4.6	16.1	37.4	178
30–39	17.4	10.8	10.8	39.0	315
40–49	17.2	4.1	8.6	29.9	213
Total	16.8	8.0	11.5	36.3	860

Note: Figures in parentheses are based on 25–49 unweighted cases.

[1] Including those whose sexual initiation was forced against their will

14.3. SPOUSAL/INTIMATE PARTNER VIOLENCE

This section of the chapter is devoted to violence perpetrated by intimate partners who are married to the respondent, or who live with the respondent as if married. Since spousal or intimate partner violence is the most common form of violence for women aged 15–49, the 2007 RMIDHS collected detailed information on the different types of violence experienced – physical, sexual, and emotional. Currently married women were asked about violence perpetrated by their current husband, and formerly married women were asked about violence perpetrated by their most recent husband.

14.3.1. Degree of marital control exercised by husbands

Marshallese women were asked about six specific acts of control exercised by their husbands or partners. The results are summarized in Table 14.7, which shows the percentage of ever-married women aged 15–49 whose husband/partner has ever demonstrated specific types of controlling behaviors, according to background characteristics of the respondent.

Four in 10 (40 percent) Marshallese women said that their husbands or partners insist on knowing where they are at all times. Similarly, almost 4 in 10 (38 percent) women reported that their husband or partner is jealous or angry if they talk to other men, and a similar proportion (36 percent) of women cited that they are frequently accused of being unfaithful. One in five respondents (20 percent) went on to say that they are not permitted to meet their female friends, and 17 percent said that their husband or partner does not trust them with any money.

Overall, the husbands or partners of almost a third of the respondents (32 percent) display three or more of the specific behaviors described in Table 14.7, compared to 44 percent who said that their husbands or partners do not display any of the specific behaviors listed. In terms of experience by age, there is little variation observed; however, women aged 20–39 are more likely to have experienced three or more of the specific behaviors listed compared to younger and older age groups. As for experience by employment status in the last 12 months, employed women are least likely to experience three or more of the specific behaviors listed (29 percent) compared to 34 percent for unemployed women. Meanwhile, women with zero living children and those with five children or more are very likely to have experienced three or more of the specific behaviors listed compared to women of other parities.

By marital status and duration, almost 6 in 10 divorced, separated, or widowed women are more likely to have experienced any three or more of the controlling behaviors listed, while those married more than once have experienced the second-highest level of three or more specific controlling behaviors listed. There is no specific pattern by marital duration; however, those women who have only married once and are in their first 0–4 years of marital duration and those married for 10 or more years are equally likely to have experienced three or more of the controlling behaviors listed in Table 14.7.

Table 14.7. Degree of marital control exercised by husbands

Percentage of ever-married women aged 15–49 whose husband/partner ever demonstrates specific types of controlling behaviors, according to background characteristics, Marshall Islands 2007

	Percentage of women whose husband:								
Characteristics	Is jealous or angry if she talks to other men	Frequently accuses her of being unfaithful	Does not permit her to meet her female friends	Tries to limit her contact with her family	Insists on knowing where she is at all times	Does not trust her with any money	Displays 3 or more of the specific behaviors	Displays none of the specific behaviors	Number of women
Age									
15–19	(26.7)	(29.7)	(15.0)	(8.9)	(39.8)	(26.1)	(26.9)	(49.7)	31
20–24	39.5	34.8	22.9	13.5	41.3	20.1	33.7	40.1	122
25–29	40.5	42.7	23.3	9.3	44.5	16.5	35.3	40.9	178
30–39	40.0	35.4	20.1	6.2	42.3	14.3	32.0	40.7	315
40–49	31.8	31.7	17.7	7.6	33.6	16.4	28.6	51.1	213
Employed last 12 months									
Not employed	40.6	36.2	20.7	9.4	41.8	15.9	33.6	43.4	537
Employed	32.5	35.1	19.9	6.5	38.0	17.6	29.2	43.7	323
Number of living children									
0	40.9	41.8	22.1	14.8	43.0	9.7	39.4	43.3	64
1–2	31.1	28.6	17.4	6.7	37.1	19.6	23.7	46.0	248
3–4	35.0	30.8	22.4	7.5	32.9	17.4	29.1	46.9	262
5+	44.6	44.9	20.7	9.0	49.5	14.6	39.8	38.5	287
Marital status and duration									
Currently married woman	36.1	34.5	18.1	7.4	39.7	16.2	30.7	44.8	818
..Married only once	33.4	31.7	15.6	7.5	37.3	14.7	27.8	47.7	619
....0–4 years	32.5	32.4	19.8	7.8	43.2	17.1	26.3	43.5	137
....5–9 years	34.9	29.3	13.6	8.1	29.9	18.4	27.3	49.8	156
....10+ years	33.1	32.6	14.8	7.1	38.3	12.0	28.7	48.4	327
..Married more than once	44.7	43.1	26.0	7.0	47.2	20.6	39.4	36.1	199
Divorced/separated/widowed	(67.2)	(61.7)	(66.4)	(27.9)	(55.6)	(24.5)	(58.5)	(15.1)	40
Residence									
Urban	38.1	34.6	19.4	6.0	40.6	14.1	30.8	44.4	635
Rural	36.0	38.7	23.1	14.9	39.8	23.3	34.9	41.1	225
Education									
No education/primary	38.5	39.3	20.7	12.2	43.5	19.8	34.9	40.9	209
Secondary	37.4	34.7	21.5	7.9	40.1	15.6	31.7	44.1	523
More than secondary	36.7	34.2	15.3	3.6	36.3	14.7	27.7	45.7	128

Table 14.7. (Continued)

Characteristics	Percentage of women whose husband: Is jealous or angry if she talks to other men	Frequently accuses her of being unfaithful	Does not permit her to meet her female friends	Tries to limit her contact with her family	Insists on knowing where she is at all times	Does not trust her with any money	Displays 3 or more of the specific behaviors	Displays none of the specific behaviors	Number of women
Wealth quintile									
Lowest	36.1	36.9	20.8	13.5	37.4	20.0	35.5	45.4	158
Second	45.6	45.4	24.9	10.6	49.7	27.2	44.1	33.7	163
Middle	35.1	36.9	21.7	7.6	44.8	14.9	30.7	42.2	187
Fourth	39.1	40.8	23.2	6.9	41.2	7.8	31.2	44.7	172
Highest	32.4	19.7	11.8	3.9	29.2	13.7	19.6	51.1	180
Total	37.5	35.7	20.4	8.3	40.4	16.5	31.9	43.6	860

Notes: Figures in parentheses are based on 25–49 unweighted cases. Women not currently married were asked questions about the behavior of their most recent husband/partner using the past tense.

More Marshallese women in rural areas than in urban areas (35 percent compared with 31 percent) are likely to have experienced three or more controlling behaviors from their husbands or partners. However, more urban women are likely to have experienced jealousy or anger leveled at them if they talk to other men than women in rural areas (38 percent compared to 36 percent). With increasing levels of education, controlling behaviors by husbands or partners are likely to decrease, as observed in Table 14.7. For example, the proportion of women who reported three or more controlling behaviors by their husband or partner for those with no or primary education is 35 percent compared to 28 percent for those with 'more than secondary' education. As for household wealth quintile, it appears that husbands' or partners' controlling behaviors experienced by women in the poorest households are high compared to the level reported by women in the wealthiest households (36 percent compared to 20 percent report three or more of the listed controlling behaviors).

14.3.2. Physical, sexual, or emotional violence

Respondents were asked about seven specific acts of physical violence, two of sexual violence, and three of emotional violence. The acts are listed in Table 14.8, with the results showing that 22 percent of women have experienced physical violence at the hands of their husband or partner, 11 percent have experienced sexual violence, and 15 percent have experienced emotional violence. Overall, almost one-third of ever-married women (30 percent) have experienced any kind of violence (physical, sexual, or emotional) by a husband or other intimate partner.

Among the physical acts of violence, slapping was the most commonly reported act, experienced by 17 percent of women, while 14 percent have been pushed or shaken or have had something thrown at them by their husbands or partners. Ten percent of women have been forced to have sex by their husbands/partners when they did not want to, and 10 percent of women have been humiliated in front of others.

Table 14.8. Forms of spousal violence

Percentage of ever-married women aged 15–49 who have experienced various forms of violence ever or in the
12 months preceding the survey, committed by their husband/partner, Marshall Islands 2007

		In the past 12 months[1]		
Forms of violence	Ever	Often	Sometimes	Often or sometimes
Physical violence				
Any	22.1	3.6	16.1	19.7
..Pushed her, shook her, or threw something at her	13.6	1.8	11.0	12.8
..Slapped her	17.2	2.3	13.5	15.7
..Twisted her arm or pulled her hair	8.3	1.4	5.8	7.2
..Punched her with his fist or hit her with something that could hurt her	11.3	1.7	8.6	10.3
..Kicked her, dragged her, or beat her up	6.7	0.8	5.7	6.5
..Tried to choke her or burn her on purpose	2.6	0.4	1.7	2.1
..Threatened or attacked her with a knife, gun, or any other weapon	2.9	0.7	2.0	2.7
Sexual violence				
Any	10.6	1.4	9.0	10.4
..Physically forced her to have sexual intercourse with him when she did not want to	9.7	1.1	8.2	9.3
..Forced her to perform sexual acts she did not want to	8.7	0.9	7.7	8.7
Emotional violence				
Any	14.7	3.3	10.5	13.8
..Said or did something to humiliate her in front of others	9.6	2.3	6.5	8.8
..Threatened to hurt or harm her or someone close to her	8.6	2.0	5.9	8.0
..Insulted her or made her feel bad about herself	3.9	0.7	2.9	3.6
Any form of physical and/or sexual violence	26.9	4.3	20.4	24.7
Any form of physical and sexual violence	5.9	1.7	4.1	5.8
Any form of emotional, physical and/or sexual violence	29.6	5.4	22.2	27.6
Any form of emotional, physical and sexual violence	3.7	1.5	2.2	3.7
Number of ever-married women	860	846	846	846

[1] Excludes widows

Table 14.9 shows the experience of ever-married women with different types of violence by background characteristics. Among ever-married women, as age increases their experience of emotional, physical, and sexual violence at the hands of their husband or other intimate partner reduces (42 percent for age 15–19 years reduces to 24 percent for age 45–49 years). Those who are employed are least likely to have experienced emotional, physical, and sexual violence at the hands of their husband or other intimate partner, while those who are unemployed are most likely to have experienced each type. As parity increases, Marshallese women are more likely to have experienced emotional, physical or sexual violence at the hands of their husband or other intimate partner. For example, one-quarter (25 percent) of women with zero parity have experienced emotional, physical, or sexual violence at the hands of their husband or other intimate partner compared to almost one-third of women with five or more living children.

Once again, marital status shows a strong relationship with experience of violence. Women who are divorced, separated, or widowed are most likely to have experienced each type of violence. This finding suggests that experience of violence may increase the likelihood of a relationship ending. Currently married women in their first marriage are less likely than currently married women who have married more than once to have experienced physical and sexual violence by their husbands (25 percent compared to 34 percent). Among women who have married only once, there is no clear pattern on their likelihood of having experienced each type of violence; however, those in their first 0–4 years are more likely to have experienced all kinds of abuse compared to those in longer duration of union.

Table 14.9. Spousal violence by background characteristics

Percentage of ever-married women aged 15–49 by whether they have ever experienced emotional, physical or sexual violence committed by their husband/partner, according to background characteristics, Marshall Islands 2007

Characteristics	Emotional violence	Physical violence	Sexual violence	Physical or sexual violence	Emotional, physical, or sexual violence	Number of women
Age						
15–19	(17.1)	(29.8)	(12.8)	(38.6)	(41.8)	31
20–24	11.8	19.7	11.4	26.5	27.5	122
25–29	17.5	28.4	16.6	32.5	34.6	178
30–39	13.3	21.8	10.8	28.1	30.1	315
40–49	15.7	17.6	4.5	18.7	23.9	213
Employed last 12 months						
Not employed	16.4	21.5	11.1	27.0	30.7	537
Employed	11.9	23.2	9.8	26.6	27.8	323
Number of living children						
0	12.2	21.2	5.9	21.6	24.9	64
1–2	9.5	20.7	11.4	26.4	28.0	248
3–4	16.5	22.5	12.1	28.5	30.2	262
5+	18.0	23.2	9.6	26.9	31.3	287
Marital status and duration						
Currently married woman	13.1	20.4	10.2	25.2	27.6	818
..Married only once	11.6	17.8	9.7	22.8	25.4	619
....0–4 years	18.6	26.8	11.7	32.9	35.2	137
....5–9 years	7.3	14.2	11.2	19.4	20.5	156
....10+ years	10.8	15.7	8.2	20.2	23.7	327
..Married more than once	17.7	28.7	11.4	32.6	34.2	199
Divorced/separated/widowed	(46.4)	(57.1)	(20.1)	(61.8)	(71.3)	40
Residence						
Urban	15.2	22.6	9.9	26.8	30.0	635
Rural	13.1	20.7	12.5	27.0	28.4	225
Education						
No education/primary	11.8	19.3	11.0	24.3	26.5	209
Secondary	16.8	24.3	11.7	29.3	32.1	523
More than secondary	10.4	17.7	5.3	21.3	24.2	128
Wealth quintile						
Lowest	12.4	22.9	13.4	29.2	29.7	158
Second	19.3	25.1	9.2	30.5	35.4	163
Middle	13.8	22.0	14.2	27.9	31.2	187
Fourth	17.6	22.4	10.5	26.8	29.5	172
Highest	10.5	18.6	5.7	20.5	22.4	180
Respondent's father beat her mother						
Yes	19.1	25.5	14.5	31.5	34.8	228
No	11.1	19.0	9.6	23.8	25.8	544
DK	25.2	32.7	6.7	33.7	39.2	88
Total	14.7	22.1	10.6	26.9	29.6	860

Notes: Figures in parentheses are based on 25–49 unweighted cases. Women not currently married were asked questions about the behavior of their most recent husband/partner using the past tense.

Rural women are less likely to have experienced each type of violence at the hands of their husband than urban women. Women with secondary education are more likely to have suffered each type of violence at the hands of their husband, while those with no or primary education are more likely than those with 'more than secondary' education to have experienced physical or sexual violence by their husband.

The results from Table 14.9 show also that as household wealth increases, the level of violence to women decreases. For instance, women in the highest wealth quintile are least likely to have experienced emotional, physical, or sexual violence at the hands of their husband or other intimate partner compared to women in lower wealth quintiles.

Respondents who in the past have witnessed or experienced violence committed by their father against their mother are more likely to have experienced emotional, physical, or sexual violence at the hands of their own husband or other intimate partner than respondents who have not (35 percent compared to 26 percent).

14.3.3. Frequency of spousal abuse

Table 14.10 show the percent distribution of ever-married respondents who reported emotional violence and who reported physical or sexual violence by current or most recent spouse in the 12 months preceding the survey and the frequency with which violence was experienced, according to selected background characteristics. Ninety-three percent of women who have ever experienced emotional violence by their current or most recent husband experienced such violence in the 12 months preceding the survey, and 22 percent of them experienced emotional violence often. Similarly, 90 percent of women who have ever experienced physical or sexual violence by their current or most recent husband experienced such violence in the 12 months preceding the survey, and 14 percent experienced such violence often.

For women who have ever experienced spousal emotional, physical, or sexual violence, those who are unemployed are more likely to have experienced such violence ‘often’ in the past 12 months than those who are employed for cash, who are more likely to have experienced such violence ‘sometimes’ in the past 12 months.

As regards women who have ever experienced spousal emotional, physical, or sexual violence by parity, the likelihood of experiencing such violence ‘often’ in the past 12 months increases with increasing parity (increasing number of living children).

Among women who have ever experienced spousal emotional, physical, or sexual violence, it appears that the likelihood of experiencing such violence in the past 12 months decreases with increasing age; however, more information is needed to confirm this pattern. As can be expected, the frequency of violence in the 12 months preceding the survey among women who report ever experiencing violence is higher for currently married women than for women who are separated or divorced. However, currently married women who have been married more than once are more likely than currently married women in their first marriage to have experienced violence in the past 12 months, and to have experienced it ‘sometimes’. Meanwhile, currently married women in their first marriage are more likely to have experienced violence in the past 12 months often than those who have been married more than once.

Differentials by residence show that women who have ever experienced spousal emotional, physical, or sexual violence are more likely to have experienced such violence in the 12 months preceding the survey, and to have experienced it more often if they live in urban areas than if they live in rural areas.

Women who have ever experienced spousal violence and have secondary-level education are more likely than women with no or primary-level education to have experienced spousal violence in the past 12 months and to have experienced violence often in the past 12 months.

Table 14.10. Frequency of spousal violence among those who report violence

Percent distribution of ever-married women aged 15–49 (excluding widows) who have ever suffered emotional violence committed by their husband/partner by frequency of violence in the 12 months preceding the survey and percent distribution of those who have ever suffered physical or sexual violence committed by their husband/partner by frequency of violence in the 12 months preceding the survey, according to background characteristics, Marshall Islands 2007

	Frequency of emotional violence in the past 12 months				Number of	Frequency of physical or sexual violence in the past 12 months				Number of
Characteristics	Often	Sometimes	Not at all	Total	women	Often	Sometimes	Not at all	Total	women
Age										
15–19	*	*	*	100.0	5	*	*	*	100.0	12
20–24	*	*	*	100.0	14	(13.9)	(83.7)	(2.3)	100.0	33
25–29	(6.6)	(87.8)	(5.6)	100.0	31	5.4	89.5	5.2	100.0	58
30–39	(23.7)	(76.1)	(0.2)	100.0	37	15.2	71.2	13.7	100.0	83
40–49	(28.1)	(56.6)	(15.4)	100.0	28	(19.5)	(62.4)	(18.2)	100.0	38
Employed last 12 months										
Not employed	29.4	66.4	4.1	100.0	80	15.4	75.4	9.2	100.0	138
Employed	(6.7)	(81.0)	(12.3)	100.0	37	10.2	78.9	10.8	100.0	85
Number of living children										
0	*	*	*	100.0	*	*	*	*	100.0	14
1–2	(18.4)	(71.5)	(10.1)	100.0	23	8.7	88.4	3.0	100.0	65
3–4	(18.2)	(71.7)	(10.2)	100.0	39	13.6	73.0	13.4	100.0	69
5+	(25.1)	(71.6)	(3.3)	100.0	46	16.9	69.5	13.6	100.0	75
Marital status and duration										
Currently married woman	19.0	76.4	4.5	100.0	106	10.9	80.0	9.2	100.0	206
..Married only once	26.5	66.8	6.8	100.0	70	12.7	76.4	10.9	100.0	141
....0–4 years	*	*	*	100.0	25	(18.0)	(80.3)	(1.7)	100.0	45
....5–9 years	*	*	*	100.0	11	(8.8)	(87.7)	(3.5)	100.0	30
....10+ years	(30.5)	(62.4)	(7.1)	100.0	34	10.8	68.6	20.6	100.0	66
..Married more than once	(4.2)	(95.8)	(0.0)	100.0	35	6.9	87.7	5.4	100.0	65
Divorced/separated	*	*	*	100.0	*	*	*	*	100.0	18
Residence										
Urban	25.0	69.5	5.5	100.0	87	15.1	73.6	11.2	100.0	164
Rural	14.6	74.9	10.5	100.0	29	8.9	85.2	5.9	100.0	60
Education										
No education/primary	(14.7)	(76.9)	(8.4)	100.0	23	5.6	75.4	19.0	100.0	48
Secondary	26.0	67.6	6.5	100.0	82	15.6	77.1	7.4	100.0	149
More than secondary	*	*	*	100.0	*	*	*	*	100.0	27
Total	22.4	70.9	6.7	100.0	116	13.5	76.7	9.8	100.0	224

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Table excludes widows who were not asked about spousal violence in the past 12 months, and includes one woman who was employed not for cash in the last 12 months.

14.3.4. Spousal violence by husband's characteristics

Table 14.11 shows the percentage of ever-married women aged 15–49 who have suffered emotional, physical, or sexual violence committed by their husband/partner according to his characteristics, marital characteristics, and women's empowerment indicators. Among respondents who experienced such violence, those whose husbands or partners have secondary or higher level of education are more likely to experience emotional, physical, or sexual violence than those whose husbands or partners are less educated.

A husband's alcohol consumption and, particularly, how often he gets drunk are associated with spousal violence. Interestingly, women who report that their husbands never drink are as likely to experience each type of spousal violence as women who report that their husbands drink. Spouses who report that their husbands get drunk often are more likely to have experienced each type of violence than those whose husbands get drunk sometimes. For example, 43 percent of women whose husbands get drunk very often have experienced emotional, physical, or sexual violence, compared with 38 percent of those whose husbands get drunk sometimes and 20 percent of those whose husbands do not drink.

Table 14.11. Spousal violence by husband's characteristics and empowerment indicators

Percentage of ever-married women aged 15–49 who have ever suffered emotional, physical or sexual violence committed by their husband/partner, according to his characteristics, marital characteristics, and empowerment indicators, Marshall Islands 2007

Characteristics	Emotional violence	Physical violence	Sexual violence	Physical or sexual violence	Emotional, physical, or sexual violence	Number of women
Husband's/partner's education						
No education/primary	11.1	17.2	9.6	23.5	27.0	210
Secondary+	15.6	23.9	10.7	27.8	30.0	641
Don't know/missing	*	*	*	*	*	7
Husband's/partner's alcohol consumption						
Does not drink	7.2	14.2	7.4	18.2	20.2	436
Drinks/never gets drunk	*	*	*	*	*	5
Gets drunk sometimes	20.7	29.0	13.7	35.2	38.2	377
Gets drunk very often	(29.8)	(36.9)	(15.5)	(36.9)	(43.3)	41
Spousal age difference[1]						
Wife older	10.5	16.8	8.0	20.8	25.0	177
Wife same age	10.3	19.9	10.6	24.5	24.5	83
Wife 1–4 years younger	15.0	24.0	9.8	29.0	30.8	311
Wife 5–9 years younger	12.4	18.3	12.1	24.3	26.6	168
Wife 10+ years younger	16.6	19.3	12.1	22.5	25.5	77
Spousal education difference						
Husband better educated	13.0	23.4	11.2	26.9	28.0	360
Wife better educated	17.9	25.2	9.3	29.5	32.9	283
Both equally educated	12.5	16.3	10.7	22.9	26.9	203
Number of marital control behaviors displayed by husband/partner						
0	2.4	4.6	0.5	5.0	5.5	374
1–2	11.7	21.1	14.1	30.7	33.2	212
3–4	29.1	44.0	18.1	51.4	57.9	216
5–6	50.2	56.3	34.5	61.9	64.9	59
Number of decisions in which women participate[1]						
0	21.5	21.3	8.9	23.6	27.3	121
1–2	14.1	21.8	13.6	28.6	31.0	130
3–4	11.1	19.9	9.6	24.7	26.8	568

Table 14.11. (Continued)

Characteristics	Emotional violence	Physical violence	Sexual violence	Physical or sexual violence	Emotional, physical, or sexual violence	Number of women
Number of reasons for which violence against women is considered to be justified						
0	15.7	20.2	5.7	21.0	24.9	351
1–2	19.0	29.6	3.8	30.6	35.2	138
3–4	9.9	17.5	17.9	28.7	29.8	265
5	17.2	30.3	17.3	36.8	37.2	106
Total	14.7	22.1	10.6	26.9	29.6	860

Notes: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Women not currently married were asked questions about the behavior of their most recent husband using the past tense.

[1]Currently married women

Total includes one woman with missing information on her husband's/partner's alcohol consumption and two women with missing information on spousal age difference, who are not shown separately.

Table 14.11 shows that spousal age differences are associated with violence. For example, wives who are older than or the same age as their husbands or partners are less likely to have experienced emotional, physical, or sexual violence than wives who are younger than their husbands or partners. As regards spousal education differences, wives who are equally as educated as their husbands or partners are less likely to have experienced all three types of violence than wives who are better educated than their husbands or spouses, followed next by wives whose husbands are more educated than them.

Marital control behaviors displayed by husbands/partners (as listed in Table 14.7) appear to be strongly associated with spousal violence. Table 14.11 shows clearly that as the number of marital control behaviors displayed by the husband/partner increases, the proportion of wives experiencing emotional, physical, or sexual violence also increases.

Women's participation in household or family decision-making probably does not have a strong association with emotional, physical, or sexual violence experienced at the hands of their husbands or partners. The results shown in Table 14.11 show some variation within each violence category; however, overall there is little variation in the experience of all three categories (emotional, physical, or sexual) as the number of decisions where women participate increases.

There is some relationship between the reasons for which violence against women is considered justified and the emotional, physical, or sexual violence women experience at the hands of their husbands or partners. As the evidence in Table 14.11 shows, in general as the number of reasons for which violence against women is considered justified increases, the proportion of women respondents who experience violence at the hands of their husbands or partners increases.

Meanwhile, Table 14.12 shows the percent distribution of ever-married women by number of years between marriage and first experience of physical or sexual violence by their husband/partner, if ever, according to marital status and duration.

Table 14.12. Onset of marital violence

Percent distribution of ever-married women by number of years between marriage and first experience of physical or sexual violence by their husband/partner, if ever, according to marital status and duration, Marshall Islands 2007

		Years between marriage1 and first experience of violence								
Marital status and duration	Experienced no violence	Before marriage[1]	<1 year	1–2 years	3–5 years	6–9 years	10+ years	Don't know/ missing	Total	Number of women
Currently married	74.8	8.3	3.4	5.9	4.2	1.0	0.5	1.8	100.0	818
..Married only once	77.2	8.3	2.9	4.6	3.6	1.0	0.5	2.0	100.0	619
....< 3 years	71.0	11.8	9.5	1.8	–	–	–	5.9	100.0	66
....3–5 years	71.1	9.6	6.2	4.2	3.6	na	na	5.2	100.0	96
....6–9 years	79.2	4.4	1.8	4.8	2.3	4.8	na	2.7	100.0	128
....10+ years	79.8	8.8	1.1	4.6	4.8	0.0	0.9	0.0	100.0	327
Married more than once	67.4	8.5	4.9	10.0	6.4	1.1	0.5	1.3	100.0	199
Divorced/separated /widowed	(38.2)	(14.4)	(8.1)	(33.4)	(3.4)	(0.0)	(2.5)	(0.0)	100.0	40
Total	73.1	8.6	3.6	7.2	4.2	1.0	0.6	1.7	100.0	860

Notes: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] For couples who are not married but are living together as if married, the time of marriage refers the time when the respondent first started living with her partner.

na = not applicable

Table 14.12 shows that overall, 25 percent of ever-married women have experienced physical or sexual violence by their husband/partner, of which 9 percent first experienced it before marriage, 7 percent experienced it 1–2 years after marriage, and 4 percent experienced it the first time either less than one year after marriage or 3–5 years after marriage.

14.3.5. Physical consequences of spousal violence

In the 2007 RMIDHS, women who had ever experienced spousal physical or sexual violence were asked about the physical consequences of the violence. Specifically, they were asked if, as a consequence of what their spouses did to them, they had ever had any of three different sets of injuries:

1) cuts, bruises, or aches;

2) burns, eye injuries, sprains, or dislocations; and

3) deep wounds, broken bones, broken teeth, or any other serious injury.

Table 14.13 shows the percentage of ever-married women who reported any spousal physical or sexual violence by the different types of physical consequences, according to the type of violence ever experienced.

Almost half the women (49 percent) who had ever experienced physical violence by their current or most recent husband/partner suffered any of the injuries asked about, compared with 33 percent of women who had suffered sexual violence, and 42 percent of women who had suffered physical or sexual violence. For each type of violence, women were most likely to report having experienced cuts, bruises, or aches, followed by eye injuries, sprains, dislocations, or burns. Women were least likely to report having suffered the most severe injuries; nevertheless, more than 1 in 10 women (ranging between 1 and 4 percent) who had ever experienced physical or

sexual violence by their husband reported suffering deep wounds, broken bones, broken teeth, or other serious injuries.

Table 14.13. Injuries to women due to spousal violence

Percentage of ever-married women aged 15–49 who have experienced specific types of spousal violence by types of injuries resulting from what their husband/partner did to them, according to the type of violence and whether they have experienced the violence ever and in the 12 months preceding the survey, Marshall Islands 2007

Characteristics	Cuts, bruises, or aches	Eye injuries, sprains, dislocations, or burns	Deep wounds, broken bones, broken teeth, or any other serious injury	Any of these injuries	Number of ever-married women
Experienced physical violence					
Ever[1]	46.3	20.8	4.0	49.3	190
In the past 12 months[2]	49.7	22.2	3.8	52.4	167
Experienced sexual violence					
Ever[1]	28.2	16.7	1.8	32.6	91
In the past 12 months[2]	28.3	17.3	1.9	32.9	88
Experienced physical or sexual violence					
Ever[1]	39.5	17.3	3.3	42.0	231
In the past 12 months[2]	41.2	17.9	3.0	43.4	209

[1] Includes in the past 12 months

[2] Excludes widows

14.3.6. Self-report of violence initiated by the respondent

The 2007 RMIDHS asked women about violence they themselves initiated against their spouse or other intimate partner. Specifically, women were asked, 'Have you ever hit, slapped, kicked, or done anything else to physically hurt your (last) husband/partner at times when he was not already beating or physically hurting you?' Respondents who said yes to this question were asked about the frequency of such violence in the 12 months preceding the survey.

Table 14.14a shows the percentage of ever-married women who have ever initiated violence against their current or most recent husband, and the percentage of ever-married women (excluding widows) who say that they have initiated spousal violence in the 12 months preceding the survey. Overall, 12 percent of ever-married women report that they have ever initiated physical violence against their current or most recent husband, while 9 percent say they have committed such violence in the 12 months preceding the survey.

Table 14.14a. Violence by women against their spouse

Percentage of ever-married women aged 15–49 who have committed physical violence against their husband/partner when he was not already beating or physically hurting them ever and in the past 12 months, according to women's own experience of spousal violence and their own and husband's/partner's characteristics, Marshall Islands 2007

	Percentage who have committed physical violence against their current or most recent husband/partner			
Characteristics	Ever	Number of women	In the past 12 months1	Number of women[1]
Woman's experience of spousal physical violence				
Ever	36.1	190	27.9	183
..In the last 12 months	38.9	167	31.2	160
..Not last 12 months/widow/ missing	*	*	*	23
Never	5.1	670	3.4	663
Current age				
15–19	(24.1)	(31)	(24.7)	31
20–24	17.6	122	15.3	122
25–29	9.1	178	5.1	178
30–39	11.3	315	8.4	309
40–49	10.4	213	6.0	206
Employed last 12 months				
Not employed	12.4	537	9.1	527
Employed	11.5	323	8.0	319
Number of living children				
0	15.8	64	15.8	64
1–2	11.8	248	10.2	247
3–4	9.6	262	6.2	255
5+	13.5	287	8.1	279
Residence				
Urban	12.5	635	9.2	623
Rural	10.5	225	7.3	223
Wealth quintile				
Lowest	13.2	158	10.9	157
Second	9.7	163	4.9	156
Middle	12.5	187	10.5	184
Fourth	14.2	172	10.7	170
Highest	10.3	180	6.4	179
Total	12.0	860	8.7	846

Notes: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Excludes widows

In comparing the statistics presented in Tables 14.14a and 14.14b, it is important to keep several things in mind. First, because of the survey's protections for respondents, interviewers did not collect violence data from couples. Only one person per household was administered the violence module, so it is not possible to compare an individual woman's report with her husband's experience. Second, the less thorough manner in which respondents were asked about spousal physical violence they initiated compared to violence they received (one question versus seven) is expected to result in a lower figure. Finally, underreporting by respondents of violence they initiated could also be an issue.

Table 14.14b. Violence by women against their spouse (continuation)

Percentage of ever-married women aged 15–49 who have committed physical violence against their husband/partner when he was not already beating or physically hurting them ever and in the past 12 months, according to women's own experience of spousal violence and their own and husband's/partner's characteristics, Marshall Islands 2007

	Percentage who have committed physical violence against their current or most recent husband/partner			
Characteristics	Ever	Number of women	In the past 12 months[1]	Number of women[1]
Marital status and duration				
Currently married woman	11.6	818	8.4	818
..Married only once	7.4	619	5.9	619
....0–4 years	12.6	137	11.8	137
....5–9 years	8.4	156	5.5	156
....10+ years	4.9	327	3.7	327
..Married more than once	24.7	199	16.1	199
Divorced/separated/widowed	19.3	40	18.2	28
Education				
No education/primary	9.3	209	7.6	204
Secondary	12.7	523	8.9	516
More than secondary	13.5	128	9.6	126
Husband's/partner's education				
No education/primary	10.1	210	7.5	210
Secondary+	12.7	641	9.1	630
Don't know/missing	*	*	*	5
Husband's/partner's alcohol consumption				
Does not drink	5.5	436	3.4	429
Drinks/never gets drunk	54.5	5	20.3	5
Gets drunk sometimes	18.3	377	14.9	369
Gets drunk very often	18.2	41	8.1	41
Spousal age difference[2]				
Wife older	9.8	177	6.1	177
Wife same age	12.7	83	8.4	83
Wife 1–4 years younger	13.2	311	9.5	311
Wife 5–9 years younger	11.2	168	8.3	168
Wife 10+ years younger	9.9	77	9.6	77
Spousal education difference				
Husband better educated	13.4	360	9.9	356
Wife better educated	12.0	283	8.0	276
Both equally educated	9.9	203	7.7	203
Don't know/missing	4.0	14	5.3	11
Total	12.0	860	8.7	846

Total includes women with missing information on husband's/partner's alcohol consumption, husband's/partner's education, and spousal age difference, which are not shown separately.

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Excludes widows

[2] Currently married women

Differentials in women initiating physical violence against their current or most recent husband are generally small. It is noted that women who report ever experiencing physical violence at the hands of their husband are more likely to report initiating violence against their husband than women who have never experienced physical violence by their husbands (36 percent compared with 5 percent). Younger women in urban areas and women with no children and who are in low

or the fourth wealth quintile households, have married more than once, are unemployed, and have more than secondary education, whose husband has higher education, whose husband drinks, whose age is younger than their husband's age, whose husband is better educated than them, and who are better educated than their husband are more likely to report initiating physical violence against their husband than other women.

14.4. HELP-SEEKING

All respondents who have ever experienced physical or sexual violence by any person were asked a series of questions about whether and from whom they sought help to try to end the violence. Table 14.15 shows that the proportion of women who experienced violence who sought help is 26 percent, compared to 52 percent who never told anyone and 14 percent who told someone. Women who experience physical violence only or who experience both physical and sexual violence are more likely to seek help than those who experience sexual violence only. In other words, those women who experience only sexual violence are least likely to have sought help or told someone. The percent of respondents who sought help generally increases with age and with number of living children, while unemployed women are the least likely to tell anyone if they have experienced violence.

Women who are divorced, separated, or widowed and have ever experienced physical or sexual violence are less likely than currently married women to seek help. Currently married women who have been married more than once are less likely than currently married women in their first marriage to seek help (51 percent compared to 55 percent).

Thirty-three percent of women in rural areas have sought help, compared with 23 percent of women in urban areas. However, more than half of all women were unable to seek help when they experienced violence (54 percent rural compared to 51 percent urban). Women with no or primary-level education were more likely not to seek help when they experienced violence than women with higher levels of education. Unemployed women were more likely to seek help than employed women. Meanwhile, there is no clear pattern with wealth quintiles and women's help-seeking behavior when they experience violence; however, women in the highest, second, and middle wealth quintiles were more likely than other income quintiles to not tell anyone when they experienced violence.

Table 14.15. Help-seeking to stop violence

Percent distribution of women aged 15–49 who have ever experienced physical or sexual violence by whether they have told anyone about the violence and whether they have ever sought help from any source to end the violence, according to type of violence and background characteristics, Marshall Islands 2007

	Never sought help					
Characteristics	Never told anyone	Told someone	Sought help from any source	Missing/don't know	Total	Number of women
Type of violence						
Physical only	51.0	17.2	31.7	0.2	100.0	144
Sexual only	53.5	4.9	5.1	36.5	100.0	69
Both physical and sexual	51.9	16.3	31.8	0.0	100.0	99
Age						
15–19	*	*	*	*	100.0	16
20–24	(47.9)	(2.6)	(40.0)	(9.5)	100.0	44
25–29	61.9	15.6	22.5	0.0	100.0	67
30–39	47.2	16.1	24.5	12.2	100.0	123
40–49	48.9	18.9	25.0	7.2	100.0	64
Employed last 12 months						
Not employed	55.4	11.1	28.1	5.4	100.0	190
Employed	46.3	19.0	22.3	12.4	100.0	122
Number of living children						
0	(56.8)	(4.2)	(29.7)	(9.3)	100.0	26
1–2	55.8	12.9	24.1	7.2	100.0	80
3–4	49.6	17.9	25.2	7.2	100.0	94
5+	49.6	14.3	26.8	9.3	100.0	112
Marital status and duration						
Currently married	53.5	12.2	26.1	8.3	100.0	286
..Married only once	54.9	10.0	23.4	11.7	100.0	190
....0–4 years	62.5	8.0	18.7	10.8	100.0	54
....5–9 years	(68.0)	(3.6)	(27.1)	(1.2)	100.0	38
....10+ years	45.6	13.7	24.5	16.2	100.0	97
..Married more than once	50.6	16.3	31.4	1.7	100.0	96
Divorced/separated/widowed	(34.2)	(36.1)	(23.2)	(6.4)	100.0	27
Residence						
Urban	51.1	15.9	23.2	9.8	100.0	230
Rural	53.8	9.4	33.3	3.5	100.0	82
Education						
No education/primary	64.6	9.8	23.0	2.6	100.0	76
Secondary	47.1	14.9	26.4	11.7	100.0	201
More than secondary	(51.3)	(19.6)	(29.1)	(0.0)	100.0	35
Wealth quintile						
Lowest	51.8	7.1	41.1	0.0	100.0	56
Second	57.6	11.1	24.2	7.2	100.0	73
Middle	(52.6)	(7.0)	(22.4)	(18.0)	100.0	76
Fourth	(38.2)	(32.4)	(23.6)	(5.7)	100.0	58
Highest	(58.0)	(16.5)	(19.0)	(6.5)	100.0	50
Total	51.8	14.2	25.8	8.1	100.0	312

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table 14.16 shows the sources of help among women who have ever experienced violence and have sought help, by type of violence. Among all those who sought help, over 6 in 10 women are most likely to have sought help from their own family (70 percent). The second-highest source of

help is a friend or neighbor, to whom over one-third (38 percent) of women go to seek help when they experience violence. Over 1 in 10 women are likely to seek help from their in-laws (11 percent).

Table 14.16. Sources from where help was sought

Percentage of women aged 15–49 who have ever experienced physical or sexual violence and sought help according to source from which help was sought, by type of violence experienced, Marshall Islands 2007

	Type of violence		
Source where help was sought	Any physical	Any sexual	Total
Own family	69.9	(58.6)	68.4
In-laws	11.3	(7.9)	11.2
Friend/neighbor	39.0	(52.7)	38.1
Doctor/medical personnel	0.0	(0.9)	0.4
Police	2.9	(0.0)	2.8
Other	3.5	(9.0)	4.6
Number of women	77	35	81

Note: Figures in parentheses are based on 25–49 unweighted cases.

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APPENDIX A. SAMPLE IMPLEMENTATION

Table A.1. Sample implementation: Women

Percent distribution of households and eligible women by results of the household and individual interviews, and household, eligible women and overall response rates, according to urban-rural residence and region, Marshall Islands 2007

	Residence		Region								
Result	Urban	Rural	Ailinglaplap	Enewetak	Kwajalein	Likiep	Majuro	Maloelap	Mili	Ujae	Total
Selected households											
Completed (C)	95.5	98.4	98.4	98.2	96.1	98.7	95.3	100.0	96.3	100.0	96.9
Household present but no competent respondent at home (HP)	0.9	0.0	0.0	0.0	1.3	0.0	0.7	0.0	0.0	0.0	0.4
Refused (R)	3.3	0.2	0.0	0.0	2.6	1.3	3.5	0.0	0.0	0.0	1.8
Household absent (HA)	0.2	1.4	1.6	1.8	0.0	0.0	0.2	0.0	3.8	0.0	0.8
Dwelling destroyed (DD)	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	578	563	187	110	154	75	424	60	80	51	1,141
Household response rate (HRR)[1]	95.8	99.8	100.0	100.0	96.1	98.7	95.7	100.0	100.0	100.0	97.8
Eligible women											
Completed (EWC)	90.9	96.2	96.1	97.9	90.2	97.7	91.3	95.6	95.0	94.4	93.3
Not at home (EWNH)	1.6	1.0	0.8	2.1	1.3	0.0	1.8	0.0	2.0	1.1	1.4
Postponed (EWP)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.1
Refused (EWR)	5.6	1.0	2.0	0.0	6.9	1.1	5.0	0.0	2.0	0.0	3.6
Incapacitated (EWI)	1.6	1.6	1.2	0.0	1.6	1.1	1.7	3.3	1.0	4.5	1.6
Other (EWO)	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	972	770	256	145	306	88	666	91	101	89	1,742
Eligible women response rate (EWRR)[2]	90.9	96.2	96.1	97.9	90.2	97.7	91.3	95.6	95.0	94.4	93.3
Overall response rate (ORR)[3]	87.2	96.1	96.1	97.9	86.7	96.4	87.4	95.6	95.0	94.4	91.2

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

[2] Using the number of eligible women falling into specific response categories, the eligible woman response rate (EWRR) is calculated as:

$$\frac{100 * EWC}{EWC + EWNH + EWP + EWR + EWPC + EWI + EWO}$$

[3] The overall response rate (ORR) is calculated as: ORR = HRR * EWRR/100

Table A.2. Sample implementation: Men

Percent distribution of households and eligible men by results of the household and individual interviews, and household, eligible men and overall response rates, according to urban-rural residence and region, Marshall Islands 2007

	Residence		Region								
Result	Urban	Rural	Ailinglaplap	Enewetak	Kwajalein	Likiep	Majuro	Maloelap	Mili	Ujae	Total
Selected households											
Completed (C)	95.0	98.6	97.9	98.3	93.7	100.0	95.4	100.0	97.6	100.0	96.7
Household present but no competent respondent at home (HP)	1.3	0.0	0.0	0.0	2.5	0.0	0.8	0.0	0.0	0.0	0.7
Refused (R)	3.8	0.0	0.0	0.0	3.8	0.0	3.8	0.0	0.0	0.0	2.0
Household absent (HA)	0.0	1.4	2.1	1.7	0.0	0.0	0.0	0.0	2.4	0.0	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	317	290	95	58	79	39	238	31	41	26	607
Household response rate (HRR)1	95.0	100.0	100.0	100.0	93.7	100.0	95.4	100.0	100.0	100.0	97.3
Eligible men											
Completed (EMC)	83.3	90.7	89.7	91.5	82.9	93.8	83.5	87.5	86.2	95.4	86.6
Not at home (EMNH)	4.0	2.6	2.3	1.9	4.8	0.0	3.7	8.9	3.1	1.5	3.4
Postponed (EMP)	0.4	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.2
Refused (EMR)	8.2	2.7	5.2	0.0	8.0	2.5	8.3	0.0	6.2	0.0	5.7
Partly completed (EMPC)	0.6	0.4	0.0	0.0	0.5	2.5	0.6	0.0	0.0	0.0	0.5
Incapacitated (EMI)	2.2	2.6	2.9	1.9	2.1	1.2	2.3	3.6	3.1	3.1	2.4
Other (EMO)	1.2	1.1	0.0	4.7	1.6	0.0	1.0	0.0	1.5	0.0	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	671	547	174	106	187	81	484	56	65	65	1,218
Eligible men response rate (EMRR)2	83.3	90.7	89.7	91.5	82.9	93.8	83.5	87.5	86.2	95.4	86.6
Overall response rate (ORR)3	79.1	90.7	89.7	91.5	77.6	93.8	79.6	87.5	86.2	95.4	84.3

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

[2] Using the number of eligible women falling into specific response categories, the eligible woman response rate (EWRR) is calculated as:

$$\frac{100 * EWC}{EWC + EWNH + EWP + EWR + EWPC + EWI + EWO}$$

[3] The overall response rate (ORR) is calculated as: ORR = HRR * EWRR/100

APPENDIX B. DATA QUALITY TABLES

Table B.1. Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Marshall Islands 2007

	Women		Men			Women		Men	
Age	Number	Percent	Number	Percent	Age	Number	Percent	Number	Percent
0	130	3.3	149	3.6	37	63	1.6	53	1.3
1	149	3.8	124	3.1	38	36	0.9	43	1.1
2	127	3.2	112	2.7	39	43	1.1	39	1.0
3	122	3.1	132	3.2	40	47	1.2	39	0.9
4	103	2.6	133	3.3	41	29	0.7	39	0.9
5	100	2.5	109	2.7	42	28	0.7	39	0.9
6	145	3.7	131	3.2	43	29	0.7	40	1.0
7	101	2.6	119	2.9	44	33	0.8	27	0.7
8	105	2.7	86	2.1	45	30	0.8	35	0.8
9	100	2.6	106	2.6	46	24	0.6	30	0.7
10	102	2.6	100	2.5	47	33	0.8	36	0.9
11	96	2.4	103	2.5	48	28	0.7	37	0.9
12	103	2.6	95	2.3	49	18	0.5	27	0.7
13	84	2.1	79	1.9	50	38	1.0	23	0.6
14	89	2.3	100	2.4	51	37	1.0	28	0.7
15	65	1.7	67	1.7	52	26	0.7	27	0.7
16	64	1.6	112	2.8	53	43	1.1	21	0.5
17	76	1.9	102	2.5	54	29	0.7	46	1.1
18	72	1.8	82	2.0	55	13	0.3	26	0.6
19	83	2.1	74	1.8	56	33	0.8	31	0.8
20	89	2.3	79	1.9	57	25	0.6	18	0.4
21	66	1.7	74	1.8	58	11	0.3	22	0.5
22	74	1.9	93	2.3	59	16	0.4	18	0.5
23	64	1.6	81	2.0	60	20	0.5	17	0.4
24	85	2.2	83	2.0	61	13	0.3	16	0.4
25	73	1.9	67	1.6	62	16	0.4	13	0.3
26	70	1.8	80	2.0	63	6	0.2	5	0.1
27	67	1.7	68	1.7	64	13	0.3	11	0.3
28	72	1.8	50	1.2	65	9	0.2	4	0.1
29	43	1.1	45	1.1	66	3	0.1	7	0.2
30	60	1.5	60	1.5	67	9	0.2	6	0.1
31	41	1.0	59	1.4	68	7	0.2	3	0.1
32	51	1.3	53	1.3	69	8	0.2	11	0.3
33	42	1.1	42	1.0	70+	54	1.4	35	0.9
34	43	1.1	52	1.3	DK/missing	2	0.0	1	0.0
35	46	1.2	49	1.2					
36	49	1.2	49	1.2	Total	3,922	100.0	4,071	100.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview.

Table B.2.1. Age distribution of eligible and interviewed women

De facto household population of women age 10-54, interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted), by five-year age groups, Marshall Islands 2007

Age group	Household population of women age 10-54	Interviewed women age 15-49		Percent of eligible women interviewed
		Number	Percentage	
10-14	473	na	na	na
15-19	360	323	19.0	89.7
20-24	379	350	20.6	92.5
25-29	325	311	18.3	95.6
30-34	237	223	13.1	94.1
25-39	237	218	12.8	91.8
40-44	166	151	8.9	90.9
45-49	132	123	7.2	93.0
50-54	173	na	na	na
15-49	1,837	1,699	100.0	92.5

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both household population of women and interviewed women are household weights. Age is based on the household schedule.

na = Not applicable

Table B.2.2. Age distribution of eligible and interviewed men

De facto household population of men aged 10-64, interviewed men aged 15-59 and percent of eligible men who were interviewed (weighted), Marshall Islands 2007

Age group	Household population of men age 10-64	Interviewed men age 15-59		Percentage of eligible men interviewed
		Number	Percentage	
10-14	253	na	na	na
15-19	231	217	20.5	94.2
20-24	215	192	18.2	89.5
25-29	158	134	12.7	85.3
30-34	148	125	11.8	84.9
25-39	114	97	9.1	85.0
40-44	104	84	8.0	81.4
45-49	81	68	6.4	84.2
50-54	66	48	4.5	72.5
55-59	58	42	3.9	71.6
60-64	36	na	na	na
15-59	1,174	1,059	97.7	90.2

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both household population of women and interviewed women are household weights. Age is based on the household schedule.

na = Not applicable

Table B.3. Completeness of reporting

Percentage of observations missing information for selected demographic and health questions (weighted), Marshall Islands 2007

Subject	Percentage with missing information	Number of cases
Month Only (births in last 15 years)	0.21	2,937
Month and Year (births in last 15 years)	0.12	2,937
Age at Death (deceased children born in the last 15 years)	0.00	113
Age/date at first union[1] (ever married women)	0.56	1,242
Age/date at first union[1] (ever married men)	0.60	723
Respondent's education (all women)	0.05	1,625
Respondent's education (all men)	0.00	1,055
Diarrhea in last 2 weeks (living children 0-59)	9.30	1,137

[1] Both year and age missing

Table B.4. Births by calendar years

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio by calendar year, according to living (L), dead (D), and total (T) children (weighted), Marshall Islands 2007

Calendar year	Number of births			Percentage with complete birth date[1]			Sex ratio at birth[2]			Calendar year ratio[3]		
	L	D	T	L	D	T	L	D	T	L	D	T
2007	57	0	57	100.0	100.0	100.0	65.9	0.0	65.2	na	na	na
2006	268	9	276	100.0	100.0	100.0	115.9	91.2	115.0	na	na	na
2005	230	7	237	100.0	100.0	100.0	94.0	100.9	94.2	99.1	78.6	98.3
2004	196	9	205	100.0	100.0	100.0	99.2	302.5	103.6	83.9	130.8	85.2
2003	238	7	244	100.0	100.0	100.0	104.0	186.5	105.6	118.9	83.8	117.5
2002	204	7	211	100.0	100.0	100.0	150.1	45.2	144.2	91.1	89.6	91.0
2001	210	9	219	99.4	95.9	99.3	112.0	131.6	112.7	104.3	108.3	104.4
2000	200	9	209	99.7	93.1	99.4	88.0	190.8	91.0	97.4	85.1	96.8
1999	199	13	212	100.0	78.9	98.7	83.5	62.4	82.0	106.6	113.1	107.0
1998	174	14	188	99.2	100.0	99.2	84.2	241.2	90.7	95.3	134.4	97.4
2003-2007	987	32	1,019	100.0	100.0	100.0	101.0	144.3	102.1	na	na	na
1998-2002	987	53	1,040	99.7	92.7	99.3	101.4	117.7	102.2	na	na	na
1993-1997	756	26	782	99.8	94.4	99.7	112.0	78.7	110.6	na	na	na
1987-1992	650	30	680	99.9	85.7	99.3	122.0	228.6	125.2	na	na	na
1986 et <	777	63	840	99.5	94.6	99.1	94.8	112.9	96.1	na	na	na
All	4,157	204	4,361	99.8	93.6	99.5	104.8	124.9	105.7	na	na	na

NA = Not applicable

[1] Both year and month of birth given

[2] (Bm/Bf)x100, where Bm and Bf are the numbers of male and female births, respectively

[3] [2Bx/(Bx-1+Bx+1)]x100, where Bx is the number of births in calendar year x

Table B.5. Reporting of age at death in days

Distribution of reported deaths under one month of age by age at death in days and the percentage of neonatal deaths reported to occur at ages 0-6 days, for five-year periods of birth preceding the survey (weighted), Marshall Islands 2007

	Number of years preceding the survey				
Age at death (days)	0-4	5-9	10-14	15-19	Total 0-19
<1	8	13	2	4	28
1	4	16	1	1	22
2	5	0	0	0	6
3	0	3	0	0	3
4	0	0	1	0	1
6	0	0	1	0	1
7	0	1	0	0	1
8	1	0	0	0	1
21	0	0	0	2	2
Total 0-30	18	33	5	8	63
Percent early neonatal[1]	96.3	96.5	100.0	79.3	94.7

[1] = 6 days / = 30 days

Table B.6. Reporting of age at death in months

Distribution of reported deaths under two years of age by age at death in months and the percentage of infant deaths reported to occur at age under one month, for five-year periods of birth preceding the survey, Marshall Islands 2007

	Number of years preceding the survey				
Age at death (months)	0-4	5-9	10-14	15-19	Total 0-19
<1a	18	33	5	8	63
1	0	2	0	0	2
2	0	2	1	0	3
3	2	6	0	0	9
4	0	1	0	3	4
6	2	0	0	0	2
7	2	1	0	1	3
8	0	0	0	2	3
9	1	0	2	0	3
10	0	0	1	0	1
11	0	1	0	0	1
12	1	2	0	1	3
13	1	1	0	0	1
14	0	0	0	1	1
22	1	0	0	0	1
1 Year	1	3	1	1	5
Total 0-11	25	45	10	13	93
Percent neonatal[1]	72.0	72.5	52.8	56.9	68.1

a Includes deaths under one month reported in days

[1] Under one month / under one year

APPENDIX C. LIST OF PEOPLE INVOLVED IN THE DHS

Name	Title
Carl Hacker	DHS Project Owner / Chairman
Justina Langidrik	DHS Project Co-Owner / Co-Chairwoman
Marie Maddison	Committee Member
Hemline Ysawa	Project Manager
Charles Paul	Project Management Trainee
Augustine Rilang	Assistant Project Manager
John Henry	Data Processing Manager
Caroline Neamon	Team Supervisor / Administration & Logistics
Joyceline Mellan	Team Supervisor
Elizabeth Go	Macro Consultant
Han Raggers	Macro Consultant
Bob Mackay	ABS Project Management Trainer
Graeme Brown	SPC Manager - Statistics and Demography Programme
Gerald Haberkorn	SPC Demographer
Arthur Jorari	SPC Population and Development Specialist
Kaobari Matikarai	SPC DHS Technical Officer
Leilua Taulealo	SPC Data Processing Officer
Wilbur Heine	Ministry of Health Contact Person
Dr. Godfrey Wadabu	Ministry of Health Contact Person/Presenter, Malnutrition
Johanna Rilang	Presenter, Family Planning
Beltalyna Abo	Presenter, Family Planning
Dr. Kevin Bisili	Presenter, Pre-natal Care
Dr. Peter Asuo	Presenter, Malnutrition
Caleb McClennen	GIS Consultant
Rito Akilang	DHS Map Producer
Centilina Bantol	Team Supervisor / Field Editor
Carrol deBrum	Team Supervisor / Field Editor
Immaculata deBrum	Field Editor / Enumerator
Nancy Kattil	Field Editor
Anita Dooley	Enumerator
Benson Langidrik	Enumerator / Data Keyer
Birita Bonbos	Enumerator / Data Keyer
Caroline Nathan	Enumerator
Clinton Kattil	Enumerator
Dave Dribo	Enumerator
Helenson Motlok	Enumerator
Hemity Dooley	Enumerator
Hemry Maddison	Enumerator
Herna Eliu	Enumerator
Irene Lee	Enumerator
Jeklin Hertin	Enumerator
Karen Kattil	Enumerator
Kyle Peter	Enumerator
Libwon Aikuij	Enumerator
Lina Reiher	Enumerator
Nitha Kios	Enumerator
Ready Jerbal	Enumerator
Rose Mieo Kumtak	Enumerator
Rosemary Latdrik	Enumerator
Stevenson Ned	Enumerator
Terryuko Minor	Enumerator
Tricia Takkie Menke	Enumerator
Whitney deBrum	Enumerator
Willie Langrine	Enumerator
Jimata Kabua, Jr.	Data Keyer
Rudolph Muller	Data Keyer
Tydie Hitto	Data Keyer
Aine Henry	Reserve Enumerator
Kenney Elcar	Reserve Enumerator

Team supervisors and field editors were also used as DHS Listers

APPENDIX D. RMI DHS QUESTIONNAIRES

16 JAN 2006

DEMOGRAPHIC AND HEALTH SURVEYS
HOUSEHOLD QUESTIONNAIRE

REPUBLIC OF MARSHALL ISLANDS
ECONOMIC POLICY, PLANNING AND STATISTICS OFFICE

IDENTIFICATION

NAME OF ATOLL

ZONE/VILLAGE

GPS UNIT NUMBER .....

GPS WAYPOINT NUMBER .....

LATITUDE (N) .....

LONGITUDE (E) .....

NAME OF HOUSEHOLD HEAD

HOUSEHOLD NUMBER .....

URBAN/RURAL .....
(URBAN=1, RURAL=2)

HOUSEHOLD SUB-SELECTED FOR MALE SURVEY? 1. Yes 2. No

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY
				MONTH
				YEAR
INTERVIEWER'S NAME				INT. NUMBER
RESULT*				RESULT
NEXT VISIT: DATE				TOTAL NUMBER OF VISITS
TIME				

*RESULT CODES:

1 COMPLETED
2 NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME
4 POSTPONED
5 REFUSED
6 DWELLING VACANT OR ADDRESS NOT A DWELLING
7 DWELLING DESTROYED
8 DWELLING NOT FOUND
9 OTHER _____ (SPECIFY)

TOTAL PERSONS IN HOUSEHOLD

TOTAL ELIGIBLE WOMEN

TOTAL ELIGIBLE MEN

LANGUAGE OF QUESTIONNAIRE
LANGUAGE OF INTERVIEW
LANGUAGE OF RESPONDENT
TRANSLATOR USED? 1 YES 2 NO

LINE NO. OF RESPONDENT TO HOUSEHOLD QUESTIONNAIRE

TEAM SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME	NAME		
DATE	DATE		

Introduction and Consent

Hello. My name is _____ and I am working with the Economic Policy, Planning and Statistics Office. We are conducting a national survey about various health issues. We would very much appreciate your participation in this survey. The survey usually takes between 10 and 15 minutes to complete.

As part of the survey we would first like to ask some questions about your household. All of the answers you give will be confidential. We hope you will participate in the survey since your views are important.

At this time, do you want to ask me anything about the survey?

May I begin the interview now?

Iakwe. Eta in _____ im ij jerb al ib b en Economic Policy, Planning and Statistics Office eo. Kemij kõmmane juon national survey ak ekatak im ekk_tb uuj eloñ kajitõk im melele ko ikijen ejmour. Emenin uteij b_ro elap elañe kwõnaj jib añ im b õk konam ilo ekatak in. Ekatak in ekkã an b õk

Ilo ekatak in, kem naaj mokta kajitõk jet kajitõk kin imõn jokwe in. Aolep uwaak ko am naj b ed ilo tinwadrik im b an ajeeded ñan jab rewot. Jej tomak im kõjatdikdik b we kwõnaj mõnõnõ in b õk konam ilo ekatak in einwot ke aolep melele ko am elap aer aorõk.

Ewõr ke am kajitõk kin ekatak in ilo tõre in? Imaroñ ke jino kajitokin eok kiiõ?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED	. .	1	RESPONDENT DOES NOT AGREE TO BE INTERVIEWED	. . .	2 ➡	END

HOUSEHOLD SCHEDULE

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX		RESIDENCE		AGE	IF AGE 15 OR OLDER: MARITAL STATUS	ELIGIBILITY		
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-22 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?		Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME) on his/her last birthday?	What is (NAME'S) current marital status? 1 = MARRIED OR LIVING TOGETHER 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER MARRIED AND NEVER LIVED TOGETHER	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF ALL MEN AGE 15 or over	CIRCLE LINE NUMBER OF ALL CHILDREN AGE 0-5
(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)
			M	F	Y N	Y N	IN YEARS				
01			1	2	1 2	1 2			01	01	01
02			1	2	1 2	1 2			02	02	02
03			1	2	1 2	1 2			03	03	03
04			1	2	1 2	1 2			04	04	04
05			1	2	1 2	1 2			05	05	05
06			1	2	1 2	1 2			06	06	06
07			1	2	1 2	1 2			07	07	07
08			1	2	1 2	1 2			08	08	08
09			1	2	1 2	1 2			09	09	09
10			1	2	1 2	1 2			10	10	10

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HOUSEHOLD

01 = HEAD
02 = WIFE OR HUSBAND OR PARTNER
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = OTHER RELATIVE
10 = STEPSON OR STEPDAUGHTER
11 = ADOPTED OR FOSTER CHILD
12 = ROOMER OR BOARDER
13 = HOUSEMATE OR ROOMMATE
14 = OTHER NON-RELATIVE
98 = DON'T KNOW

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX		RESIDENCE		AGE	IF AGE 15 OR OLDER MARITAL STATUS	ELIGIBILITY		
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-22 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?		Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME) on his/her last birthday?	What is (NAME'S) current marital status? 1 = MARRIED OR LIVING TOGETHER 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER MARRIED AND NEVER LIVED TOGETHER	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF ALL MEN AGE 15 or over	CIRCLE LINE NUMBER OF ALL CHILDREN AGE 0-5
(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)
			M	F	Y N	Y N	IN YEARS				
11			1	2	1 2	1 2			11	11	11
12			1	2	1 2	1 2			12	12	12
13			1	2	1 2	1 2			13	13	13
14			1	2	1 2	1 2			14	14	14
15			1	2	1 2	1 2			15	15	15
16			1	2	1 2	1 2			16	16	16
17			1	2	1 2	1 2			17	17	17
18			1	2	1 2	1 2			18	18	18
19			1	2	1 2	1 2			19	19	19
20			1	2	1 2	1 2			20	20	20

TICK HERE IF CONTINUATION SHEET USED ☐

(2A) Just to make sure that I have a complete listing. Are there any other persons such as small children or infants that we have not listed? YES → ADD TO TABLE NO ☐

2B) Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who usually YES → ADD TO TABLE NO ☐

2C) Are there any guests or temporary visitors staying here, or anyone else who stayed here last night, who have not been listed? YES → ADD TO TABLE NO ☐

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF

01 = HEAD	08 = BROTHER OR SISTER
02 = WIFE/HUSBAND/ PAR	09 = OTHER RELATIVE
03 = SON OR DAUGHTER	10 = STEPSON OR STEPDAUGHTI
04 = SON-IN-LAW OR DAUGHTER-IN-LAW	11 = ADOPTED OR FOSTER CHIL 12 = ROOMER OR BOARDER
05 = GRANDCHILD	13 = HOUSEMATE OR ROOMMATI
06 = PARENT	14 = OTHER NON-RELATIVE
07 = PARENT-IN-LAW	98 = DON'T KNOW

LN NO.	IF AGE 0-17 YEARS: SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS				IF AGE 5 YEARS OR OLDER: EVER ATTENDED SCHOOL		IF AGE 5-24 YEARS: CURRENT/RECENT SCHOOL ATTENDANCE				IF AGE 0-4 YEARS: BIRTH REGISTRATION
	Is (NAME)'s natural mother alive?	Does (NAME)'s natural mother usually live in this household or was she a guest last night? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER. IF NO RECORD '00'.	Is (NAME)'s natural father alive?	Does (NAME)'s natural father usually live in this household or was he a guest last night? IF YES: What is his name? RECORD FATHER'S LINE NUMBER. IF NO RECORD '00'.	Has (NAME) ever attended school? IF AGE 0-4 YEARS SKIP TO (22)	What is the highest level of school (NAME) has attended? SEE CODES BELOW. What is the highest grade/year (NAME) completed at that level? SEE CODES BELOW.	Did (NAME) attend school at any time during the (2006-2007) school year?	During this school year, what level and grade/year [is/was] (NAME) attending? SEE CODES BELOW.	Did (NAME) attend school at any time during the previous school year, that is, (2005-2006)?	During that school year, what level and grade/year did (NAME) attend? SEE CODES BELOW.	Does (NAME) have a birth certificate? IF NO, PROBE: Has (NAME)'s birth ever been registered with the civil authority? 1 = HAS CERT 2 = REGISTERED 3 = NEITHER 8 = DON'T KNOW
	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	21)	(22)
	Y N DK		Y N DK		Y N	LEVE GRADE	Y N	LEVE GRADE	Y N	LEVE GRADE	
01	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 101		
02	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 101		
03	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 101		
04	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 101		
05	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 101		
06	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 101		
07	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 101		
08	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 101		
09	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 101		
10	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 101		

CODES FOR Qs.17, 19, AND 21: EDUCATION

LEVEL

0 = PRESCHOOL/KINDERGARTEN
1 = ELEMENTARY
2 = HIGH SCHOOL
3 = VOCATIONAL
4 = COLLEGE
5 = MASTERAL
6 =PROFESSIONAL/DOCTORATE
8 = DON'T KNOW

GRADE

00 = LESS THAN 1 YEAR COMPLETED (USE '00' FOR Q. 17 ONLY THIS CODE IS NOT ALLOWED FOR QS. 19 AND
98 = DON'T KNOW

LN NO.	IF AGE 0-17 YEARS: SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS				IF AGE 5 YEARS OR OLDER: EVER ATTENDED SCHOOL		IF AGE 5-24 YEARS: CURRENT/RECENT SCHOOL ATTENDANCE				IF AGE 0-4 YEARS: BIRTH REGISTRATION
	Is (NAME)'s natural mother alive?	Does (NAME)'s natural mother usually live in this household or was she a guest last night? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER. IF NO RECORD '00'.	Is (NAME)'s natural father alive?	Does (NAME)'s natural father usually live in this household or was he a guest last night? IF YES: What is his name? RECORD FATHER'S LINE NUMBER. IF NO RECORD '00'.	Has (NAME) ever attended school? IF AGE 0-4 YEARS SKIP TO (22)	What is the highest level of school (NAME) has attended? SEE CODES BELOW. What is the highest grade/year (NAME) completed at that level? SEE CODES BELOW.	Did (NAME) attend school at any time during the (2006 - 2007) school year?	During this school year, what level and grade/year [is/was] (NAME) attending? SEE CODES BELOW.	Did (NAME) attend school at any time during the previous school year, that is, (2005 - 2006)?	During that school year, what level and grade/year did (NAME) attend? SEE CODES BELOW.	Does (NAME) have a birth certificate? IF NO, PROBE: Has (NAME)'s birth ever been registered with the civil authority? 1 = HAS CERT 2 = REGISTERED 3 = NEITHER 8 = DON'T KNOW
	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	21)	(22)
	Y N DK		Y N DK		Y N	LEVE GRADE	Y N	LEVE GRADE	Y N	LEVE GRADE	
11	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 10		
12	1 2 8 GO TO 14		1 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 10		
13	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 10		
14	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 10		
15	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 10		
16	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 10		
17	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 10		
18	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 10		
19	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 10		
20	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 101		1 2 GO TO 20		1 2 GO TO 10		

CODES FOR Qs.17, 19, AND 21: EDUCATION

LEVEL

0 = PRESCHOOL/KINDERGARTEN
1 = ELEMENTARY
2 = HIGH SCHOOL
3 = VOCATIONAL
4 = COLLEGE
5 = MASTERAL
6 =PROFESSIONAL/DOCTORATE
8 = DON'T KNOW

GRADE

00 = LESS THAN 1 YEAR COMPLETE (USE '00' FOR Q. 17 ONLY. THIS CODE IS NOT ALLOWED FOR QS. 19 AND 21
98 = DON'T KNOW

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES		SKIP
101	What is the main source of drinking water for members of your household? *Ia eo ekkã an ri-mwin eb b õk aer dren in daak jene?*	PIPED WATER		
		PIPED INTO DWELLING	11	
		PIPED TO YARD/PLOT	12	→ 106
		PUBLIC TAP/STANDPIPE	13	
		FROM NEIGHBOR	14	
		TUBE WELL OR BOREHOLE	21	→ 103
		DUG WELL		
		PROTECTED WELL	31	
		UNPROTECTED WELL	32	
		RAINWATER	41	→ 106
		RAINWATER & PIPED WATER		
		PIPED INTO DWELLING	51	
		PIPED TO YARD/PLOT	52	→ 106
		PUBLIC TAP/STANDPIPE	53	
		FROM NEIGHBOR	54	→ 103
		TANKER TRUCK	61	→ 103
		VENDOR PROVIDED/BOTTLED WATER	71	
		OTHER _____ (SPECIFY)	96	→ 103
102	What is the main source of water used by your household for other purposes such as cooking and handwashing? *Ia eo ekkã an ri-mwin eb b õk aer dren in kõmmane jerb al ko ɪmweo eɪnwõt kõmaat ak kwalkwõl?*	PIPED WATER		
		PIPED INTO DWELLING	11	
		PIPED TO YARD/PLOT	12	→ 106
		PUBLIC TAP/STANDPIPE	13	
		FROM NEIGHBOR	14	
		TUBE WELL OR BOREHOLE	21	
		DUG WELL		
		PROTECTED WELL	31	
		UNPROTECTED WELL	32	
		RAINWATER	41	→ 106
		RAINWATER & PIPED WATER		
		PIPED INTO DWELLING	51	
		PIPED TO YARD/PLOT	52	→ 106
		PUBLIC TAP/STANDPIPE	53	
		FROM NEIGHBOR	54	
		TANKER TRUCK	61	
		OTHER _____ (SPECIFY)	96	
103	Where is that water source located? *Ia eo jɪkɪn eb b õk dren ɪn ej b ed ɪe?*	IN OWN DWELLING	1	
		IN OWN YARD/PLOT	2	→ 106
		ELSEWHERE	3	
104	How long does it take to go there, get water, and come back? *Ewɪ aitoken etal nan jɪkɪn eb b õk dren eo, b õk dren eo im roltok?*	MINUTES	[ ][ ][ ]	
		DON'T KNOW	998	
105	Who usually goes to this source to fetch the water for your household? *Wõn eo ekkã an etal im b õktok dren ñan ri-mwin?*	ADULT WOMAN	1	
		ADULT MAN	2	
		FEMALE CHILD UNDER 15 YEARS OLD	3	
		MALE CHILD UNDER 15 YEARS OLD	4	
		OTHER _____ (SPECIFY)	6	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES		SKIP
106	Do you do anything to the water to make it safer to drink? *Elon ke wãwein eo kwõj kõmmane nan dren eo bwe en erreo ñan idaak?*	YES ..... NO ..... DON'T KNOW	1 2 8	→ 108
107	What do you usually do to make the water safer to drink? *Ta eo ekkã am kõmmane ñan kõkmanmanlok dren eo bwe en erreo nan idaak?* Anything else? *Ebar ke wõr?* RECORD ALL MENTIONED.	BOIL ..... ADD BLEACH/CHLORINE ..... STRAIN THROUGH A CLOTH ..... USE WATER FILTER (CERAMIC/ SAND/COMPOSITE/ETC.) ..... SOLAR DISINFECTION ..... LET IT STAND AND SETTLE ..... OTHER _____ (SPECIFY) DON'T KNOW	A B C D E F X Z	
108	What kind of toilet facility do members of your household usually use? *Kain imõn bwidrej rõt ri-mwin rej kõjerbale?*	FLUSH OR POUR FLUSH TOILET FLUSH TO PIPED SEWER SYSTEM ..... FLUSH TO SEPTIC TANK ..... PIT LATRINE ..... SOMEWHERE ELSE ..... PIT LATRINE CLOSED PIT ..... PUBLIC SHARED TOILET ..... BUCKET LATRINE ..... NO FACILITY/BEACH/BUSH ..... OTHER _____ (SPECIFY)	 11 12 13 14 21 31 41 51 96	 → 110 → 111
109	Do you share this toilet facility with other households? *Komij ke share e imõn bwidrej in ibben imoko jet?*	YES ..... NO	1 2	→ 111
110	How many households use this toilet facility? *Jete em ko rej kõjerbal imõn bwidrej in?*	NO. OF HOUSEHOLDS IF LESS THAN 10 ..... 10 OR MORE HOUSEHOLDS ..... DON'T KNOW	[0][ ] 95 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES			SKIP
111	Does your household have: *Ewõr ke men kein imwin im ej/rej emmõn wõt aer jerbal:*		YES	NO	
	Electricity?	ELECTRICITY …… …	1	2	
	A communication antenna?	COMMUNICATION ANTENNA .	1	2	
	A table?	TABLE …… …	1	2	
	A chair?	CHAIR …… …	1	2	
	A sofa?	SOFA …… …	1	2	
	A bed?	BED …… …	1	2	
	A cupboard or cabinet?	CUPBOARD OR CABINET . .	1	2	
	A radio?	RADIO …… . …	1	2	
	A CB or VHF radio?	CB OR VHF RADIO . . … .	1	2	
	A CD/cassette player?	CD/CASSETTE PLAYER . . .	1	2	
	A Video or DVD player?	VIDEO OR DVD PLAYER . …	1	2	
	A television?	TELEVISION …… …	1	2	
	A mobile telephone?	MOBILE TELEPHONE … …	1	2	
	Landline telephone?	LANDLINE TELEPHONE …	1	2	
	A walkie talkie?	WALKIE TALKIE . . … …	1	2	
	A refrigerator?	REFRIGERATOR ……. …	1	2	
	A deep freezer?	DEEP FREEZER . . … .	1	2	
	A gas or electric stove?	GAS OR ELECTRIC STOVE …	1	2	
	A desk/laptop computer?	DESK/LAPTOP COMPUTER …	1	2	
	An internet connection?	INTERNET CONNECTION …..	1	2	
	A washing machine?	WASHING MACHINE ……	1	2	
	A sewing machine?	SEWING MACHINE . . … .	1	2	
	A microwave oven?	MICROWAVE OVEN . . … .	1	2	
	A dryer?	DRYER ……	1	2	
	Solar panel/equipment?	SOLAR PANEL/EQUIPMENT	1	2	
	An electric generator?	ELECTRIC GENERATOR . …	1	2	
112	What type of fuel does your household mainly use for cooking? *Ta eo kom ej kõjerbal ñan kõmat?*	ELECTRICITY ……		01	
		PROPANE GAS ……		02	115
		SOLAR ENERGY ……		03	
		KEROSENE ……		04	
		CHARCOAL ……		05	
		WOOD ……		06	
		COCONUT HUSKS/SHELLS ……		07	
		NO FOOD COOKED IN HOUSEHOLD ……		95	117
		OTHER _____ (SPECIFY)		96	
113	In this household, is food cooked on an open fire, an open stove or a closed stove? *Ilo mwin, komij kõmat lal ke, kõmat ilo stove ko ejelok chimney ak jikin kadriwõjlok baat ko ke, (einwõt stove kerosene) ke, ilo stove ko ewõr aer chimney ak cover?* PROBE FOR TYPE.	OPEN FIRE ……		1	
		OPEN STOVE ……		2	
		CLOSED STOVE WITH CHIMNEY …		3	115
		OTHER _____ (SPECIFY)		6	
114	Does this (fire/stove) have a chimney, a hood, or neither of these? *Ewõr ke an stove in chimney ak jikin kadriwõjlok baat ko?*	CHIMNEY ……		1	
		HOOD ……		2	
		NEITHER ……		3	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
115	Is the cooking usually done in the house, in a separate building, or outdoors? *Ekkã an ri-mwin kõmat iloan mwin ke ak ilo juon em eo ejjenolok ke ak ilo nabõj?*	IN THE HOUSE ..... 1 IN A SEPARATE BUILDING ..... 2 OUTDOORS ..... 3 OTHER _____ 6 (SPECIFY)	117
116	Do you have a separate room which is used as a kitchen? *Ejjenolok ke jikin kõmat eo?*	YES ..... 1 NO 2	
117	MAIN MATERIAL OF THE FLOOR. RECORD OBSERVATION.	NATURAL FLOOR EARTH/SAND ..... 11 RUDIMENTARY FLOOR WOOD PLANKS ..... 21 WOOD PLANKS WITH VINYL CARPET.. 22 FINISHED FLOOR PARQUET OR POLISHED WOOD ..... 31 VINYL OR ASPHALT STRIPS ..... 32 CERAMIC TILES ..... 33 CEMENT ..... 34 CARPET ..... 35 OTHER _____ 96 (SPECIFY)	
118	MAIN MATERIAL OF THE ROOF. RECORD OBSERVATION.	NATURAL ROOFING NO ROOF ..... 11 THATCH/PALM/PANDANUS LEAF ... 12 RUDIMENTARY ROOFING CANVASS/TARPOULINE ..... 21 WOOD PLANKS ..... 22 CARDBOARD ..... 23 FINISHED ROOFING METAL ..... 31 WOOD ..... 32 CALAMINE/CEMENT FIBER ..... 33 CERAMIC TILES ..... 34 CEMENT ..... 35 ROOFING SHINGLES ..... 36 OTHER _____ 96 (SPECIFY)	
119	MAIN MATERIAL OF THE EXTERIOR WALLS. RECORD OBSERVATION.	NATURAL WALLS NO WALLS ..... 11 PANDANUS LEAF/PALM/TRUNKS ... 12 DIRT ..... 13 RUDIMENTARY WALLS PLYWOOD ..... 21 CARDBOARD ..... 22 REUSED WOOD ..... 23 CANVAS/TARPOULINE ..... 24 MASENITE ..... 25 DRY WALL ..... 26 FINISHED WALLS ..... CEMENT ..... 31 STONE WITH LIME/CEMENT ..... 32 BRICKS ..... 33 CEMENT BLOCKS ..... 34 WOOD PLANKS/SHINGLES ..... 35 OTHER _____ 96 (SPECIFY)	
120	How many rooms in this household are used for sleeping? *Jete room kõjerbal ñan kiki ilo mwin?*	ROOMS ..... [ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES			SKIP
121	Does any member of this household own: *Ewõr ke ian ri-mwin ewõr men kein ibbeir:*		YES	NO	
	A watch? *watch?*	WATCH	1	2	
	A bicycle? *baajkle*	BICYCLE	1	2	
	A motorcycle or motor scooter? *otobai?*	MOTORCYCLE/SCOOTER .	1	2	
	A fishing gear? *kein eñod ko?*	FISHING GEAR	1	2	
	A car, truck, or van? *waan ettõr?*	CAR/TRUCK	1	2	
	A boat with motor? *loan ibben engine?*	BOAT WITH MOTOR	1	2	
	A sailing canoe? *Tipñol?*	SAILING CANOE	1	2	
	A paddling canoe? *kõrkõr?*	PADDLING CANOE	1	2	
	A rear-cart? *driaka?*	REAR-CART	1	2	
	Agricultural/farm equipment? *Kein jerbal ko ilo jikin kallip ak atke kilep ko?*	AGRI./FARM EQUIPMENT .	1	2	
122	Does any member of this household own: *Ewõr ke ian ri-mwin ewõr jikin:*		YES	NO	
	a: residential land?	RESIDENTIAL LAND	1	2	
	b: agricultural land?	AGRICULTURAL LAND	1	2	
	c. commercial land?	COMMERCIAL LAND	1	2	
123	Does this household own any livestock, herds, other farm animals, or poultry? *Ewõr ke nejin ri-mwin menin mour ko einwõt bao ak pig?*	YES		1	
		NO		2	→ 125
124	How many of the following animals does this household own? *Jete uan menin mour kein ewõr nejimi?* IF NONE, ENTER '00'. IF MORE THAN 95, ENTER '95'. IF UNKNOWN, ENTER '98'.				
	Pigs	PIG			
	Ducks	DUCKS			
	Chickens?	CHICKEN ...			
125	Does any member of this household have a bank account? *Ewõr ke ian ri-mwin ewõr an account ilo bank ko?*	YES		1	
		NO		2	

MALNUTRITION EXAMINATION FOR CHILDREN AGE 0-5

		CHILD 1	CHILD 2	CHILD 3
201	CHECK COLUMN 11. RECORD THE LINE NUMBER AND AGE FOR ALL ELIGIBLE CHILDREN 0-5 YEARS IN QUESTION 202. IF MORE THAN SIX CHILDREN, USE ADDITIONAL QUESTIONNAIRE(S).			
202	LINE NUMBER FROM COLUMN 11	LINE NUMBER	LINE NUMBER	LINE NUMBER ....
	NAME FROM COLUMN 2	NAME	NAME	NAME
203	What is (NAME'S) birth date?	DAY	DAY	DAY .....
		MONTH	MONTH	MONTH .....
		YEAR	YEAR	YEAR
204	CHECK 203: CHILD BORN IN JANUARY 2002 OR LATER?	YES ..... 1 NO ..... 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 301)	YES ..... 1 NO ..... 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 301)	YES ..... 1 NO ..... 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 301)
205	OBSERVE WHETHER THERE IS **WASTING** IN THE FOLLOWING PARTS OF THE CHILD'S BODY. ASK PARENT TO REMOVE CHILD'S CLOTHING FOR THE PURPOSE OF THIS OBSERVATION/QUESTIONING.	THIN / WASTED / NOT	THIN / WASTED / NOT	THIN / WASTED / NOT
	A. HEAD	A. HEAD 1 2 3	A. HEAD 1 2 3	A. HEAD 1 2 3
	B. FACE	B. FACE 1 2 3	B. FACE 1 2 3	B. FACE 1 2 3
	C. NECK	C. NECK 1 2 3	C. NECK 1 2 3	C. NECK 1 2 3
	D. SHOULDER	D. SHOULDER 1 2 3	D. SHOULDER 1 2 3	D. SHOULDER 1 2 3
	E. UPPER ARMS	E. ARMS 1 2 3	E. ARMS 1 2 3	E. ARMS 1 2 3
	F. CHEST (RIBS VISIBLE)	F. CHEST 1 2 3	F. CHEST 1 2 3	F. CHEST 1 2 3
	G. BUTTOCKS	G. BUTTOCKS 1 2 3	G. BUTTOCKS 1 2 3	G. BUTTOCKS 1 2 3
	H. THIGH	H. THIGH 1 2 3	H. THIGH 1 2 3	H. THIGH 1 2 3
206	OBSERVE WHETHER THERE IS **SWELLING** IN THE FOLLOWING PARTS OF THE CHILD'S BODY.	YES / NO / DK	YES / NO / DK	YES / NO / DK
	A. HANDS	A. HANDS 1 2 3	A. HANDS 1 2 3	A. HANDS 1 2 3
	B. ABDOMEN	B. ABDOMEN 1 2 3	B. ABDOMEN 1 2 3	B. ABDOMEN 1 2 3
	C. LOWER LEGS	C. LWR LEGS 1 2 3	C. LWR LEGS 1 2 3	C. LWR LEGS 1 2 3
207	OBSERVE IF THE FOLLOWING ABNORMALITIES ARE PRESENT IN EACH CHILD:	YES / NO	YES / NO	YES / NO
	HAIR	HAIR	HAIR	HAIR
	A. SPARSE	A. SPARSE 1 2	A. SPARSE 1 2	A. SPARSE 1 2
	B. THIN	B. THIN 1 2	B. THIN 1 2	B. THIN 1 2
	C. YELLOW/ORANGE	C. YELLOW/O 1 2	C. YELLOW/O 1 2	C. YELLOW/O 1 2
	SKIN	SKIN	SKIN	SKIN
	D. FACE PUFFY	D. FACE PUFFY 1 2	D. FACE PUFFY 1 2	D. FACE PUFFY 1 2
	E. FLAKY/DRY	E. FLAKY 1 2	E. FLAKY 1 2	E. FLAKY 1 2
	F. SORE/WOUNDS/PEELING	F. SORE 1 2	F. SORE 1 2	F. SORE 1 2
208	TEST FOR SWELLING ON TOP OF FEET.			
	PRESS FIRMLY ON THE TOP OF A FOOT WITH THUMB FOR 30-40 SECONDS. OBSERVE AND RECORD IF A DENT REMAINS IN THE AREA OF THE SKIN.	YES ..... 1 NO ..... 2 DK 3	YES ..... 1 NO ..... 2 DK 3	YES ..... 1 NO ..... 2 DK 3
209	RESULT OF FOOT PRESSING	FOOT PRESSED ..... 1 NOT PRESENT ..... 2 REFUSED ..... 3 OTHER 6	FOOT PRESSED ..... 1 NOT PRESENT ..... 2 REFUSED ..... 3 OTHER 6	FOOT PRESSED ..... 1 NOT PRESENT ..... 2 REFUSED ..... 3 OTHER 6
210	OBSERVE OVERALL NUTRITIONAL STATUS OF CHILD. IN YOUR OPINION, DO YOU FEEL THIS CHILD IS MALNOURISHED?	YES ..... 1 NO ..... 2 DK 3	YES ..... 1 NO ..... 2 DK 3	YES ..... 1 NO ..... 2 DK 3
211		GO BACK TO 203 IN NEXT COLUMN IN THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF ADDITIONAL QUESTIONNAIRE(S); IF NO MORE CHILDREN, GO TO 301.		

		CHILD 4	CHILD 5	CHILD 6
201	CHECK COLUMN 11. RECORD THE LINE NUMBER AND AGE FOR ALL ELIGIBLE CHILDREN 0-5 YEARS IN QUESTION 202. IF MORE THAN SIX CHILDREN, USE ADDITIONAL QUESTIONNAIRE(S).			
202	LINE NUMBER FROM COLUMN 11	LINE NUMBER	LINE NUMBER	LINE NUMBER ....
	NAME FROM COLUMN 2	NAME	NAME	NAME
203	What is (NAME'S) birth date?	DAY	DAY	DAY .....
		MONTH	MONTH	MONTH .....
		YEAR	YEAR	YEAR
204	CHECK 203: CHILD BORN IN JANUARY 2002 OR LATER	YES ..... 1 NO ..... 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 301)	YES ..... 1 NO ..... 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 301)	YES ..... 1 NO ..... 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 301)
205	OBSERVE WHETHER THERE IS **WASTING** IN THE FOLLOWING PARTS OF THE CHILD'S BODY. ASK PARENT TO REMOVE CHILD'S CLOTHING FOR THE PURPOSE OF THIS OBSERVATION/QUESTIONING.	THIN / WASTED / NOT	THIN / WASTED / NOT	THIN / WASTED / NOT
	A. HEAD	A. HEAD 1 2 3	A. HEAD 1 2 3	A. HEAD 1 2 3
	B. FACE	B. FACE 1 2 3	B. FACE 1 2 3	B. FACE 1 2 3
	C. NECK	C. NECK 1 2 3	C. NECK 1 2 3	C. NECK 1 2 3
	D. SHOULDER	D. SHOULDER 1 2 3	D. SHOULDER 1 2 3	D. SHOULDER 1 2 3
	E. UPPER ARMS	E. ARMS 1 2 3	E. ARMS 1 2 3	E. ARMS 1 2 3
	F. CHEST (RIBS VISIBLE)	F. CHEST 1 2 3	F. CHEST 1 2 3	F. CHEST 1 2 3
	G. BUTTOCKS	G. BUTTOCKS 1 2 3	G. BUTTOCKS 1 2 3	G. BUTTOCKS 1 2 3
	H. THIGH	H. THIGH 1 2 3	H. THIGH 1 2 3	H. THIGH 1 2 3
206	OBSERVE WHETHER THERE IS **SWELLING** IN THE FOLLOWING PARTS OF THE CHILD'S BODY.	YES / NO / DK	YES / NO / DK	YES / NO / DK
	A. HANDS	A. HANDS 1 2 3	A. HANDS 1 2 3	A. HANDS 1 2 3
	B. ABDOMEN	B. ABDOMEN 1 2 3	B. ABDOMEN 1 2 3	B. ABDOMEN 1 2 3
	C. LOWER LEGS	C. LWR LEGS 1 2 3	C. LWR LEGS 1 2 3	C. LWR LEGS 1 2 3
207	OBSERVE IF THE FOLLOWING ABNORMALITIES ARE PRESENT IN EACH CHILD:	YES / NO	YES / NO	YES / NO
	HAIR	HAIR	HAIR	HAIR
	A. SPARSE	A. SPARSE 1 2	A. SPARSE 1 2	A. SPARSE 1 2
	B. THIN	B. THIN 1 2	B. THIN 1 2	B. THIN 1 2
	C. YELLOW/ORANGE	C. YELLOW/O 1 2	C. YELLOW/O 1 2	C. YELLOW/O 1 2
	SKIN	SKIN	SKIN	SKIN
	D. FACE PUFFY	D. FACE PUFFY 1 2	D. FACE PUFFY 1 2	D. FACE PUFFY 1 2
	E. FLAKY/DRY	E. FLAKY 1 2	E. FLAKY 1 2	E. FLAKY 1 2
	F. SORE/WOUNDS/PEELING	F. SORE 1 2	F. SORE 1 2	F. SORE 1 2
208	TEST FOR SWELLING ON TOP OF FEET. PRESS FIRMLY ON THE TOP OF A FOOT WITH THUMB FOR 30-40 SECONDS. IF A DENT REMAINS IN THE AREA OF THE SKIN	YES ..... 1 NO ..... 2 DK 3	YES ..... 1 NO ..... 2 DK 3	YES ..... 1 NO ..... 2 DK 3
209	RESULT OF FOOT PRESSING	FOOT PRESSED ..... 1 NOT PRESENT ..... 2 REFUSED ..... 3 OTHER 6	FOOT PRESSED ..... 1 NOT PRESENT ..... 2 REFUSED ..... 3 OTHER 6	FOOT PRESSED ..... 1 NOT PRESENT ..... 2 REFUSED ..... 3 OTHER 6
210	OBSERVE OVERALL NUTRITIONAL STATUS OF CHILD. IN YOUR OPINION, DO YOU FEEL THIS CHILD IS MALNOURISHED?	YES ..... 1 NO ..... 2 DK 3	YES ..... 1 NO ..... 2 DK 3	YES ..... 1 NO ..... 2 DK 3
211		GO BACK TO 203 IN NEXT COLUMN IN THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF ADDITIONAL QUESTIONNAIRE(S); IF NO MORE CHILDREN, GO TO 301.		

TICK HERE IF CONTINUED IN ANOTHER QUESTIONNAIRE. ☐

MENTAL HEALTH MODULE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES		SKIP
301	Now I would like to ask you some questions on some illness that the Health Department would like your opinion to help the Health people assist persons with mental illness. *Kio ikonaan kajitok jet kajitok ko ikijen naninmej ko im Department eo an Ejmour ej konan b ok am lemnak ikijier nan jib an rijerb al ro ilo Ejmour ie jib an armej ro im ewor naninmej in jorran kemelij ib b eir.*	YES	1	
	Did you ever have anybody in this household that has a mental disease? *Enanin ke kar wor armej imwin im ewor an naninmej in jorran kemelij?*	NO	2	
		DON'T KNOW	8	→ 313
302	Is this person still alive? *Ej mour wot ke armej in?*	YES	1	
		NO	2	
		DON'T KNOW	8	→ 313
303	What is this person's relationship to the household head? *Ta kadkad eo an armej in nan eo ej jeb an mwin?*	SPOUSE	01	
		CHILD	02	
		PARENT	03	
		BROTHER/SISTER	04	
		NIECE/NEPHEW	05	
		OTHER RELATIVE BY BLOOD	06	
		OTHER RELATIVE BY MARRIAGE	07	
		NOT RELATED	08	
		DON'T KNOW	98	
304	Is this person a male or a female? *Emmaan ke kora?*	MALE	1	
		FEMALE	2	
305	How old is this person on his/her last birthday? *Jete an armej in yio jen kar kemem eo an eliktata?*	AGE IN COMPLETED YEARS	[ ][ ]	
		DON'T KNOW	98	
306	Does this person live in this household all the time? *Armej in ej jokwe ke imwin aolep ien?*	YES	1	
		NO	2	
		DON'T KNOW	8	
307	Who takes care of this person? *Won eo ej b ok eddro ak lale armej in?*	NO ONE	A	→ 309
		HOUSEHOLD HEAD	B	
		PERSON'S SPOUSE	C	
	Anyone else? *Eb ar ke wor?*	PERSON'S CHILDREN	D	
		PERSON'S PARENTS	E	
		OTHER RELATIVE BY BLOOD	F	
	RECORD ALL MENTIONED.	OTHER RELATIVE BY MARRIAGE	G	
		NON-RELATIVE	H	
		DON'T KNOW	Y	→ 309
308	How is care being provided to this person? *Kain jib an rot ko lilok nan armej in?*	PROVIDE		
		FOOD	A	
		CLOTHING	B	
	Anything else? *Eb ar ke wor?*	HEALTH/MEDICAL NEEDS	C	
		ASSIST IN		
		EATING	D	
	RECORD ALL MENTIONED.	BATHING	E	
		GOING OUT OF HOUSE	F	
		TALK TO HIM/HER	G	
		OTHER _____ (SPECIFY)	X	
		DON'T KNOW	Y	
309	Has this person ever received any help or psychiatric treatment? *Armej in enanin ke kar eb b ok jab rewot kain jib an ko ak jib an ko ikijen naninmej in jorran kemelij?*	YES	1	
		NO	2	
		DON'T KNOW	8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES		SKIP
310	For how long has this person been mentally ill? *Ewi aetoken an armej in b ed ilo naninmej in jorran kemelij?*	LESS THAN ONE MONTH 1 YEAR 2-5 YEARS 6-10 YEARS MORE THAN 10 YEARS DON'T KNOW	1 2 3 4 5 8	
311	Do you feel embarrassed having a mentally ill person in your household? *Ewor ke am enjake in jook ke ewor juon eo im ewor an naninmej in jorran kemelij ej jokwe imwiin?*	YES NO DON'T KNOW	1 2 8	
312	How did people you know react when they found out that there is a mentally ill person in your household? *Ewi wawein an armej ro kojela kajeir lemnak ak kar makitkit ke rej jela ke ewor juon eo ewor an naninmej in jorran ilo kemelij ej jokwe imwiin?* Any other reaction? *Eb ar ke wor?* RECORD ALL MENTIONED.	SCARED/FRIGHTENED SCORN THE HOUSEHOLD SHOWED INDIFFERENCE FELT SORRY/PITY DID NOT SHOW ANY REACTION OTHER _____ (SPECIFY) DON'T KNOW	A B C D E X Y	
313	In your opinion, can mental illness be treated? *Ilo am lemnak, ewor ke unokan naninmej in jorran kemelij?*	YES NO DON'T KNOW	1 2 8	
314	Do you feel that mentally ill persons should be: *Ilo am enjake lok, armej rotin rej aikuij ke b we:*		YES / NO / DK	
	a. looked after in a mental home? *ren lale er ilo moko mon kain ri-naninmej rotin?*	IN MENTAL HOME	1 / 2 / 8	
	b. looked after by relatives? *ro nukuier ren lale er?*	CARED BY RELATIVES	1 / 2 / 8	
	c. left alone to look after themselves? *b ed im lale er make?*	LEFT ALONE BY THEMSELVES	1 / 2 / 8	
	d. have appointed responsible guardians and social security support? *en wor juon eo emoj jitone b wen lale er?*	GUARDIANS & SS SUPPORT	1 / 2 / 8	
	e. locked up in prison? *b ed im tot ilo kalb uuj?*	LOCKED UP IN PRISON	1 / 2 / 8	
315	Now I would like to ask you some questions about persons who have attempted suicide. *Kio ikonan kajitok ib b am jet kajitok ikijen armej ro emoj aer kajeon b ok mour ko aer.* Has any member of your household ever attempted suicide? *Enanin ke wor ian ri-mwin renanin kar kajeon b ok mour eo an?*	YES NO DON'T KNOW	1 2 8	 → 326
316	What is this person's relationship to the household head? *Ta kadkad eo an armej in nan eo ej jeb an mwin?*	SPOUSE CHILD PARENT BROTHER/SISTER NIECE/NEPHEW OTHER RELATIVE BY BLOOD OTHER RELATIVE BY MARRIAGE NOT RELATED DON'T KNOW	01 02 03 04 05 06 07 08 98	
317	Is this person a male or a female? *Emmaan ke kora?*	MALE FEMALE	1 2	
318	How old is this person on his/her last birthday? *Jete an armej in yio jen kar kemem eo an eliktata?*	AGE IN COMPLETED YEARS	[ ][ ]	
319	Does this person live in this household all the time? *Armej in ej jokwe ke imwiin aolep ien?*	YES NO DON'T KNOW	1 2 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES				SKIP
320	How many times has this person attempted suicide? *Jete allen an armej in kajeon b ok mour eo an make?*	NO. OF TIMES				
		DON'T KNOW			98	
321	Did you or any family member ever report this person's suicide attempt(s) to the following? *Kwe ak jab rewotian ri-mwiin rar ke kinaak lok an kar armej in kar kajeon b ok mour eo an make nan jikin kein?*		YES	NO	DK	
	a. Police? *Mon Policeman?*	POLICE	1	2	8	
	b. Health authority? *Rijerb al ro ilo jikin Ejmour eo?*	HEALTH AUTHORITY	1	2	8	
	c. Priest/pastor/religious leader? *Rikake in mon jar ko?*	PRIEST/PASTOR/ RELIGIOUS LEADER ...	1	2	8	
	d. Any family member? *Nan b ar ro jet uan b amle in?*	FAMILY MEMBER	1	2	8	
322	Do you think the following are the reasons for that person to have attempted suicide? *Ilo am lemnak, un kein elaajrak ilal rej un ko ke im rar komman b we armej in en kajeon b ok mour eo an make?*		YES	NO	DK	
	a. Problems at home (with food, money & others)? *Ineb ata ko ilo mweo (ikijen mona, jaan ak ko jet)?*	PROBLEM AT HOME ...	1	2	8	
	b. Person was taking drugs including alcohol? *Armej eo ear kojerb al uno ko rekajur im dren in kadrek?*	DRUGS	1	2	8	
	c. Workplace problems? *Ineb ata ko ilo jikin jerb al eo?*	WORKPLACE	1	2	8	
	d. Girlfriend/boyfriend problems? *Ineb ata ib b en jiron ak likao eo jeran?*	GIRLFRIEND/BOYFRIEND	1	2	8	
	e. Could not find work/jobless? *Ilo an jab maron elolo an jerb al?*	JOBLESS	1	2	8	
	f. Person had incurable disease? *Armej eo ewor an naninmej eo ejellok unokan?*	INCURABLE DISEASE ...	1	2	8	
	g. Other (stress, depression, worry, anxiety)? *Ineb ata ko jet (stress, mok)?*	OTHER	1	2	8	
323	What assistance was provided to this person after his/her pre-suicidal attempt? *Kain jib an rot ko kar lilok nan armej in elkin an kar kajeon b ok mour eo an make?* Any other assistance? *Eb ar ke wor?*	NONE			A	
		TALKED TO HIM/HER			B	
		BROUGHT FOR COUNSELLING TO				
		PSYCHOLOGIST			C	
		MEDICAL/HEALTH SPECIALIST			D	→ 326
		PRIEST/PASTOR/RELIGIOUS LEADER..			E	
		ELDER/FAMILY MEMBER			F	
		OTHER _____ (SPECIFY) (SPECIFY)			X	
		DON'T KNOW			Y	
324	Do you know where to go to seek help? *Kojela ke ia eo kwoj etal nane im kab ok jib an ie?*	YES			1	
		NO			2	
		DON'T KNOW			8	→ 326
325	Where can you go to seek help? *Ia eo komaron etal im eb b ok jib an ie?* Anywhere else? *Eb ar ke wor?* RECORD ALL MENTIONED.	PSYCHOLOGIST			A	
		MEDICAL/HEALTH SPECIALIST			B	
		PRIEST/PASTOR/RELIGIOUS LEADER .			C	
		ELDER/FAMILY MEMBER				
		OTHER _____ (SPECIFY) (SPECIFY)			X	
		DON'T KNOW			Y	
326	Do you personally know of a person who had committed suicide? *Ewor ke armej en kojela kajen im emoj an b ok mour eo an make?*	YES			1	
		NO			2	
		DON'T KNOW			8	→ 332

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES		SKIP
327	What was this person's relationship to the household head? *Ta kadkad eo an armej in nan eo ej jeban mwiin?*	SPOUSE ..... CHILD ..... PARENT ..... BROTHER/SISTER ..... NIECE/NEPHEW ..... OTHER RELATIVE BY BLOOD OTHER RELATIVE BY MARRIAGE NOT RELATED ..... DON'T KNOW	01 02 03 04 05 06 07 08 98	
328	Was this person a male or female? *Emmaan ke kora?*	MALE ..... FEMALE	1 2	
329	Did this person had pre-suicidal attempts? *Ewor ke ien maanlok armej in ear kajeon bok mour eo an make?*	YES ..... NO ..... DON'T KNOW	1 2 8	→ 331
330	Have you or any household member ever talked or provided counselling to this person after the pre-suicidal attempt? *Kwe ak jabrewot ian ri-mwiin rar ke kenaan ibben ak lelok jiban ak kokabiloklok nan armej in elkin ien eo/ko ear kajeon bok mour eo an make?*	YES ..... NO ..... DON'T KNOW	1 2 8	
331	Do you think the following are the reasons for that person to have committed suicide? *Ilo am lemnak, un kein elaajrak ilal rej un ko ke im rar komman bwe armej in en kajeon bok mour eo an make?*		YES NO DK	
	a. Problems at home (with food, money & others)? *Inebata ko ilo mweo (ikjen mona, jaan ak ko jet)?*	PROBLEM AT HOME ...	1 2 8	
	b. Person was taking drugs including alcohol? *Armej eo ear kojerbal uno ko rekajur im dren in kadrek?*	DRUGS	1 2 8	
	c. Workplace problems? *Inebata ko ilo jikin jerbal eo?*	WORKPLACE	1 2 8	
	d. Girlfriend/boyfriend problems? *Inebata ibben jiron ak likao eo jeran?*	GIRLFRIEND/BOYFRIEND	1 2 8	
	e. Could not find work? *Ilo an jab maron elolo an jerbal?*	JOBLESS	1 2 8	
	f. Person had incurable disease? *Armej eo ewor an naninmej eo ejellok unokan?*	INCURABLE DISEASE ...	1 2 8	
	g. Other (stress, depression, worry, anxiety)? *Inebata ko jet (stress, mok)?*	OTHER	1 2 8	
332	CHECK COLUMNS 8 AND 9 OF THE HOUSEHOLD SCHEDULE. ANY EVER-MARRIED ELIGIBLE WOMAN ONLY NEVER-MARRIED ELIGIBLE WOMAN NO ELIGIBLE WOMAN → END SELECT AT RANDOM 1 OUT OF _____ SUB-SAMPLE FOR DOMESTIC VIOLENCE NOT SUB-SAMPLE FOR DOMESTIC VIOLENCE INTERVIEW WITH SECTIONS 1-10 ONLY OF WOMAN'S QUESTIONNAIRE			
333	COPY LINE NUMBER IN COLUMN 9 AND NAME IN COLUMN 2 OF HOUSEHOLD SCHEDULE	LINE NUMBER ..... NAME _____		