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How successful are HIV-AIDS prevention education programmes?

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The HIV-AIDS pandemic represents a major challenge for social and economic development in Sub-Saharan Africa. The Joint United Nations Programme on HIV-AIDS (UNAIDS) has estimated that in this region there are more than 20 million people living with HIV, and that around 10 percent of these people are below the age of 15 years.

The 15 Ministers of Education associated with the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) have been concerned for a number of years about the lack of well-designed objective indicators that can be used to guide an informed debate about the effectiveness of HIV and AIDS prevention education programmes. SACMEQ research teams responded to this concern in 2007 by developing an HIV-AIDS Knowledge Test (known as the HAKT) that was suitable for administration to Grade 6 pupils (aged around 13.5 years on average in SACMEQ countries) and their teachers.

The HAKT was focussed specifically on the official curriculum frameworks for HIV-AIDS that had been adopted by SACMEQ Ministries of Education. The 86 HAKT test items addressed 43 curriculum topics concerned with “basic knowledge required for protecting and promoting health”. These topics covered five main dimensions: definitions and terminology, transmission mechanisms, avoidance behaviours, diagnosis and treatment, and myths and misconceptions.

The HAKT was administered in late 2007 to around 60,000 Grade 6 pupils and their teachers in over 2500 schools across the 15 SACMEQ countries – and the resulting data analyses indicated that this instrument had a

high level of reliability, and that it was suitable for placing pupils and their teachers on a common scale of knowledge about HIV-AIDS. The performance of pupils and teachers was summarized in the form of three scores:

Transformed Scores – scaled HAKT scores that were transformed to an overall SACMEQ mean of 500 and standard deviation of 100;

Minimal Knowledge Scores – dichotomous scores that indicated whether or not respondents had mastered at least 50% of the officially-designated curriculum that was assessed by the HAKT; and

Desirable Knowledge Scores – dichotomous scores that indicated whether or not respondents had mastered at least 75% of the officially-designated curriculum that was assessed by the HAKT.

The SACMEQ research teams accepted that knowledge about HIV-AIDS was a necessary, but not sufficient, requirement to ensure that young people would adopt behaviours that would protect and promote their own health and the health of others. However, they also recognized that ignorance about HIV-AIDS could never provide a sound foundation for wise behaviour.

Following extensive discussion of these matters, they agreed that it would be appropriate for each SACMEQ country to aim to deliver HIV-AIDS prevention education programmes at the primary school level that would permit (a) all Grade 6 pupils to reach the minimal knowledge level on the HAKT, and (b) a least half of the Grade 6 pupils to reach the desirable knowledge level on the HAKT.

Performance of Grade 6 pupils & teachers on SACMEQ HIV-AIDS knowledge test

School System	Pupils						Teachers					
	Transformed Score		Reached Minimal Level		Reached Desirable Level		Transformed Score		Reached Minimal Level		Reached Desirable Level	
	Mean	SE	%	SE	%	SE	Mean	SE	%	SE	%	SE
Mauritius	453	5	17	2	2	1	698	6	98	1	63	3
Lesotho	465	4	19	1	5	1	751	8	99	1	82	3
Zimbabwe	477	5	30	2	4	1	785	7	99	0	93	2
Seychelles	488	2	25	1	3	0	789	3	99	0	95	0
Zambia	488	4	35	2	4	1	744	7	98	1	86	2
Uganda	489	4	33	2	4	1	708	9	98	1	72	3
Botswana	499	4	32	2	7	1	782	6	100	0	93	2
SACMEQ	500	4	36	2	7	1	746	7	99	1	82	2
Zanzibar	501	3	38	1	4	0	657	5	94	1	45	3
Namibia	502	3	36	2	6	1	764	6	100	1	87	2
South Africa	503	4	35	2	8	1	781	6	100	0	93	2
Mozambique	507	6	40	2	8	2	741	7	99	1	81	3
Kenya	509	4	39	2	7	1	793	8	100	0	95	2
Malawi	512	5	43	2	9	1	714	9	99	1	72	4
Swaziland	531	3	52	2	4	1	759	7	100	0	89	2
Tanzania	576	4	70	2	24	1	724	7	99	1	82	3

The scores on the HAKT (and their standard errors of sampling) have been summarized in the table above for Grade 6 pupils and their teachers. The analyses conducted for this table employed pupils as the units of analysis.

The first set of three scores listed in the table indicated that there were substantial differences in Grade 6 pupil knowledge across the SACMEQ countries. Pupil knowledge levels ranged from “relatively higher” in Tanzania (with an average transformed score of 576, and with 70 percent and 24 percent of pupils reaching the minimal and desirable knowledge levels, respectively) to “relatively lower” in Mauritius (with an average transformed score of 453, and with 17 percent and 2 percent of pupils reaching the minimal and desirable knowledge levels, respectively).

The alarming feature of these research results was the generally low level of knowledge about HIV-AIDS among Grade 6 pupils. For the SACMEQ overall average only 36 percent of pupils reached the minimal knowledge level, and only 7 percent of pupils reached the desirable level. In addition, within most SACMEQ countries only around 20 to 40 percent of pupils reached the minimal knowledge level, and less than 10 percent of pupils reached the desirable knowledge level.

In contrast, the second set of three scores listed in the table illustrated that Grade 6 teachers in the SACMEQ countries had high knowledge levels with respect to the HIV-AIDS prevention education curriculum that had been officially specified for primary schools.

The average transformed score for teachers across the SACMEQ countries was 746, and the national averages ranged from a high of 793 in Kenya to a low of 698 in Mauritius. Almost all teachers in the SACMEQ countries reached the minimal knowledge level, and around 80 to 95 percent of teachers in most SACMEQ countries reached the desirable knowledge level.

These research results should send a major shockwave through those governments, international agencies, and development partners that have made substantial investments in HIV-AIDS prevention education programmes for Africa. Grade 6 pupils in SACMEQ countries are at a very vulnerable average age of 13.5 years – and yet their knowledge about HIV-AIDS is clearly inadequate for the task of guiding their decisions about behaviours that will protect and promote health. This is not an acceptable outcome – given the extreme human suffering caused by HIV infection and the massive amount of effort that has been devoted to large-scale HIV-AIDS prevention education programmes.

Of equal concern was the contrast between the very low knowledge levels of most pupils about HIV-AIDS and the very high knowledge levels of most of their teachers. This was an unexpected result because SACMEQ research teams had assumed that if teachers had high levels of knowledge about HIV-AIDS then they would be able to transmit this knowledge to their pupils. Their assumption was obviously faulty, and further research will be required in order to examine and evaluate possible explanations for this knowledge gap.

The time has come to launch a comprehensive review and evaluation of all aspects of the delivery of HIV-AIDS prevention education programmes in African schools. The goal for such programmes must be to ensure that **all** children leave primary school with the basic knowledge that is required to guide their decisions about health protection and promotion behaviours related to HIV-AIDS.

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