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GENDER EQUALITY IN EDUCATION: LOOKING BEYOND PARITY

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**ARE THERE ANY DISPARITIES BETWEEN GIRLS AND BOYS
IN THE RESPONSE OF THE EDUCATION SECTOR OF HIV
AND AIDS? ASSESSMENT OF EDUCATIONAL HIV/AIDS
PREVENTION PROGRAMMES APPLIED BY SACMEQ III
COUNTRIES**

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1. INTRODUCTION

The gender-balance issue ranks high in most educational HIV and AIDS prevention programmes in the countries of Southern and East Africa which is the region hardest hit by HIV and AIDS. Indeed, such programmes aim at “young people” – which is a group at risk, as it represents 45% of new HIV infections. Moreover, it has been observed that young women in Sub-Saharan Africa are more vulnerable as they are 8 times more exposed to HIV than are young men (UNESCO, 2011). The main reasons invoked for this are gender inequalities and an unequal sharing of power between men and women (UNAIDS IATT, 2009).

In such a context, governments, international agencies, and non-governmental organisations have striven to develop strategies and courses of action to prevent HIV infection among young people and lessen gender inequalities. Education for prevention of HIV and AIDS has been part of these endeavours. These efforts have been included in the drive for Education for All (EFA) and the Millennium Development Goals, one of the key objectives of which relates to prevention among young people, both male and female, so that by 2010 95% of young people get the practical knowledge they need to limit the risk of transmission (UNGASS, 2001).

This paper aims to assess whether the goals of the in-school programmes on prevention of HIV and AIDS that are taught in primary schools of 15 national ministries of education in Southern and Eastern Africa have been reached equitably between boys and girls by the end of primary education. One feature of most of these ministries is that they are in countries that are the hardest hit by a general HIV epidemic.

More specifically, the paper aims to analyse schoolboys’ and schoolgirls’ general knowledge about HIV and AIDS. Through five sub-domains of knowledge covered in school programmes, it also seeks to ascertain their attitudes to people living with HIV and AIDS, their perceptions of courses on HIV and AIDS, and their preferred source of information on the infection and the syndrome. Furthermore, the study is completed by an analysis of the levels of knowledge about HIV and AIDS; attitudes towards people living with HIV; and lastly, the levels of teacher training on HIV and AIDS, which are key for any effective education for prevention strategies .

2. METHODOLOGY

This paper draws on the data collected from a national sample of about 61,000 sixth graders who took part in the third research project conducted in 2007 by the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ). It also uses indicators that measure pupils' and teachers' levels of knowledge about HIV and AIDS (SACMEQ, 2010).

SACMEQ comprises 15 national education ministries: Botswana, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, the Seychelles, South Africa, Swaziland, Uganda, Tanzania, Zambia, Zanzibar, and Zimbabwe.

SACMEQ administered an HIV and AIDS knowledge test (HAKT) especially designed from the official HIV and aids programmes adopted by SACMEQ member education ministries. The testing included 86 items covering five major areas of "**basic knowledge required to protect and promote health**" that pupils are supposed to have acquired by the end of primary school: "Definition and Distinctions"; "Transmission Mechanisms"; "Avoidance Behaviours"; "Diagnosis and Treatment"; "Myths and Misconceptions". On the basis of the responses given by pupils and teachers to the HAKT, an HIV AIDS minimum-knowledge performance indicator was constructed to identify those pupils who had, or had not, mastered at least 50% of the official programme evaluated by the test (Dolata and Ross, *in preparation*).

The descriptive analysis was carried out using the IBM SPSS version 19 statistical database processing software. Results are reported as significant when at the 95 percent confidence level.

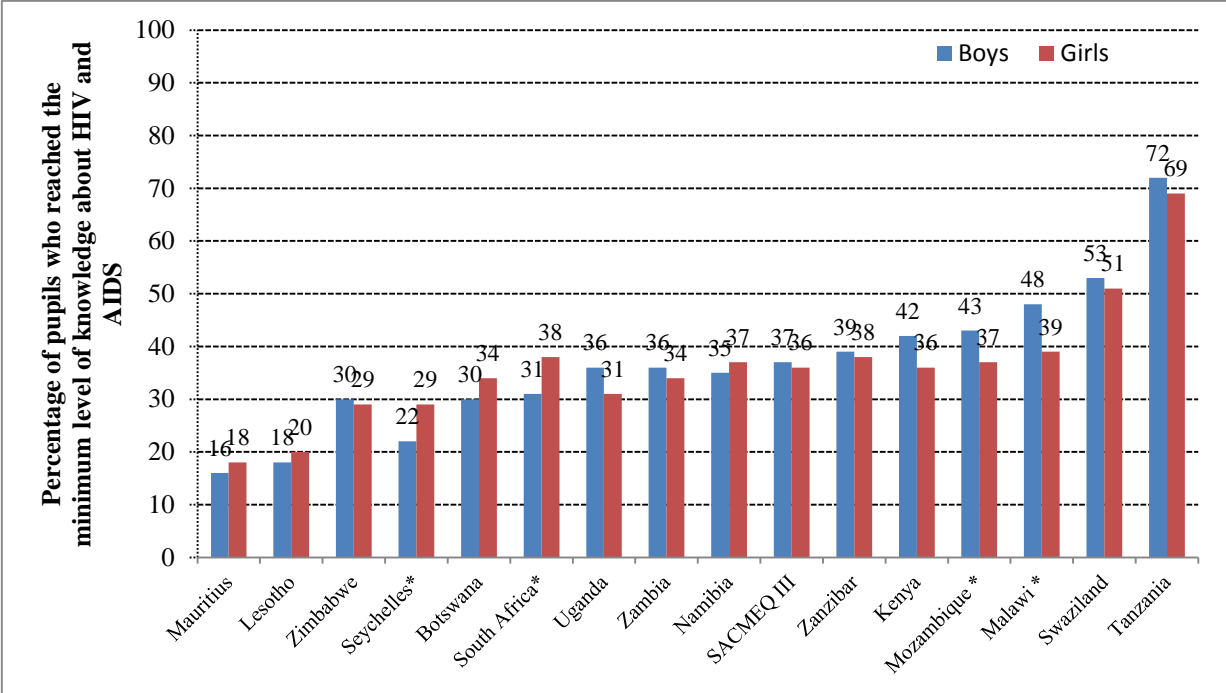
3. RESULTS

1. Did SACMEQ III find a statistically significant difference in the level of HIV and AIDS knowledge between sixth-grade boys and girls?

Although HIV and AIDS education has been formally introduced in the primary schools of SACMEQ III participating countries (except Mauritius and Zanzibar), preliminary results are alarming given the very low level of knowledge among female and male pupils in most SACMEQ countries: about 36% of boys and girls have acquired half the knowledge covered in

the end-of-primary curricula (graph 1). Statistically significant differences in the minimum levels of knowledge between boys and girls in primary school were identified in four countries (better among girls in South Africa and the Seychelles, and greater among boys in Malawi and Mozambique). However, these differences are relatively small (lower than 9%) and hence can be considered negligible.

Graph 1. Percentages of boys and girls who reached the minimum level of knowledge about HIV and AIDS



Legend: * The difference in minimum level of knowledge between boys and girls is statistically significant at 95%.

The findings generated by the analysis of the performance of boys and girls for each HAKT item are given in table 1 below for the different SACMEQ III member countries. For each knowledge area, the number of items “mastered” by the boys and girls is presented across the SACMEQ school systems. An item, or rather the concept measured by the item, is considered “mastered” by respondents if the proportion of correct responses to the item exceeds 75%.

Table 1. Number of items mastered by boys and girls for each main area of HIV-AIDS knowledge covered by the HAKT.

School System	Areas of knowledge on HIV and aids covered by HAKT									
	Definition and Distinctions (10 items)		Transmission Mechanisms (28 items)		Avoidance Behaviours (24 items)		Diagnosis and Treatment (16 items)		Myths and Misconceptions (8 items)	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Botswana	3	4	7	11	8	13	2	2	3	3
Kenya	2	2	18	16	10	9	1	1	2	2
Lesotho	2	2	5	7	3	3	1	1	0	0
Malawi	2	0	16	15	15	12	1	0	3	3
Mauritius	0	0	3	9	1	2	4	5	0	0
Mozambique	2	1	14	12	11	9	2	2	3	0
Namibia	2	2	14	14	9	10	2	2	1	2
Seychelles	1	1	10	13	8	14	3	5	1	1
South Africa	2	2	11	13	11	13	1	1	2	2
Swaziland	4	6	19	19	15	15	4	2	3	4
Tanzania	4	4	17	18	16	13	8	8	5	5
Uganda	2	2	13	10	8	3	1	1	0	0
Zambia	1	0	13	10	9	4	2	1	3	1
Zanzibar	2	3	7	9	11	10	5	5	5	5
Zimbabwe	1	1	9	13	5	8	1	1	0	1

Notes : The respondents who have mastered more than half of the concepts covered by the items of an area are bolded;

The differences in the mastery of more than 5 items for boys and girls are highlighted in yellow.

Overall, pupils' knowledge in three areas – namely, "Definitions and Distinctions", "Diagnosis and Treatment", and "Myths and Misconceptions" covered by items 10, 16, and 8 respectively is very low. Indeed, most of pupils have mastered less than half the items in these three areas. Hardly any disparity between boys and girls is seen in any of the countries.

Regarding knowledge on "Transmission Mechanisms" (that included 28 items), questions about the possible *transmission of HIV through the blood* were answered correctly by all the SACMEQ III pupils. Only the pupils in Kenya, Malawi, Namibia, Swaziland, and Tanzania answered above half of the items correctly (between 14 items answered correctly in Malawi and 19 items in Swaziland). These items concerned possible *mother-to-child transmission, hygiene, and non-transmission by animals/insects*. Fairly moderate

differences were seen between boys and girls in the number of items answered correctly in the various countries. The greatest gap was observed in Mauritius, where only the girls answered nine items correctly (mainly on the *non-transmission by animals and insects*).

Regarding “Avoidance behaviours” (24 items), pupils in only three countries –Malawi, Swaziland, and Tanzania– and girls in Botswana and Seychelles possessed above 50 % correct knowledge on the topic. Differences in responses by boys and girls were also noted. For instance, only the boys in Uganda and Zambia and only the girls in Botswana and the Seychelles answered above 20% of these items correctly.

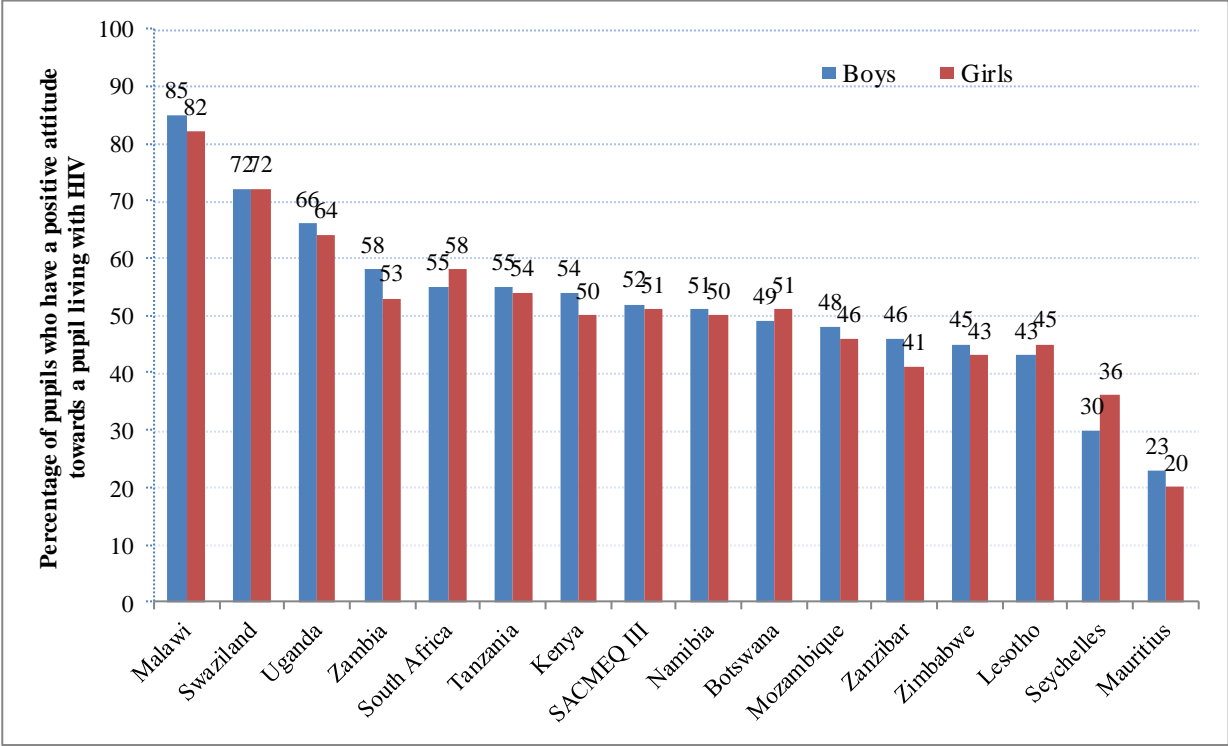
For Ministries of Education National SACMEQ, these findings suggest the urgent need to improve the general level of HIV-AIDS knowledge among boys and girls and review the education programs and HIV and AIDS and especially the school curricula.

2. What percentage of sixth graders in SACMEQ school systems have expressed positive attitude towards a person living with HIV?

School is a good place to convey messages about prevention of HIV and AIDS to young people, thereby promoting responsible behaviour and positive attitudes towards others – especially towards pupils and staff living with HIV. This is crucial in countries where the epidemic is widespread, as is the case in most of the SACMEQ III countries. Consequently, effective learning is not possible in an environment where stigmatisation and discrimination are tolerated and the attitudes and behaviour of school staff and pupils are conflicting.

Boys’ and girls’ attitudes to someone living with HIV were captured by asking four questions related to stigmatisation and discrimination of people living with HIV and AIDS. Graph 2 presents results for the first question, with the percentages of boys and girls who have a positive attitude to a *pupil* carrying HIV. On average out of every two boys (52%) and girls (51%) one says he/she has a positive attitude to a pupil infected with HIV. Therefore half of all the boys and girls pupils have a positive attitude towards pupils living with HIV.

Graph 2. Percentage of boys and girls who have a positive attitude towards a pupil living with HIV



On a country-comparison basis, the percentages of pupils who have a positive attitude differ substantially from one country to another, with more than 80% in Malawi and fewer than 25% in Mauritius. Once again, no significant differences were seen in the percentages of girls and boys across the SACMEQ school systems. Similar findings were made following the analysis of pupils’ answers concerning their presumed attitudes to a *teacher, friend, or parent* living with HIV and/or AIDS.

These results reflect the need to strengthen HIV and AIDS education programs across SACMEQ school systems and non-formal interventions in schools to promote understanding and tolerance towards people living with HIV.

3. In SACMEQ III, which were the main sources of information on HIV and AIDS for boys and girls at the end of primary school?

In SACMEQ countries, various channels are used to provide information on HIV and AIDS. Pupils are supposed to be taught about HIV and AIDS in primary school but are also exposed to information on HIV and AIDS outside school; for example, through radio and/or television programmes. If pupils' preferred sources of information about HIV and AIDS are known, it sheds light on their perception of their coursework in school. It also enables identification of new sources of information and facilitates the improvement of existing sources. In SACMEQ III, pupils were asked to state if they had acquired their information on HIV and AIDS from a range of about 30 sources. The answers were mainly of two types: a) "Electronic" and "mass media and social events" (newspapers, television, drama, school-based lessons, etc.); and b) "people" (teachers, parents, friends, peers, etc.). The boys (B) and the girls (G) were also asked to indicate their preferred source (table 2).

Table 2. SACMEQ III pupils' ranking of preferred sources of information on HIV and AIDS

School Systems	1		2		3		4		5		6		7		8		9		10	
	Electronic (Radio, TV, Video)		Teacher		Health professional		Performance (Play, Drama, Concert)		Printed (Books, newspapers, magazines)		Family		Friends or Peers		Computer / Internet		Person living with HIV		Religious	
	G	F	G	F	G	F	G	F	G	F	G	F	G	F	G	F	G	F	G	F
Botswana	45	40	13	14	16	16	9	9	9	11	3	3	2	2	2	1	2	2	1	0
Kenya	35	32	17	18	15	15	10	10	8	8	5	6	3	5	0	1	3	5	1	2
Lesotho	46	43	21	22	10	11	4	5	8	10	4	3	3	4	1	0	2	3	1	0
Malawi	55	52	20	22	6	7	9	10	4	3	2	3	1	2	0	0	0	1	0	1
Mauritius	66	65	5	6	10	12	2	1	4	4	4	5	3	2	7	4	1	1	1	1
Mozambique	42	41	24	25	12	9	5	5	5	7	3	4	7	8	0	1	1	1	1	1
Namibia	47	42	12	14	13	16	7	8	8	8	4	4	3	2	3	2	2	2	1	0
Seychelles	46	40	14	18	22	24	1	1	0	1	9	9	1	2	5	5	0	1	0	0
South Africa	39	32	22	25	15	16	5	4	6	7	4	5	3	2	3	3	3	3	1	0
Swaziland	47	44	13	15	12	12	8	11	7	8	5	5	4	4	0	1	1	2	0	1
Tanzania	48	45	15	18	12	12	6	5	8	8	2	1	5	7	1	1	1	1	2	1
Uganda	38	36	21	21	11	10	11	11	5	5	5	7	4	4	3	3	1	1	2	1
Zambia	34	33	24	25	9	9	12	11	7	9	5	4	4	4	2	2	2	2	2	1
Zanzibar	40	36	8	9	14	17	17	17	2	3	4	7	8	7	1	1	2	1	4	3
Zimbabwe	34	32	27	26	13	12	10	10	9	11	2	3	4	2	1	0	1	1	0	0
SACMEQ III	44	41	17	18	13	13	8	8	6	7	4	5	4	4	2	2	1	2	1	1

Pupils clearly preferred "electronic" media (radio, TV, and video) to get information on HIV and AIDS. This applied to boys (44%) as well as girls (41%). The second source of information

chosen by both boys (17%) and girls (18%) –“Teacher”– ranked far behind. The third and fourth most preferred sources of information of both boys and girls were “Health Professional” (13%) and “Performance” (play, drama, concerts) at 8%. Ranked bottom by both boys and girls as the preferred source of information were “Peers”, whereas this information channel had been very widely relied upon in most of the HIV-education programmes for over a decade. The same ranking of preferences by girls and boys was found across the SACMEQ school systems.

Generally speaking, “Electronic” media such as television and radio, plus cultural activities (drama, concerts etc.) aim to heighten awareness of attitudinal and behavioural changes, both individual and collective. They also broadcast information, albeit fairly general, so that it can be understood by everyone.

To complete this analysis we focused on those activities carried out during the delivery of lessons by teachers – which was ranked second among pupils’ preferred sources of information. Among pupils who had been given courses on HIV and AIDS, boys and girls were asked a question about their preferred activities during such lessons in school. Without question, classroom teaching was the most prized by boys (48%) and girls (49%). Most of such teaching is used to express and convey factual knowledge relating to HIV and AIDS. The second most preferred activity was questions and answers (12% of the boys and 14% of the girls), with gender differences observed in the various countries. Indeed, it seems that more girls in Botswana and the Seychelles preferred asking questions on HIV and AIDS to the teacher than did the boys. Raising questions during classroom discussions is a participatory teaching activity that enables more in-depth examination of a subject. It also allows for learning from others and helps develop skills such as listening and positive attitudes.

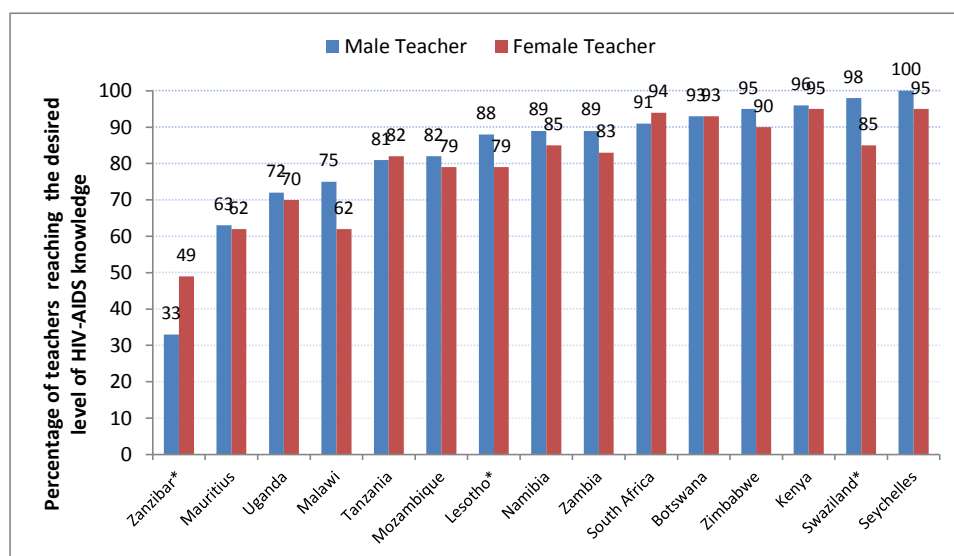
In all, this finding suggests that “electronic” communication can play an important role in both formal and non-formal education activities for prevention of HIV and AIDS.

4. Between male and female teachers in SACMEQ III, are there statistically significant differences in the level of knowledge on HIV and AIDS; teacher attitudes to people living with HIV/AIDS; and teacher in-service training on HIV/AIDS?

Teachers’ levels of knowledge and attitudes play a fundamental role in education about HIV and AIDS. Education on HIV and AIDS can be seriously compromised if teachers have not been properly trained (in terms of content and pedagogy) or if they harbour negative attitudes (UNAIDS IATT, 2009). For instance, a teacher who feels uncomfortable with sensitive issues relating to HIV and AIDS (such as sexuality) will not teach the subject, or will teach it poorly.

Unlike the pupils, almost all the teachers (99%) from the SACMEQ III countries had acquired at least the minimum level of knowledge on HIV and AIDS and the vast majority of them (82%) reached the *desired* level; that is, they had mastered three quarters of the official programme as measured by the HAKT (Dolata and Ross, 2010). That notwithstanding, the overall figures mask some “weaknesses” in Zanzibar and Mauritius (graph 3). In addition, significant gender disparities in teachers’ levels of knowledge were detected in three countries, with males doing better in Swaziland and females in Lesotho and Zanzibar.

Graph 3. Percentage of male and female teachers who reached the desired level of knowledge on HIV and AIDS



Legend: * The difference between male and female teachers is statistically significant at 95%.

Teacher attitudes to a *pupil* and a *teacher* living with HIV are mostly positive (85%), except in Mauritius (64%). No significant difference was found between males and females across SACMEQ school systems..

One out of every two teachers that participated to SACMEQ III study had received in-service training on HIV and AIDS. Readers should remember that in 2007 HIV and AIDS education had not been formally implemented in Mauritius or Zanzibar. Considerable disparities were found between the different countries in which HIV and AIDS education had been formally implemented. These ranged from 38% of teachers having received in-service training in Swaziland to 73% in Lesotho (table 3). On average the total length of training given to teachers (either all at once or over several periods) is eight days, but this varies from 3 days in Mauritius to 11 days in Mozambique.

Table 3: Teacher in-service training on HIV and AIDS and total length of the training given

<i>School System</i>	Number of teachers given in-service training on HIV and AIDS	Total duration of the training given (days)
	%	Mean
Mauritius	7	3
Zanzibar	24	6
Swaziland	38	9
Mozambique	41	11
Seychelles	46	4
SACMEQ III	50	8
Botswana	51	10
Tanzania	51	7
Zimbabwe	52	10
Zambia	57	6
South Africa	59	8
Namibia	62	10
Kenya	62	9
Malawi	63	4
Uganda	69	8
Lesotho	73	7

On the one hand, these preliminary findings on teachers are “encouraging”, showing satisfactory levels of knowledge and generally positive attitudes. However, these are also a source of questions about the "high" HIV-AIDS knowledge level of teachers and "low" levels of their pupils and suggest a problem in transferring “knowledge” from teachers to pupils.

The main reasons given by teachers to justify the lack of HIV and AIDS teaching are, firstly, the inadequate provision of teacher training - that focused primarily on the facts and not enough on skills (pedagogy) to transmit knowledge - and, secondly, the lack of time devoted to a subject not examinable (IE, 2007).

It is recommended to SACMEQ Ministries of Education to investigate the reasons why well-informed teachers were not able to transfer the HIV-AIDS knowledge to students and to review the in-service and pre-service training programmes to ensure that teachers are well trained both in terms of content and pedagogy.

5. CONCLUSION

This investigation, that set out to examine the gender balance among the sixth graders in the 15 education systems covered by SACMEQ III, actually highlighted a far more serious problem. In fact, overall there is a reasonable balance between boys and girls; however the general level of pupils' stigma and knowledge is of concern as it is far below the set educational objectives.

Furthermore, this study gives reason to think that media such as television and/or radio –very greatly valued by pupils as their preferred source of information on HIV and AIDS– could be a very promising educational vehicle.

Strangely enough, on the whole teachers appear to have a satisfactory level of knowledge and fairly positive attitudes to people living with HIV. The discrepancy between pupils' and teachers' levels of knowledge could be due to problems in the conveyance of knowledge. More specifically, an ever greater number of studies point to the lack of training in the teaching of HIV and AIDS (UNAIDS IATT, 2009). The data collected by SACMEQ III do not enable any confirmation of this assumption; however, findings on teacher in-service training in HIV and AIDS revealed a problem regarding teachers' access to such training (only 50% of them have been trained). In addition to this, the training provided is too short.

It would be worth using the findings of this study to determine options for improving HIV and AIDS education programmes as well as more effective education policies.

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