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Education level and (HIV/AIDS knowledge in Kenya

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Education level and human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS) knowledge in Kenya investigated secondary and university students' HIV/AIDS knowledge in the City of Nairobi, Kenya. This was motivated by research findings in Sub-Saharan Africa and Asia, showing a correlation between education level and knowledge of HIV/AIDS. The method employed was that of descriptive statistics consisting of frequency, percentage, t-test and probability in the analyses of data. The sample comprised 259 female and male participants drawn from several schools and universities in Nairobi. The results showed that both male and female participants from both schools and universities had a very high knowledge of HIV/AIDS. In terms of comparison between secondary and university respondents, the latter's performance was superior, as the mean difference was statistically significant. Thus confirming what other researchers have reported in their research findings. In conclusion, it was argued that education remains the social vaccine in the absence of a cure for HIV/AIDS, which remains the most effective means for combating the enormously dreadful disease in recent human history. It is important therefore that education be given the highest priority in combating HIV/AIDS on the basis of the fact that it is controllable, manageable and preventable, all of which can be realized through education.

Key words: Human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS), girls' education, correlation, educational attainment, HIV/AIDS free children.

INTRODUCTION

In the World Food Programme (2013) comprehensive literature review in Sub-Saharan Africa, it was reported that education remains the only hope that can immeasurably contribute to prevention of the human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS) transmission to children falling under the age of 5 to 14 years identified as free from HIV/AIDS. The observation is made in contrast to the adolescents within the range of 15 to 24 years, who are increasingly being ravaged by HIV/AIDS more than any other given group of population in Sub-Saharan Africa. On the basis of an individual, education places such person in a better position to understand information on HIV/AIDS transmission and prevention; better access to health services, reduced social and economic vulnerability, and higher level of participation in programmes dealing with HIV/AIDS public education.

There is evidence to show that the more education one has, the less vulnerable and the more practice of safer sex. For example, girls with high school education are less likely to contract HIV/AIDS than those who have had lower level of education. The World Bank takes the position

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that, against the background of AIDS being incurable, education may well be the alternate vaccine available to mankind. In Botswana, Fako et al. (2010) made a study of 1,294 primary to university students on their knowledge about HIV/AIDS, driven by the motivation that education is one of the factors predicting one's knowledge of HIV/AIDS. The results of the study confirmed what had been hypothesised. Those with higher level of education were more knowledgeable than those who had lower level of education, university students outperformed secondary school students. Quality of education also served as a predictor of one's knowledge of HIV/AIDS. Those who attended better schools were more knowledgeable than those who attended not so schools. Moreover, parents' children whose parents were more educated than others performed better than children whose parents had attained a lower level of education.

Rahman et al. (2006) in Bangladesh investigated adolescents' knowledge and awareness about HIV/AIDS. By use of a multivariate logistic regression analysis they concluded that, the number of years of schooling correlated to their HIV/AIDS knowledge. Similarly, Jukes et al. (2009) state that keeping girls in school serves as a shield against the risk of contracting HIV/AIDS. They further point out that there is a correlation between educational attainment and the chances of contracting HIV/AIDS, in such a way that, the higher the education level attained, the lower the chance of being HIV/AIDS infected. Girls who remain in school at both primary and secondary school contribute to lower chances of their being HIV/AIDDS positive. They conclude that merely being in school, as well as higher educational attainment are each sufficient to guard against HIV/AIDS transmission.

According to Baker et al. (2010), there are many research findings showing that, higher education level is associated with lower level of HIV/AIDS risk taking. In an extensive investigation of 19,000 adults' education effect on the use of condom, observed that for every additional year in their education, there was a linear correlation increase in their use of condom. It was further argued that schooling enhances higher level of cognitive skills, in terms of both planning and reasoning. Such abilities contribute to better decision making, regarding the use of HIV/AIDS preventive measures. It was further argued that HIV/AIDS knowledge leads to improvement of attitude towards people who are infected, which comes about as a result of exposure to education.

United Nations International Children Education Fund (UNICEF) (2004) reports that representative surveys in 53 countries have shown that, education particularly geared at girls has the potential to equip young people with the necessary HIV/AIDS knowledge, that facilitates them in the prevention of transmission of HIV/AIDS infection. Comparative analyses of countries and regions have shown concrete evidence that, both young men and women with higher levels of education command higher levels of HIV/AIDS knowledge; better understanding of prevention of infection, undergoing change of behaving that is likely to predispose them to contracting HIV/AIDS. It goes without saying that, quality education for children will lead to the protection of people threatened with the most dreadful disease in recent human history. According to Carol Bellamy, a UNICEF Executive Director, "Education is crucial to success against the pandemic. In fact, UNICEF remains convinced that until an effective remedy is found, education is one of the most effective tools for curbing HIV/AIDS" (World Food Programme (WFP), 2013).

A nationwide survey of 2,057 respondents in Afghanistan was carried out aimed at investigating their level of HIV/AIDS knowledge/awareness (Mooley, 2008). The results showed that the majority of them were not that well informed about HIV/AIDS. For the few that did well in their response to the survey, education and access to media played a significant role in heightening their HIV/AIDS knowledge and awareness. The level of education for the participants contributed immensely to their knowledge and awareness of HIV/AIDS. Moreover, education served as a bridge for gender divide, as the gap was increasingly narrowed between men and women, leading women who had a high level of education being as good as men with comparable education (Mooley, 2008).

Mondal et al. (2012) assessed ever married women's knowledge and awareness regarding HIV/AIDS and some of the factors associated with such knowledge in terms of both control and prevention. The sample consisted of 10,996 women whose age ranged between 15 to 49 years. The results showed that, among other factors, participants' education and that of their husbands had statistically significant correlation with their level of HIV/AIDS knowledge/awareness. In a related investigation, de Walque (2007) investigated the effect of education campaign on knowledgeability about HIV/AIDS over a period of 12 years in Uganda. This was followed by what the author refers to as "substantial revolution" in the HIV education. The campaign resulted in less and less women contracting HIV/AIDS in the rural areas, which were the focus of the study. In terms of use of condom, it was correlated to the level of schooling participants had attained (De Walque, 2007). Galvez (2012) in Peru examined the protective attitudes and practices against the risk of HIV/AIDS among Peruvian students selected from 52 schools. In comparison between age/education and knowledge, attitudes and practices, statistically significant correlations were observed. Those who were older and had higher level of education in terms of grades scored at the highest level of HIV/AIDS knowledge, respondents whose parents had higher education attainment ranked highest in their knowledge of HIV/AIDS.

According to the World Bank (2013), the education of children should be afforded the highest priority in a world

Table 1. Means in percentage and standard deviations, t-test and probability.

Country: N	SD	M (%)	*t-test*	P
Kenya: Sec School 157	6.4	78.4	125	0.001
University 102	8.3	80.4		

N = 259.

that is ravaged, daunted and haunted by HIV/AIDS. Such assertion is motivated by the fact that, good and quality based education ranks as one of the most effective and cost-effective ways of HIV/AIDS control and prevention. School children are referred to as the "window of Hope". For the future, why are they referred to as such? Because school-age children are known as HIV/AIDS free generation between the ages of 5-14 years. This holds true even in countries where HIV/AIDS has hit the hardest. The World Bank refers to education as the "social vaccine" against HIV/AIDS. Research has shown that, for girls remaining in school and completing their basic education, their chances of being HIV/AIDS positive is reduced by 50%. According to Global Campaign for Education projects that by 2015 when education for all is expected to be achieved, 7 million cases of HIV/AIDS will be avoidable (2013).

In summary, it has been argued that, there is a correlation between level of education and HIV/AIDS knowledge. The longer one remains in school, the more the person is likely to know more about HIV/AIDS transmission, infection, and prevention. This does not end there, in so far as there is likely to be transfer of such knowledge in behaviour change. Important national and international organizations have underscored the supreme importance of education, as an effective means of combating HIV/AIDS, particularly in the secure knowledge that there is no known available cure. It was partly in this context that the present investigation resolved to examine how secondary school and university students in Kenya, the extent to which they differ in their knowledge of HIV/AIDS in relationship to their level of education.

METHODOLOGY

Sample

Participants who took part in this investigation were drawn from secondary school and university students in Nairobi, Kenya. Their distribution was as follows: 102 university students and 157 secondary school students, making a sum of 259 participants both females and males.

Procedure

For both secondary school and university participants, the uestionnaire was administered by university lecturers known to the researcher. This was preceded by briefing students on what the questionnaire was all about, and that responding to the questionnaire was voluntary. As such, they were free to either respond to the questionnaire, or choose not to respond to the questionnaire. There was no report of some of the prospective participants refraining from responding to the questionnaire, for all participating students.

Measuring instrument

A questionnaire comprising 25 statements and questions commonly used for testing respondents' HIV/AIDS knowledge, perceptions, attitudes and beliefs was used. Each statement and question had three options, namely "Yes, No Don't know". Participants were asked to tick whatever option they thought was true of their HIV/AIDS knowledge. For confidentiality purposes, respondents were advised not to write their names or name of the school/ university affiliated to. They were, however, requested to indicate their gender and date of birth. While the questionnaire comprised 25 statements and questions, only 19 were included in the statistical analyses. This was so because there was lack of clarity in the six statements/questions they responded to, so that either way they answered would mean the answer was correct.

RESULTS

Descriptive statistics in the form of frequency, percentage, means, standard deviations, "t-test" and probability were used as method of data analyses as displayed in Tables 1 and 2. In Table 1, the response to the questionnaire for secondary school participants was a mean of 78.4%, whereas for university students the mean was 80.4%. The mean difference stood at t (257 df) = 125, $p < 0.001$, which was statistically significant in favour of university students. Meaning that university students on account of their level of education, were more knowledgeable on HIV/AIDS than was the case with high school students. Table 2 displays frequency and percentage of responses for both secondary and university students. For both groups of participants, their HIV/AIDS knowledge was very high. On the other hand, on the basis of what has been shown in Table 1, there was a difference in mean that was statistically significant, showing that the HIV/AIDS knowledgeability for University participants was higher than that of secondary school students. Such outcomes were in alignment with the argument that higher levels of educational attainment correspond linearly with one's knowledge of HIV/AIDS.

DISCUSSION

Extensive research in Sub-Saharan Africa and Asia has been conducted to find out the relationship between educational attainment and knowledge/awareness of HIV/AIDS. In most research findings, a relationship between high level of education and knowledge/ awareness of HIV/AIDS has been observed, such that those who have attained higher level of education happen to be just as knowledgeable in HIV/AIDS in terms of its transmission,

Table 2. University and secondary participants' responses in frequency and percentage.

No.	Statement	University N = 102		Secondary N = 157	
		Freq.	%	Freq	%
2	Sharing cigarette with AIDS person	81	79	145	92
3	Sharing a cup with AIDS person	87	85	147	94
4	Sharing food with infected person	100	98	152	97
5	Using same toilet seat AIDS person	88	86	131	93
6	Kissing an AIDS person	43	42	103	66
7	Taking care of AIDS person	98	96	119	76
9	Sharing clothes with AIDS person	93	91	140	89
10	Blood transfusion from AIDS person	102	100	150	96
11	Having sex an infected person	102	100	149	95
12	Shaking hands with AIDS person	98	96	150	96
13	Mosquito bite	88	86	95	61
14	There is no cure for AIDS	82	80	118	75
16	AIDS is punishment for engaging in sex outside marriage	52	51	78	**57**
17	AIDS persons should be avoided	94	92	99	63
21	Stand a chance of	56	55	38	24
	Contracting AIDS?				
22	Careful in relationship with gender counterpart to avoid AIDS	98	96	150	96
23	Should AIDS children be in the same school with those who do not have AIDS?	73	72	114	73
24	Would you sleep with an AIDS person?	43	42	92	59
25	Would you sit next to an AIDS person?	83	81	138	88

N = 259.

prevention infection and control. This served as the motivation for undertaking the present research investigation which sought to find out, whether in the case of Kenya similar observation would be confirmed in relationship with secondary school students and those at university in the City of Nairobi. It was hypothesized that on the basis of research findings, the performance of university students, on a questionnaire of 25 statements/questions, would outperform secondary school students.

The analyses of data showed that, both secondary and university students performed at high level in responding to the questionnaire, as shown in frequency and percentage. While this was so, further analysis on the basis of descriptive statistics by testing mean difference, the difference between the two groups was statistically significant. University students scored higher than secondary school respondents did. Such findings confirmed what other researchers in Sub-Saharan Africa and Asia have frequently reported (Fako et al., 2010; Baker et al., 2010; Mooley, 2008; Galvez, 2012). More-over, this also has confirmed what world organizations such as the World Food Programme (2013), UNICEF (2004) and the World Bank (2013) have advocated, regarding the supreme importance of education, as effective means of combating HIV/AIDS transmission and infection.

Fako et al. (2010) carried out an investigation in Botswana consisting of primary, secondary and university students on their knowledge of HIV/AIDS in relationship with their level of education. In every instance, students at higher level performed significantly better than those at low level of education. In Bangladesh, Rahman et al. (2006) reported that, among adolescents, the number of years of schooling correlated with their HIV/AIDS knowledge. Jukes et al. (2009) pointed out that there is a correlation between educational attainment and the chances of contracting HIV, in such a way that the higher the educational level attained, the lower the chance of being HIV/AIDS positive. It is further pointed out that, keeping girls in school serves as a shield against the rise of contracting HIV/AIDS. All these findings and more have been confirmed by the present investigation, so far as university students were more HIV/AIDS knowledgeable than those who were at secondary school level. It is partly in this context that world organizations, as mentioned earlier on, underscore the importance of education, starting at primary school level as a social vaccine in the control of HIV/AIDS, which is responsible for the millions of people the world over who have died, are dying and will continue dying. This need not continue, if education is accepted by all those concerned, as a" social vaccine".

Conclusion

Education level and HIV/AIDS knowledge in Kenya has confirmed a relationship between level of education and knowledge of HIVAIDS. University participants compared to secondary school respondents performed at higher level in their knowledge of HIV/AIDS. Such results are gratifying, given the importance of education in the control of HIV/AIDS transmission and infection. Such results also serve as a challenge to society in relationship to the enormous damage and destruction of millions of lives. The cure for HIV/AIDS is nowhere in sight, though the quest for it continues through research. What has been established is that HIV/AIDS is manageable, controllable and preventable. This can be very well realized, if education is afforded the priority it deserves.

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