

**EDITORIAL****The Effect of HIV Education Program on Changing the Attitude of Secondary School Students Towards HIV/AIDS Sufferers Khartoum State (2014)**

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**Abstract:**

HIV/AIDS seriously affects adolescents throughout the world. One-third of all currently infected individuals are youth ages 15 to 24, and half of all new infections occur in same age youth.

This is an Interventional Quasi study, aimed to assess the effect of health education program of Human Immune -Deficiency virus on changing attitude towards HIV and AIDS among secondary school students in Khartoum state. Five hundred students were enrolled by using multi stage random sampling, the study was done in three phases: phase one used questionnaire of 32 questions. Phase two was implementing the Sudanese National Aids Program (SNAP'S) which is a health education program in secondary schools alongside the curriculum for students in the selected secondary schools for 8 months. Phase three was Re- Evaluation by the same questionnaire used in phase one.

The study revealed that few students were willing to care of a family member or friend who suffers with AIDS (25.6%) in the pre-test however the percentage increased to (79.2%) after intervention, (42.6%) thought that HIV positive people should not be allowed to mix with people at mosque or church , the percentage decreased to (39.2%) after the intervention. 63.8% of students said that a teacher who is HIV positive should not be allowed to continue teaching in their school, while only (86.2%) of the students changed their mind after intervention. Also prior to intervention (27.6%) of the students accepted sharing same class with HIV infected student while (50.0%) agreed after the intervention. The study concluded that education intervention program was effective and statistically significant in the Improvement of students' attitude towards HIV/AIDS positive (P value= 0.001).

**Key words:** Attitude, HIV/AIDS, secondary school students, Khartoum state.

**المستخلص :**

معظم اصابات فيروس مرض نقص المناعة المكتسب تحدث وسط الشباب من عمر 14-24 سنة هذه دراسته تدخلية تهدف الى تقييم أثر تدريس كتيب البرنامج القومي السوداني للايدز للتثقيف الصحي على سلوك عينة من طلاب المدارس الثانوية بولاية الخرطوم تجاه المصابين بالفيروس أو مرضى الأيدز و التي اشترك

فيها (500) طالب تم اختيارهم عشوائيا بطريقة التعدد المرحلي . نفذت الدراسة على ثلاثة مراحل : المرحلة الأولى تم فيها جمع المعلومات بواسطة استبيان مكون من(32) سؤال , ثم مرحلة التدخل عن طريق تدريس الذى وضع بواسطه البرنامج السودانى القومى للايدز لمدة ستة اشهر, ثم المرحلة الثالثة و التى جمعت فيها البيانات بنفس الاستبيان الأول .

توصلت الدراسة الى النتائج الآتية: 25.6% من الطلاب كانوا موافقين على رعاية مريض ايدز ينتمى الى الأسرة قبل التدخل بينما ارتفعت النسبة الى 79.2% بعد التدخل . 42.2% رأوا أن المصاب بالفيروس لا يجب ان يختلط بالناس فى المسجد و قد نقصت النسبة بعد التدخل الى 39.2%.

63.8% من الطلاب قبلوا بتلقى الدراسة من معلم مصاب بالفيروس قبل التدخل و قد ارتفعت النسبة الى 86.2% بعد التدخل. كما لم يمانع 27.6% منهم على وجود زميل لهم بالفصل مصاب بالفيروس قبل التدخل و ارتفعت النسبة الى 50.0% بعد التدخل .

خلصت الدراسة الى أن منهج التنقيف الصحى للطلاب ذو أثر بالغ احصائيا فى تحسين إتجاهات طلاب المدارس الثانوية تجاه المصابين بفيروس نقص المناعة المكتسب أو تجاه مرضى الايدز .

**المفتاح:** إتجاهات , طلاب المدارس الثانوية , الايدز , ولاية الخرطوم

### Introduction:

There is great concern about the spread of HIV epidemic in or within the adolescent population. It has been concluded internationally that adolescent sexual activity is characterized by early onset, multiple sexual partners, and a low incidence of condom use <sup>(1)</sup>

Although Acquired Immune Deficiency Syndrome (AIDS) is rare among adolescents,' this should not be grounds for neglecting preventive health education in school systems. Epidemiological data on the use of drugs and the spread of other sexually transmitted diseases (STD) among this population suggest that the rate of disease transmission may far exceed its reported rate. <sup>(4)</sup>

A worrisome aspect of this epidemic is that HIV/AIDS affects the prime productive years of young people who are assets in the development of their country. The behavior they adopt now and that they maintain throughout their sexual lives will determine the course of this epidemic for decades to come. Young people would continue to learn from one another, but their behavior would depend largely on the information, skills and services that the current generation of adults choose to equip their children with. <sup>(5)</sup>

The risk for acquiring human immunodeficiency virus (HIV) infection during adolescence and early adulthood starts with initiation of sexual behavior or injection drug use, and also the contributing behaviors such as use of alcohol and other types of drugs. What contributes to level of risk is the prevalence of HIV in potential sex partners, the percentage of HIV-infected persons unaware of their status and the frequency of risky sexual behaviors and injection drug use. In 2009, youths who represented 21% of the U.S. population, comprised 6.7% of persons living with HIV. More than half (59.5%) were unaware of their infection which was the highest for any age group <sup>(6)</sup>.

In Sudan the youth are at risk of HIV infection due to high unemployment, delay in marital sex, increased premarital sex, peer pressure and changing lifestyle. Students

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constitute a segment of the youth that is particularly vulnerable to HIV infection. UNAIDS (United National Acquired immune deficiency syndrome) suggests that the prevalence is about 53% in youth which constitutes (98,922) people living with HIV in 2012, and the prevalence of the disease is prone to rise due to the large scale population movement (refugees, returnees) and changing life style which are reflected in high rates of urbanization and changing community structures <sup>(7)</sup>.

In a study conducted in Wuhan, China a total of 406 (68.70%) high school students in the pre-intervention phase said that they would like to help people living with HIV/AIDS however the percentage increased in the post-intervention phase to 496 (83.93%), (P, 0.05). <sup>(8)</sup>

In a study done in sub-Saharan Africa about Two-thirds of the sample said they would be willing to look after relatives who contracted HIV/AIDS compared with 28% who were not prepared to do so. There was a common attitude that AIDS patients need to be isolated and receive special care in special health settings. <sup>(9)</sup>

This study tried to investigate the attitude of high secondary school students towards HIV/AIDS sufferers and test whether a health education program would create a shift in their mindset whether positive or negative.

**Methods:**

This is Quasi Interventional study which was done in higher secondary schools students of Khartoum state (148198 students) , (69300) were males and the females were (78898) distributed to governmental schools as (43583 males and 52210 females) and non-governmental schools (25717 males and 26688 females).500 student from first and second class were enrolled by multi stage random sample for school selection and by using a systematic random method for student selection,

The study was done in three phases by self-rating questionnaires using a combination of open and closed-ended questions.

In Phase one a questionnaire of 10 questions in Arabic-language was adapted for students' social behavior towards HIV/AIDS patients. Phase two was implementing the 6 months intervention program which is the Sudanese National Aid program (SNAP's). It includes: Lectures (one lectures per week 2 hour per each), Posters, Handouts and CDs about HIV. Phase three was the Re-Evaluation stage, using the same questionnaire in phase one.

Data obtained was analyzed by using SPSS soft ware.

Students' attitude towards HIV/AIDS sufferers was assessed using the following variables:

Their attitude towards knowing anyone who is HIV positive, their attitude towards knowing anyone who had a HIV test, their willingness to take care of a family member or friend who has AIDS, their attitude towards allowing HIV positive to pray in a mosque or church, their attitude towards allowing HIV positive teacher to continue teaching in their school, their attitude towards eating food made by someone who is HIV positive, their attitude towards sharing the same classroom with an HIV positive

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child, their attitude towards AID/HIV positive shopkeeper, their misconception about HIV/AIDS transmission by Sharing same food utensils, their misconception about HIV/AIDS transmission by working with someone who is HIV positive.

The students replied to each statement by choosing a response category out of three choices: (1) "Yes", (2) "No" and (3) "Don't know".

**Ethical consideration:**

Ethical approval was obtained from the Ethical Review Board of the Ministry of Health. Permission from Khartoum Ministry of Education was also obtained. Permission was sought and obtained from all higher secondary Schools' heads involved in order to allow the use of questionnaires, implementing the health education which was the Sudanese National Aids Program (SNAP's), and finally the data collection. Valid verbal consent was obtained from all students who had Capacity to give informed consent of those who agreed to participate in the study before the questionnaire administration.

**Results:**

Total of (500) students recruited from Governmental & non-Governmental school. (48%) of them were Females (240) and (52%) were Males (260), and the geographical distribution was as follows: (211) from Khartoum district, (119) Khartoum North district and (170) from Omdurman district.

Q1. In the pre-intervention (64.2%) of the students said they did not know someone who is HIV positive however after the post- intervention the percentage was (86.4%).

Q2. In the pre-intervention (66.8%) of the students denied any knowledge of someone who has had an HIV test while (48.6%) of the students maintained their statement in post- intervention. Q3. In the pre-intervention (25.6%) of the students said that they were willing to take care of a family member or friend who has AIDS and (79.2%) in post- intervention:

Q4. In the pre- intervention (42.6%) of the students said that HIV positive people should not be allowed to attend prayers in a mosque or church and percentage decreased to (39.2%) in the post-intervention. Q5. In pre-intervention (63.8%) said they would not allow HIV positive teacher teaching them however (86.2%) of the students said Yes in post-intervention. Q6. In the pre-intervention (42.2%) of the students thought a person can catch HIV/AIDS by eating food made by someone who is HIV positive so and (83%) thought that it is unlikely in the post-intervention.

Q7. In the pre-intervention (27.6%) of the students said they would accept sharing same class with HIV positive students however (50.0%) said yes in post-intervention.

Q8. In the pre-intervention phase (67.6%) of the students said they were afraid to buy fresh vegetables from an AID/HIV positive shopkeeper however this declined to (7.4%) in post-intervention.

Q9. In pre-intervention (30.6%) of the students thought that a person could catch HIV/AIDS by sharing food utensils, and (13.8%) said so in post-intervention. Q10. (34.8%) of students thought that a person can catch HIV/AIDS by working with

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someone who is HIV positive, however the percentage declined to (13.8%) in post-intervention.

Socio-demographic characteristics

A high number of respondents were from Khartoum district (211) (Subset for alpha = 0.05)

**Table (1) shows demographic distribution data of students.**

Area	N	Subset for alpha = 0.05		
		1	2	3
Khartoum	211	0.2891		
Omdurman	170		1.6095	
Khartoum North	119			3.3445

**Table (2) shows results of T test by pairs to determine the significance of HIV/AIDS health education program efficiency in improving secondary school students' attitude towards HIV/AIDS sufferers In Khartoum state 2012-2013**

Measuring Time	Mean	SD	Calculate d T value	Df	Prob.	Statistical Inference
Pre-intervention	8.156	2.229	14.037	499	0.001	The difference is significant
Post-intervention	10.072	2.095	14.037	499	0.001	The difference is significant

**Table (3) Students distribution according to the answers of the scale questions concerning their attitude towards HIV positive people (N=500).**

Question	Pre Test			Post Test		
	YES	NO	Don't Know	YES	NO	Don't Know
1. Do you know anyone who is HIV positive?	16.0%	64.2%	19.8%	9.8%	86.4%	3.8%
2. Do you know anyone who has had a HIV test?	9.4%	66.8%	23.8%	45.2%	48.6%	6.2%
3. Would you be willing to take care of a family member or friend who is sick with AIDS?	25.6%	63.4%	11.0%	79.2%	20.8%	0.0%

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4. Should people who are HIV positive be allowed to pray in a mosque or church?	41.0%	42.6%	16.4%	57.8%	39.2%	3.0%
5. Should a teacher who is HIV positive be allowed to continue teaching in school?	23.6%	63.8%	12.6%	86.2%	13.6%	0.2%
6. Can a person catch HIV/AIDS by eating food made by someone who has HIV positive?	36.6%	42.2%	21.2%	10.6%	83%	6.4%
7. Would you share same classroom with HIV positive child?	69.0%	27.6%	3.4%	44.6%	50.0%	5.4%
8. Would you be afraid to buy fresh vegetables from an AID/HIV positive shopkeeper?	67.6%	28.0%	4.4%	7.4%	90.8%	1.8%
9. Can a person catch HIV/AIDS by Sharing same food utensils?	54.4%	30.6%	15.0%	6.8%	87.8%	5.4%
10. Can a person catch HIV/AIDS by working with someone who is HIV positive?	34.8%	45.6%	19.6%	13.8%	82.0%	4.2%

**Discussion:**

A total of 500 higher secondary school students participated in this study, (260) males and (240) females distributed as (119) in Khartoum North, (170) in Omdurman and (211) in Khartoum in both governmental & non-governmental schools.

Schools are key settings for educating children about HIV/AIDS and for stopping the further spread of the HIV infection <sup>(10)</sup>

In our study we found that students in the pre-intervention phase, as expected, were prone to stigmatize and discriminate against people with HIV/AIDS however we found significant shift in the mindset of the students in the post-intervention phase.

Initially in the pre-intervention phase the students denied knowing anyone Who is HIV positive (64.2%) or had HIV test (66.8%) however post-intervention (86.4% said yes

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and 48.6% said no). The effectiveness of the program showed that the students were more willing take care of a family member or a friend who is HIV positive in the post-intervention phase (25.6% in pre-intervention and 79.2% in post-intervention intervention). Tables no. 3

Misconception about catching HIV/AIDS by working with this group (34.8% before and 13.8% after intervention) might be an important factor that could explain of the students' negative attitude towards such group. The change in attitude towards participation in worship places faced resistance (42.6% before and 39.2% after intervention). This is rather surprising as places of worship are deemed the places where sufferers would seek spiritual and social support however the representation of such places in the minds of the students could reflect a wider social attitude as in such places one could come into direct contact with strangers. The intervention was also extremely effective in changing the attitude of the students towards HIV positive teachers as (63.8%) in the pre-intervention phase showed reluctance compared to (13.6%) in the post-intervention phase. One can deduct that familiarity with the teachers and the controlled school environment might explain the positive shift compared to worship places. The same could be said for sharing the same classroom with HIV positive students (69.0%) in the pre-intervention were reluctant compared to (44.6%) in the post-intervention. Tables no. 3

Although there was a positive shift in the attitude about sharing the same classroom with HIV positive students it was less than the attitude towards the teacher, such less favorable change could be explained by the close vicinity of HIV positive students to their classmates and sharing of other facilities or could be a stigma issue or inner psychological conflict befriending this socially ostracized group. However, our study showed healthier attitude compared to a study conducted in the UAE which showed that (73%) of the study sample felt students with HIV should not be allowed to attend school. <sup>(11)</sup>

In a study carried out at Omdurman National Voluntary Counselling and Testing Centre, in Sudan which covered (870) participants, only (4.7%) accepted to live with someone who suffers with AIDS and only (2.1%) to work with someone infected with AIDS. <sup>(12)</sup>

This shows that the public attitude is far more negative compared to the students who might have better access to knowledge.

The positive shift in the mindset of the students with regards to buying vegetables from HIV positive person from (67.6%) to (7.4%) indicates the effectiveness of the program which corrected their misconception about HIV positive traders. Tables no. 3 The same corrective experience of misconception was found in the question about catching HIV by eating food made by someone who is HIV positive from (36.6%) to (10.6%). The same trend was found with regards to a person catching HIV/AIDS by sharing same food utensils from (30.6%) in pre-intervention to (13.8%) in post-intervention proving once more the efficacy and effectiveness of the health education program. Tables no. 3

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In comparison a study conducted in university students in Turkey, indicated that students believed that HIV/AIDS could be contracted by sharing same food utensils (46%) and sharing a toilet seat of an HIV positive person (37%).<sup>(13)</sup>

**Conclusion and Recommendation:**

The study concluded that the improvement of students' attitude following the health education program intervention was significant (P value= 0.001) which proves the efficacy of the intervention.

It was clear that the effect of traditions, social myth and customs had stronger influence on students' attitude towards HIV positive sufferers than any general health awareness campaigns however focused and specific interventions have shown that they are efficacious in creating positive change in the mindset of the students.

The study proves that the Sudanese National Aids Program (SNAP's) implementation is effective in reducing stigma and paving the way to raising awareness about the disease in terms of social inclusion and prevention and therefore the authors recommended that it should be incorporated in schools' curricula and collaborative work between schools, society and the governmental and non-governmental organizations should ensue.

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