

Original Article

Assessment of Knowledge and Attitude among School Teachers Regarding HIV/AIDS Education in Field Practice Area of a Medical College in Southern Rajasthan

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ABSTRACT

Background: Teachers can play a very significant role in reducing the occurrence and spread of HIV infection among their students by educating regarding causation and prevention of HIV/AIDS. This depends on their own knowledge regarding HIV/AIDS and their attitude towards HIV/AIDS education.

Objective: Purpose of this study was to assess the knowledge and attitude towards HIV/AIDS education among school teachers in Udaipur.

Material and methods: Cross-sectional, pre-structured questionnaire based study. Study was conducted among 138 school teachers in both urban and rural field practice area of Rabindra Nath Tagore Medical College, Udaipur. Data were analyzed statistically by simple proportions and test of significance (one way ANOVA) and Mann Whitney U test using SPSS ver.16.

Results: The participants were 138 school teachers comprised 42 (30.4%) males and 96 (69.6%) females. The mean age was 38.5±10.7 years. All the teachers had heard about HIV/AIDS. Commonest sources of information were News papers/ magazines/ posters (88.4%). Overall mean score of knowledge was found to be 18.2±1.92. There were significant differences in knowledge by the type of school and teaching subject (p value <0.05). The mean attitude score was found to be 20.4±5.75. There was significant differences in attitude by the type of school, teacher's age and teaching subject (p value <0.05). No statistically significant association seen between adequate knowledge and favourable positive attitude (p >0.05).

Conclusion: Knowledge about HIV/AIDS is adequate but there is a gap between knowledge and attitude. Teachers training programme to impact on behaviour change needed.

Key words: HIV/AIDS, knowledge, attitude, school teachers

INTRODUCTION

AIDS, the Acquired Immunodeficiency Syndrome (sometimes called 'Slim disease') is a fatal illness caused by a retrovirus known as the Human Immunodeficiency Virus (HIV) which breaks down the body's immune system, leaving the victim vulnerable to a host of life threatening opportunistic infections, neurological disorders and unusual malignancies [1].

In India approximately 2.1 million (1.7 million-2.7 million) people were living with HIV in 2013, with national adult HIV prevalence of 0.3%. A total of 130,000 [93,000-160,000] died during 2013. India is estimated to have the third highest number of estimated people living with HIV/AIDS, after South

Africa and Nigeria. Although the proportion of people living with HIV is lower than previously estimated, India's epidemic continues to affect large number of people [2].

Teachers can play as role models, advocates for healthy school environment, and guide students in need of services, resources for accurate information, mentors, and effective instructors. But to meet these expectations in the HIV/AIDS era, teachers need skills and knowledge as well as support from the educational system and broader community. A large number of young people throughout the world attend school. Schools are good platform where the topics related to HIV/AIDS can be addressed and information,

values, and skills conveyed in schools can thus have a considerable impact on their lives.

Teachers can play a very significant role in reducing the occurrence and spread of HIV infection among their students by giving education regarding causation and prevention of HIV/AIDS. This depends on their own knowledge regarding HIV/AIDS, their attitude towards HIV/AIDS education. In this context the present study was conducted to assess the knowledge and attitude regarding the causation and prevention of HIV/AIDS education.

MATERIAL AND METHODS

The study was conducted in both urban and rural field practice area of Rabindra Nath Tagore Medical College, Udaipur, Rajasthan. All secondary and senior secondary schools both Government and Private were included in the study. The study was a cross sectional descriptive study. All the school teachers teaching class IX and above in the schools of study area irrespective to their stream were included. A total number of schools were 14 and a total number of teachers were 138.

Self made semi structured questionnaire was the major tool of the study. This tool was prepared with help of review of literature and reviewing topic on HIV/AIDS in secondary and senior secondary school syllabus. Total twenty six questions were utilized to assess the knowledge of teachers regarding causation and prevention of HIV/ AIDS. Each correct response was given one mark. Every Teachers scored ≥ 18 marks considered as adequate knowledge ($n=96$) and < 18 marks considered as inadequate knowledge ($n=42$). The attitude was measured by using five point Likert scale. To calculate the total attitudes score, each strongly agree response was given four marks, three marks for agree, two for disagree and strongly disagree was given one mark. A total of 8 statements were put for testing attitude towards HIV/AIDS education. High score (≥ 22) considered as positive favorable attitude and low score (< 22) considered as negative attitude. A pilot study was conducted in 10 school teachers and necessary changes were made accordingly and implemented for survey and result of these teachers were not included in present study.

All the secondary and senior secondary schools of urban and rural field practice area of RNT Medical College were identified and visited. After obtaining permission from the head of institutes of these schools, all teachers were consulted. Two teachers in urban area and one in rural area refused to

participate and a total of 7 teachers from both areas were found absent during the visit to schools. All the teachers were requested to gather in a common hall in each school. Information was provided about aims and objectives of the study and methodology adopted, and teachers were given assurance about confidentiality. Respondents were made to sit separately while filling the questionnaire to avoid communication. Twenty minutes were given to every respondent to fill the questionnaire form. Health education regarding HIV/AIDS was given at the completion of questionnaire to clarify teacher's doubts, misconceptions regarding HIV/AIDS. Data was entered and analyzed with Epi info 7 statistical software.

RESULTS

The participants were 138 school teachers comprised 42 (30.4%) males and 96 (69.6%) females [Table-1]. The mean age was 38.5 ± 10.7 years. The mean teaching experience of study population was observed to be 12.8 ± 10.8 years. All the teachers (100%; $n=138$) had heard about HIV/AIDS. A commonest source of information was Print media (88.4%).

Table 1: Demographic profile of study participants (n = 138)

Variable	No. of participant (%)	
Age Group (In Years)	21-30	41 (29.7%)
	31-40	42 (30.4%)
	41-50	30 (21.8%)
	>50	25 (18.1%)
Sex	Male	42 (30.4%)
	Female	96 (69.6%)
Area of service	Rural	48 (34.8%)
	Urban	90 (65.2%)

Though most of the teachers (90%) responded correctly to different questions on mode of transmission, but only 26% were aware of commonest route of HIV/AIDS spread in India is heterosexual route. Only 37% correctly responded that HIV transmits through breast milk from HIV infected mother to her child and only 17.4% correctly answered that HIV may be transmitted during window period [Table-2].

Regarding the knowledge about prevention of HIV/AIDS, majority (90%) of the teachers responded correctly to different questions on preventive methods of HIV/AIDS. Most Common

misconception regarding HIV/AIDS among teachers was that it is the disease of foreigners/ sex workers (20.3%). A small percentage (1.5%) were thought that HIV may spread by eating/drinking from the plates and cups used by HIV/AIDS infected patients, by shaking hands/hugging with HIV/AIDS patient, by mosquito and other insect bites, by sharing bed used by HIV/AIDS patient [Table-3].

Table 2: Knowledge of participants about HIV/AIDS (n = 138)

Variables	Correct responses (%)
Knowledge about mode of HIV transmission	
Unsafe Sex	136 (98.6%)
Sharing HIV contaminated needles, syringes etc.	131 (94.9%)
Infected mother to child during pregnancy and delivery	125 (90.6%)
Infected mother to child by breast feeding	51 (37.0%)
Piercing nose/ear, tattooing with HIV contaminated instruments	88 (63.7%)
Blood transfusion and organ transplantation of HIV infected Pt.	131 (94.9%)
HIV may be transmit during window period	24 (17.4%)
Most common route of HIV transmission in India	36(26.0)
Knowledge about signs of HIV/AIDS	
Weight loss \geq 10% of body weight	68 (49.3%)
Chronic diarrhea for more than 1 month	70 (50.7%)
Fever for more than 1 month	85 (61.6%)
Knowledge about screening test used for diagnosis of HIV	88 (63.8)
Knowledge about the disease and risk factor	
Does HIV affect body's natural defense?	101 (73.2%)
Does presence of STD increases HIV infection risk?	88 (63.8%)
HIV positive patient have a higher risk to getting tuberculosis	67 (48.6%)
Knowledge about Preventive measure of HIV/AIDS transmission	
Being faithful to single partner	134 (97.1%)
Consistent and proper use of condoms	125 (90.6%)
By using disposable needles, syringes	123 (89.1%)
Screening blood for HIV before transfusion	129 (93.5%)

Overall mean score was found to be 18.2 ± 1.92 which comes under category of adequate knowledge score. On comparing mean knowledge scores with different variables by applying ANOVA test, there were significant differences in knowledge by the type of school and teaching subject, where government school teachers (F static 5.58; p value 0.0195) and science teachers scored better (F static 4.96; p value 0.0275).

Table 3: Misconceptions among participants about HIV/AIDS (n = 138)

Misconceptions regarding HIV/AIDS	Correct responses
HIV may be transmitted by eating/drinking from same utensils of HIV/AIDS patients.	125 (90.6%)
HIV may be transmitted by shaking hands/ hugging with HIV/AIDS patient	133 (96.4%)
HIV may be transmitted by by mosquitoes and other insect bites.	124 (89.8%)
HIV may be transmitted by sharing bed used by HIV/AIDS patient	124 (89.8%)
HIV may be transmitted by caring and treating HIV/AIDS patient	136 (98.6%)
HIV/AIDS patient may be identify by Look	125 (90.6%)
HIV/AIDS is only the disease of foreigners and sex workers	84 (60.9%)

Positive attitudes of participants towards HIV/AIDS education ranged from 83.4% to 49.2% on different statements, while those with negative attitudes varied from 43.6% to 12.4% [Table-4]. The mean attitude score was found to be 20.4 ± 5.75 which comes under the category of negative attitude. Out of total 138 respondent 44.2% were showing positive favourable attitude and 55.8% were in the category of negative attitude.

On comparing mean attitude scores with different variables by applying ANOVA test, there were significant differences in attitude by the type of school, teacher's age and teaching subject, where government school teachers (F static 4.63; p value 0.0332), young teachers (F static 4.37; p value 0.0057) and science teachers scored better (F static 7.38; p value 0.0074).

Relationship between knowledge and attitude investigated using Mann-Whitney U test. Knowledge was grouped as adequate and inadequate. No statistically significant association seen between adequate knowledge and favorable positive attitude (U = 1.663E3; p >0.05).

Table 4: Distribution of participants according to their attitude towards HIV/AIDS education (n = 138)

Statements	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Responded
1. We should support HIV/AIDS education in the school curriculum	44 (31.9%)	71 (51.5%)	11 (8.0%)	6 (4.3%)	6 (4.3%)
2. High School teachers are responsible for HIV/AIDS education in schools	36 (26.1%)	45 (32.6%)	40 (29.0%)	14 (10.1%)	3 (2.2%)
3. Use teachers' knowledge to spread HIV/AIDS awareness in the community	24 (17.4%)	51 (36.9%)	42 (30.4%)	7 (5.1%)	14 (10.1%)
4. No separate schools should be there for HIV/AIDS infected children	33 (23.9%)	35 (25.3%)	42 (30.4%)	18 (13.2%)	10 (7.2%)
5. Pre service training about HIV/AIDS education should be emphasized.	31 (22.5%)	51 (36.9%)	18 (13.0%)	20 (14.6%)	18 (13.0%)
6. Separate teaching hours should be there for HIV/AIDS education	34 (24.6%)	60 (43.5%)	21 (15.2%)	7 (5.1%)	16(11.6%)
7. Teachers should not be embarrassed by answering students questions about HIV/AIDS	36 (26.1%)	40 (29.0%)	24 (17.4%)	9 (6.5%)	29(21.0%)
8. If a teacher is HIV positive, he/she should be allowed to continue his/her teaching in school.	45 (32.6%)	40 (29.0%)	10 (7.2%)	7 (5.1%)	36 (26.1%)

DISCUSSION

In present study all the teachers (100%) had heard about HIV/AIDS. A commonest source of information was print media (88.4%). Similar finding was observed in school teachers of Lucknow district of northern India [3]. On the contrary, television was reported the main source of information in school teachers in Ogun State, Nigeria [4] Turkish school teachers [5] and Yazd, Islamic Republic of Iran [6].

Overall mean knowledge score was found to be 18.2 ± 1.92 (70%) in present study. Similar findings was observed in studies in Sudan East African [7] where overall mean score for knowledge about AIDS was 5.0 out of a total of seven (71%) and in Iran [6] means knowledge score of the teachers was 11.5 out of 17 (68%). In contrary to our finding a study conducted in Zambia at University of South Africa [8] showed a very low mean knowledge was found 4.5 out of 15(30%).

In present study, majority (98.6%) of the teachers responded correctly to questions on mode of transmission through unsafe sex. In studies conducted in Ogun State, Nigeria [4], in Turkish school teachers [5] and in Iran [6] also found in their study that most respondents knew that HIV may be transmitted by unsafe sexual intercourse.

Majority of the teachers (90.6%) responded correctly that HIV can be transmitted from infected mother to child during pregnancy and delivery in present study. Similar finding was observed in a study conducted in Turkish school teachers [5] where 91.5% teachers correctly responded. This level was founded low in studies conducted in Ogun State, Nigeria [4], and in Iran [6] that was 80.7% and 76.9% respectively.

In present study, only 37% teachers correctly responded that HIV transmits through breast milk from HIV infected mother to her child. Turkish school teachers [5] and in Ogun State, Nigeria [4] revealed in their study that knowledge about this factor was only 25.8% and 21% respectively.

Sixty four percentage teachers responded correctly that presence of sexually transmitted diseases increases HIV infection risk in our study. Similar to our finding a study in Ogun State, Nigeria [4] 63.4% participants responded correctly.

Regarding the knowledge about prevention of HIV/AIDS our study revealed that majority (90%) of the teachers responded correctly to different questions on preventive methods of HIV/AIDS. In congruence to our finding a study conducted in Turkish school teachers [5] observed that correct use of condoms is an effective way to prevent the transmission of HIV/AIDS during sex (89.5%

teachers) and the risk of transmission can also be reduced by having sex with only one faithful uninfected partner (88.8%).

In our study common misconception regarding HIV/AIDS among teachers was, HIV/AIDS is only the disease of foreigners/ sex workers (20.3%). A small percentage (1-7%) thought that HIV may spread by eating/drinking from the plates and cups used by HIV/AIDS infected patients, by shaking hands/hugging/living with HIV/AIDS patient, by mosquito and other insect bites, by sitting/sleeping on the bed used by HIV/AIDS patient. There was also misconception among 3.6% teachers that HIV positives can be identified by look. A study in Kenya [9] observed that 1.4% teachers incorrectly responded that HIV may spread by mosquitoes and other insect bites. A study in Turkish school teachers [5] observed that a considerable number of the respondents were not aware that HIV infection cannot be transmitted by mosquito bites (33.2%), shaking or touching hands (27.4%). A study in Ogun State, Nigeria [4] observed that there was misconception among teachers that HIV may be transmitted by sharing food/utensils (16.2%), by mosquito/ insect bites (16.7%). A cross-sectional interview study by in Iran [6] observed that some teachers (20.3%) thought that mosquitoes could transmit HIV/AIDS.

On comparing mean knowledge scores with different variables statistically significant difference was observed between government and private school teachers where government school teachers obtained higher knowledge score in our study. In contrary to our finding private school teachers scored better in study conducted in north-western Himalayas, India [10] and study in Udipi district, Karnataka, India [11].

A statistically significant higher mean knowledge score was observed by science teachers as compared to non-science teachers in present study. In congruence to our finding a study in Udipi district, Karnataka, India [11] revealed that teachers those teaching science scored better.

In this study 83.4% subjects either agreed or strongly agreed to include HIV/AIDS education in the school curriculum. Dawson et al [12] found that 99% of female respondents and 100% of male respondents said in their study that they were in favour of including AIDS education in the curriculum in school ,which was higher than our study. Nearly 68.1% also agreed that there should be separate teaching hours for HIV/AIDS education in our study. In contrary to our finding a study in Zambia [8] showed that 91.5% teachers were

agreed on the same statement. In our study 55.1% teachers either agree or strongly agree that teachers should not be embarrassed by answering student's questions about HIV/AIDS. A study by in Zambia [8] a higher proportion teacher was agreed on the same statement (84.2%).

On comparing mean attitude scores with different variables statistically significant difference was attained between government and private school teachers where government school teachers observed higher attitude score in our study. In contrary to our finding a study conducted in northwestern Himalayas, India [10] findings revealed a significant difference between public and private school teachers in their attitude level ($p < .001$) where private school teachers scored better.

A statistically significant higher mean attitude score was observed by science teachers as compared to non-science teachers. In congruence to our findings a study by Weir Sen Lin et al [13] showed that, science teachers had more positive attitudes toward teaching about HIV/AIDS.

Comparison of mean attitude scores by their age showed that highest mean attitude score was observed among teachers of 21-30 years age group and then decrease gradually with their age and that difference was also found to be statistically significant in our study. In congruence to our finding a study in Zambia at University of South Africa [8] showed that highest mean attitude score was observed among teachers of 21-30 years age group but that difference was found to be statistically insignificant. A study amongst Turkish school teachers [5] revealed young teachers had more positive attitudes but no significant difference was found between age groups and attitudes. A study conducted in Iran [6] revealed a relationship between the age of participants and their attitude and found that younger teachers having more positive attitudes than older once ($P < 0.001$).

In our study no statistically significant association was seen between adequate knowledge and favourable positive attitude ($p > 0.05$). In contrary to our finding a study conducted by in Iran [6] observed direct correlation between teachers' knowledge scores of HIV/AIDS and scores for a positive attitude toward HIV/AIDS ($P < 0.001$).

CONCLUSION

It is the current requirement of country to train and strengthen their future pillars and save them from the biggest global threat. Education currently may be the best way of defense against the spread of

the HIV/AIDS. Individuals and systems have to make changes in their thinking, behavior, attitudes, beliefs, and policies.

Government should implement an HIV/AIDS education programme impacting on behavior change among teachers and students by using quality learning material on HIV/AIDS. Government should also organize regular training workshops and seminars where clarifications of doubt could be sought from experts. In addition, as teachers may be reluctant to tackle the teaching of sex related sensitive issues in detail, other channels for covering this vital topic outside the school context, such as mass media, Health personnel etc., should be rigorously formulated and implicated. More research about school teachers' and students' knowledge, attitudes and beliefs regarding HIV/AIDS needs to be done.

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