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Human immunodeficiency virus, acquired immunodeficiency syndrome (HIV/AIDS): awareness and attitude among school teachers

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Abstract

Introduction: Awareness and attitude regarding human immunodeficiency virus and acquired immunodeficiency syndrome (HIV/AIDS) can play a crucial role in providing health education and prevention of HIV/AIDS. This study aims to find out awareness and attitude regarding HIV/AIDS amongst secondary level school teacher.

Method: During 3-months period in 2018, secondary level school teachers in Lalitpur district in Kathmandu valley, Nepal, were randomly selected by lottery to find out their awareness and attitude regarding HIV/AIDS. A self-administered structured questionnaires and a five-points Likert attitude scale was used to collect data. Data was analysed with SPSS version 16.

Result: Among 116 school teachers included in the study, 94 (81%) had adequate level of awareness on HIV/AIDS, 115(99.1%) were aware about sexual transmission of HIV, 112 (96.6%) about not being transmitted by eating drinking from same utensils and 113 (97.4%) knew commercial sex workers as high-risk group. Overall, 106 (91.4%) had favourable attitude regarding HIV/AIDS. There was no significant correlation between awareness and attitude.

Conclusion: The HIV/AIDS awareness among secondary level school teachers was adequate, their attitude was favorable. There was no association between awareness and attitude.

Keyword: attitude, awareness, HIV/AIDS, school teachers

Introduction

Acquired immunodeficiency syndrome (AIDS) is a fatal illness caused by the human immunodeficiency virus (HIV), a retrovirus which affects the immune system, leaving the victim vulnerable to life-threatening infections, neurological disorders, and malignancies.¹ Worldwide, in 2016, an estimated 36.7 million individuals were living with HIV and 1.8 million died from AIDS.² In Nepal, in 2016, the number of individuals with HIV were 32735, a prevalence of 0.17%.³

A study revealed adequate knowledge but negative attitude of HIV/AIDS.⁴ Even with sufficient knowledge, the teachers often feel uncomfortable to discuss with students the issues of sexuality and use of condoms.⁵ Teachers may play significant role to provide HIV/AIDS education to students and reduce the spread of HIV infection.

This study was designed to find out awareness and attitude of secondary level school teachers regarding HIV/AIDS.

Method

A cross-sectional study was conducted among secondary level school teachers during April 2018 to February 2019. The study population consisted of 145 school teachers who were selected from four schools in Lalitpur district, in Kathmandu valley, Nepal. Non-probability convenient sampling was used for selection of Two private schools- Little's Angles School (LAS) and Ideal Model School (IMS), and two government schools- Harishiddhi Secondary School (HSS) and Namuna Machhindra School (NMS) in Lalitpur district were selected as per convenience. The sample size was calculated by using Slovin's formula^{6,7}: $s = N/1+Ne^2$, where $s = 145$ (sample size for known population), $e = 0.05$ (margin of error as 5%). The required sample size was 106. Allowing non-response rate of 5% and maintaining the power of test, the final

sample size was 116. The proportionate stratified random sampling was used for two strata (105 teachers from private schools and 40 from government schools). Teachers who taught in grade 8 to 10 were selected by simple random sampling lottery method from each stratum, Figure 1.

The instruments included three parts:

Part-I, related to the socio-demographic characteristics of teachers; age, gender, marital status, education, teaching experience and teaching subject.

Part-II, related to awareness regarding HIV/AIDS among teachers. Adequate awareness was a score $> 75\%$, moderately aware 51-75% and inadequate awareness $\leq 50\%$.⁸

Part-III, related to attitudes consisted of ten positive items of five points Likert scale (strongly agree=5, agree=4, don't agree=3, disagree=2, strongly disagree=1). Favourable attitude was a score $> 75\%$, neutral 50-75% and unfavourable $< 50\%$ based on scoring criteria.⁹

Ethical approval was obtained from Institutional Review Committee (IRC) of Patan Academy of Health Sciences (PAHS). Written permission from schools administration was obtained. Informed verbal consent was taken from the teachers and anonymity was maintained. The self-administered structured questionnaires were used to collect the data. The questionnaire was developed based on literature review and books.^{1,4,5,10,11} Content validity was done and reliability test was also done (cronbach's alpha = 69). The SPSS 16 was used for descriptive analysis of frequency, mean and standard deviation for socio-demographic variables. Mann-Whitney U test and Kruskal Wallis test was used to analyze correlation between socio-demographic variables of school teachers with their knowledge and attitude scores.

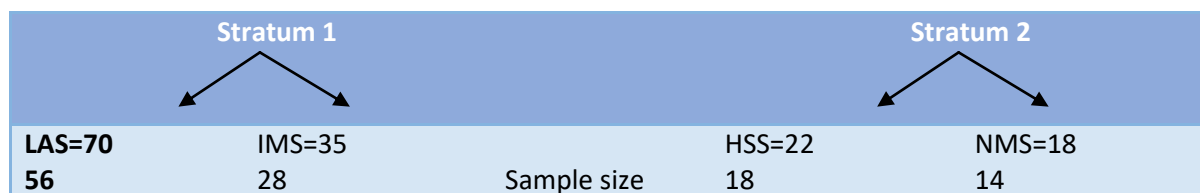


Figure 1. Strata, population size, sample size of four schools. LAS = Little's Angles School, IMS=Ideal Model School, HSS = Harishiddhi Secondary School, NMS=Namuna Machhindra School

Result

The 116 secondary school teachers who participated in the study, the mean age was 38.58 ± 8.76 year, male 63(54.3%), most of the school teacher were married 91(78.4%), educational qualification masters or above 88 (74.9%), work experience more than one year 106 (91.4%), and currently teaching

general/non-science subjects 82 (70.7%). Mean awareness and attitude scores were 84.13 and 89.03% respectively.

In general awareness, 101 (87.1%) were aware that HIV is communicable, 4 (3.4%) may be transmitted by eating and drinking from same utensils, Table 1.

Table 1. General awareness of the secondary school teachers regarding HIV/AIDS, N=116

Variables	Yes		No	
	n	%	N	%
HIV/AIDS is curable	34	29.3	82	70.7
HIV/AIDS is a communicable	101	87.1	15	12.9
HIV/AIDS is Genetic disease	28	24.1	88	75.9
HIV may be transmitted by mosquitoes and other insect bites	13	11.2	103	88.8
HIV may be transmitted by eating and drinking from same utensils	4	3.4	112	96.6
STDs increase the risks of HIV infection	99	85.3	17	14.7
HIV positive patient have a higher chance to getting tuberculosis	94	81	22	19

Table 2. Specific awareness of school teachers regarding HIV/AIDS, N=116

Mode of Transmission ^a	Frequency	Percent
Sexual transmission	115	99.1
Pregnant mother to baby	104	89.7
Infected blood and blood products	111	95.7
Sharing infected needles	112	96.6
Sharing razors	101	87.1
Prevention of HIV Transmission^a		
Safe sex	111	95.7
Use of sterile needle and syringe	104	89.7
Blood test before blood transmission	109	94.0
Avoid multiple sexual partners	109	94.0
High risk group of HIV/AIDS^a		
People who received blood frequently	78	67.2
Men having sex with men	34	29.3
Intra venous drugs abusers	100	86.2
Commercial sex workers	113	97.4
Causative agent of HIV		
Bacteria	3	2.6
Virus	112	96.6
Protozoa	1	.9

Note: ^a multiple responses

Table 3. Attitude of Teachers regarding HIV/AIDS, N=116

SN	Statement of Attitude	Strongly agree N (%)	Agree N (%)	Don't agree N (%)	Disagree N (%)	Strongly disagree N (%)	Mean (SD)
1	I need to support HIV/AIDS education in the school curriculum	94 (81.0)	21 (18.1)	-	1 (0.9)	-	4.79 (0.46)
2	I believe that HIV/ AIDS related education should be crucial for secondary level students.	82 (70.0)	27 (23.3)	1 (.9)	2 (1.7)	4(3.4)	4.56 (0.88)
3	I do not feel embracement by answering students questions related to HIV/AIDS	74 (63.8)	36 (31.0)	3 (2.6)	3 (2.6)	-	4.56 (0.67)
4	I feel comfort to teach reproductive health related chapter	59(50.9)	52 (44.8)	2(1.7)	3(2.6)	-	4.44 (0.66)
5	I believed that HIV/AIDS related awareness helps students to protect themselves from HIV infection.	91(78.4)	24 (20.7)	-	-	-	4.76 (0.53)
6	I am grateful to use my knowledge for prevention of HIV in the community.	67(57.8)	45 (38.8)	2 (1.7)	2(1.7)	-	4.53 (0.62)
7	I am responsible for HIV/AIDS education among the school children	51 (44)	52 (44.8)	7 (6.0)	6(5.2)	-	4.28 (0.79)
8	Students with HIV/AIDS should be allowed to attend school	76 (65.5)	35 (30.2)	2 (1.7)	2(1.7)	-	4.58 (0.7)
9	HIV/AIDS positive teacher should be allowed to teach school.	77 (66.4)	32 (27.6)	2 (1.7)	3(2.6)	2(1.7)	4.54 (0.8)
10	People with HIV/AIDS can live a normal life.	64 (55.2)	47 (40.5)	2 (1.7)	2(1.7)	1(.9)	4.47 (0.7)

In specific awareness 115 (99.1%) were aware of sexual transmission, 104 (89.7%) of pregnant mother to baby, 111 (95.7%) about safe sex as prevention, 113 (97.4%) that commercial sex workers are a high risk group and 112 (96.6%) of virus as causative agent, Table 2.

Towards attitude, 94 (81.0%) strongly agreed to support that school curriculum should include HIV/AIDS education, Table 3.

Correlation between awareness and attitude scores was not statistically significant ($p < 0.40$), correlation coefficient $r = 0.08$. Kruskal Wallis and Mann-Whitney U test revealed no significant association between awareness and socio-demographic variables (school teacher's age, gender, marital status, educational qualification, work experience and teaching subjects)

Discussion

In present study the overall awareness of the school teachers regarding HIV/AIDS was adequate (84.13%), similar to the study from southern Rajasthan India⁵(70%), and Iran¹⁰ (68%). In contrast low mean knowledge score was found in Zambia (30%) at the University of South Africa.¹²

In present study overall attitude was favourable with a score of 89%. This might be because the majority of school teachers had (75.9%) master/ above educational qualification and teaching experience more than one years. On the contrary the study in southern Rajasthan India found that negative attitude toward HIV/AIDS.⁵

In present study, no statistically significant association was found between awareness and attitude regarding HIV/AIDS ($r = 0.077$, p -

value=0.409), similar to the study from Rajasthan ($p > 0.05$).⁵ Awareness and attitude are different terminology gives different meaning. Awareness is understanding level of persons (teachers) on HIV/AIDS disease process, risk factors, prevention and treatment as a whole. Attitude refers to feeling and opinion of the school teachers. So, this study presented that high level of awareness does not match the favorable attitude. Level of awareness does not play vital role for favorable or unfavorable attitude vice versa.

There was no significant association between awareness with teacher's socio-demographic variables, similar to a study conducted in Bichi Local Government of Kano State Nigeria¹¹ but the study from southern Rajasthan⁵ revealed young teachers (F static 4.37; p value .006) and science teachers scored better (F static 7.38; p-value .007) scored better. In Nepal and Nigeria awareness of HIV/AIDS was not affected by their socio-demographic variables of (age, work experience etc.) School teachers in Rajasthan were younger and had more awareness about HIV/AIDS. This may be because of changing concept of health in new generation and education may change awareness in young one.

Some of the limitation of this study are choice and number of schools sampled may not represent all the schools in Kathmandu valley, and no subgroup comparison was done between the teachers from private and public schools and sampling using general prevalence could have been more representative.

Conclusion

The findings of this study shows more than four fifth of the teachers of secondary level schools had adequate level of awareness towards the HIV/AIDS and almost all had favourable attitude regarding HIV/AIDS.

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Conflict of Interest and Funding

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Supplement

Questionnaire

Type of school: Government / Private

part I

Socio- Demographic Data

- 1 Age
- 2 Gender
 - a. Male
 - b. Female
- 3 Marital status
 - a. Married
 - b. unmarried
 - c. Divorced
 - d. widowed
- 4 Educational qualification
 - a. Bachelor
 - b. Master/above

- 5 Duration of work experience in current position
 - a. Less than 1 year
 - b. More than 1 year

- 6 Currently teaching subject

Part –II
Awareness related question

- 1 Is HIV/AIDS curable?
 - a. Yes
 - b. No

- 2 Is a HIV/AIDS communicable?
 - a. Yes
 - b. No

- 3 Is HIV/AIDS genetic disease?
 - a. Yes
 - b. No

- 4 What are the mode of transmission of HIV(Multiple response)
 - a. Sexual transmission
 - b. Pregnant mother to baby
 - c. Infected blood and blood products
 - d. Sharing infected needles
 - e. Sharing razors

- 5 what are the sources of information about HIV/AIDS(multiple response)
 - a. Books
 - b. Training
 - c. Journal/newspaper
 - d. Friends
 - e. Health personnel

- f. Internet
- 6 How to prevent HIV Transmission(multiple response)
- a. safe sex
 - b. Use of sterile needle and syringe
 - c. Blood test before blood transmission
 - d. Avoid multiple sexual partners
- 7 HIV may be transmitted by mosquitoes and other insect bites
- a. Yes
 - b. No
- 8 HIV may be transmitted by eating and drinking from same utensils of HIV/AIDS patients
- a. Yes
 - b. No
- 9 what is the causative agent of HIV
- a. Bacteria
 - Virus
 - c. protozoa
- 10 who are the high risk groups of HIV/AIDS(Multiple response)
- a. People who received blood frequently
 - b. Men having sex with men
 - c. Intra venous drug abusers
 - d. Commercial sex workers
 - e. people who received organ from others
- 11 Do STDs increase the risks of HIV infections?
- a. yes
 - b. No

12 Does HIV positive patient have a higher chance to getting tuberculosis?

a. Yes

b. No

Likert Scales Related to Attitude

S.N.	Statement	Strongly agree	Agree	Don't agree	Disagree	Strongly disagree
1	I need support HIV/AIDS education in the school curriculum					
2	I believe that HIV/ AIDS related education should be crucial for secondary level students.					
3	I do not feel embracement by answering students questions related to HIV/AIDS					
4	I feel comfort to teach reproductive health related chapter					
5	I believe that HIV/AIDS related awareness helps students to protect themselves from HIV infection.					
6	I am grateful to use my knowledge for prevention of HIV in the community.					
7	I am responsible for HIV/AIDS education among the school children					
8	Students with HIV/AIDS should be allowed to attend school					
9	HIV/AIDS positive teacher should be allowed to teach school.					
10	People with HIV/AIDS can live as a normal life.					