ORIGINAL ARTICLE

A preliminary report on "knowledge, attitude, and practice" on "human immunodeficiency virus" among the students of a college in Bankura

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Abstract

Background: Human immunodeficiency virus (HIV) infection leading to acquired immunodeficiency syndrome (AIDS) is rising faster in Asia-Pacific region of the world. Although self-protection is the best preventive measurement for AIDS. Inadequate knowledge, negative attitudes, and risky practices are identified as the key factor for the AIDS. College students constitute a vulnerable group of AIDS due to their curiosity, lack of knowledge, and risk-prone behavior. **Purpose:** The study aims to examine the knowledge, attitude, and awareness about HIV infection/AIDS among a group of the college students' in Bankura district, West Bengal. **Method:** This study was quantitative and cross-sectional, with a descriptive design. Students have performed self-completed questionnaire, designed to measure their knowledge, attitudes, and awareness to HIV/AIDS. **Results:** Of the college students, 82% were aware about HIV infection/AIDS. Of which, 4.60% were found outstanding and high level of knowledge and 11.50% of students with excellent knowledge. The major sources of information on HIV infection/AIDS to 80% of respondents were electronic media and print media. **Conclusion:** From the survey report, we can conclude that AIDS awareness among college students of the Bankura is not satisfactorily.

Key words: Acquired immunodeficiency syndrome, awareness, college students' knowledge, human immunodeficiency virus, knowledge; attitude and practice

INTRODUCTION

The first case of acquired immunodeficiency syndrome (AIDS) was identified in the United States of America in 1981.[1,2] Since then, human immunodeficiency virus (HIV)/AIDS has spread drastically many countries over the years. Recent years, HIV/AIDS became a major global health challenges. This disease continues to affect more than millions of people around the world irrespective of their demographic status. In 2013, globally 35 million people were living with HIV infection and about 1.5 million deaths were recorded due to HIV infection/AIDS.[3] In 2015, the number was about 36.9 million of people living with HIV infection/AIDS.

India is the second most populated country in the world and it has the third largest HIV (after South Africa and Nigeria) epidemic in the world. A recent study[4] estimated that 2.1 million people live with HIV infection and AIDS (PLHA) in India. The decline tendency of HIV infection among the Indian is reported in only few cases. Most of the HIV-positive persons do not report due to the lack of awareness, fearing of social stigma, etc. [Table 1]. It may be mentioned that HIV infection in India was first detected in 1986 among female sex workers in Chennai.[5]

Globally, the spread of HIV infection/AIDS remains on the rise especially among college students. Knowing the knowledge base of HIV infection/AIDS is a most powerful

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Table 1: Burden of HIV in India [4]

Year	Estimated number of new HIV infections in adults (children)	Estimated number of HIV infections	Prevalence (%)	Number of annual HIV-related deaths
2007	106,335 (21.000)	2,225,930	0.34	150,000
2008	96,124 (20,000)	2,198,559	0.32	140,000
2009	88,234 (18,000)	2,174,594	0.31	130,000
2010	84,827 (17,000)	2,156,452	0.30	120,000
2011	82,100 (17,000)	2,146,839	0.29	110,000
2012	80,458 (16,000)	2,143,446	0.28	100,000
2013	78,613 (15,000)	2,127,958	0.27	90,000
2014	77,351 (12,000)	2,119,881	0.27	80,000
2015	75,948 (10,000)	2,116,581	0.26	68,000

HIV: Human immunodeficiency virus

means of promoting positive attitudes and engaging in safe practices in community people.[6] Youths are most vulnerable to AIDS/HIV infection because they engage in casual life due to insufficient information in this regard.

The nature of college students, their age, ambition, experience of new events[7] and other contextual were the driving factors that increase their risk of exposure to HIV infection/AIDS.[8] The students' level of knowledge, attitude, and practice (KAP) of HIV infection/AIDS can provide information for the combating situation. Half of all new HIV infections in the worldwide are more prevalent between the ages of 15 and 24.[9] Every day, nearly 6000 young people become infected with HIV, i.e., more than four in every minute.[10] The present study was designed to examine HIV infection/AIDS-related KAP among the students attending colleges in the district of Bankura, West Bengal, India.

METHODS

Study Design

This study was designed with a descriptive cross-sectional survey to collect data from the college students of Bankura district, West Bengal, India, using a self-administered questionnaire. The study was conducted from January 2018 to April 2018. The study participation was voluntary and anonymous.

Sample

A convenient sampling method was used to act as volunteer participants from the Bankura Christian College in Bankura district, West Bengal. A total of 130 adult college students (undergraduate: 109 and post-graduate: 21) in the age group 18–23 years were selected for this study.

Inclusion Criteria

The following criteria were chosen to be adult volunteer for this study - (a) the college students living in the Bankura district; (b) the age of the participants were between 18 and 23 years; (c) the college students shall be able to read and write in Bengali and English, and (d) they must be college students.

Exclusion Criteria

Students excluded in these studies were the medical students. Because it was assumed that their responses would not reflect as HIV prevention was included in the curricula for medical professions.

The different students were approached in their classrooms and invited to participate in this study. After explaining the nature, purpose, and anonymity of this survey, a questionnaire was developed and given to each student who was consented. All the students were assured that their responses would be confidential and that their participation was voluntary. In this survey, the students were free to decline at any time.

Instrument

The questionnaire consisted of questions that would take 10–20 min to complete. The pre-tested questionnaire was constructed of questions derived from previous research studies.[11-16] The questionnaire on knowledge of HIV infection/AIDS among the students consisted of 20 questions, of which 13 questions were related to HIV infection transmission and rest 7 questions were related to other relevant information [Table 4].

A two-point Likert-type scale "Yes" or "No" was used to get the answer. Each correct answer weighs 1 mark and wrong answer weighs 0 mark. Hence, the maximum marks will be 20 and the minimum will be 0. The gradation of marks is as follows: Those have answered 90% and above correct are graded as AA, 80–89% correct as A^+, 70–79% correct as A, 60–69% correct as B^+, and 50–59% correct as B and those have answered correctly but <50% is marked as C.

Table 2: Demographic analysis of college students and their mean HIV knowledge

Parameters	Mean±SD/*n* (%)	95% CI
Age (years)	20.19±4.06	19.43–20.95
Number of family members	6.20±3.82	5.49–6.92
HIV knowledge score	12.81±3.03	12.24–13.37

HIV: Human immunodeficiency virus, CI: Confidence interval

Table 3: Descriptive statistics of the demographic parameters

Parameters	Mean±SD/*n* (%)
Family type	
Nuclear	84 (64.62)
Joint	46 (35.38)
Gender	
Female	89 (68.50)
Male	41 (31.50)
Caste	
General	74 (56.90)
SC	14 (10.80)
ST	17 (13.10)
OBC	25 (19.20)
Stream	
B.Sc.	22 (16.90)
B.A.	39 (30.00)
M.A.	21 (16.20)
B.P.Ed.	48 (36.90)
HIV knowledge score	12.81±3.03
HIV knowledge (%)	
AA (90 and above)	6 (4.60)
A+ (80–89)	15 (11.50)
A (70–79)	26 (20.00)
B+ (60–69)	33 (25.40)
B (50–59)	29 (22.30)
C (<50)	21 (16.20)

HIV: Human immunodeficiency virus

Statistical Analysis

The data were analyzed by the SPSS 17 for Windows (SPSS Inc., Chicago, USA) for the assessment of correlation between psychiatric morbidity and sociodemographic and clinical variables. Descriptive analysis was performed using Pearson's Chi-square and Student's *t*-test. To compare different variables and psychiatric status, one-way ANOVA with Tukey's *post hoc* test was used. Pearson correlation, $P < 0.05$, was considered as statistically significant. Logistic regression analysis was done to assess the correlation amongst sociodemographic and clinical variables and psychiatric morbidity.

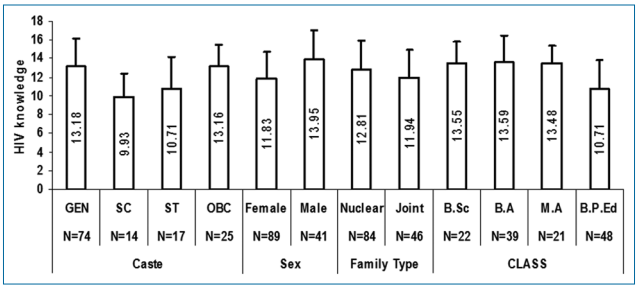

Figure 1: The impact of some demographic and educational factors on the mean score of human immunodeficiency virus (HIV) knowledge among the students. It was noted that caste ($F = 7.885$; $P < 0.001$), gender ($t = 3.851$; $P < 0.001$), and stream ($F = 10.584$; $P < 0.001$) had been significantly associated with the HIV knowledge of the students, but family type ($t = 1.5477$; $P > 0.05$) is not associated with HIV knowledge

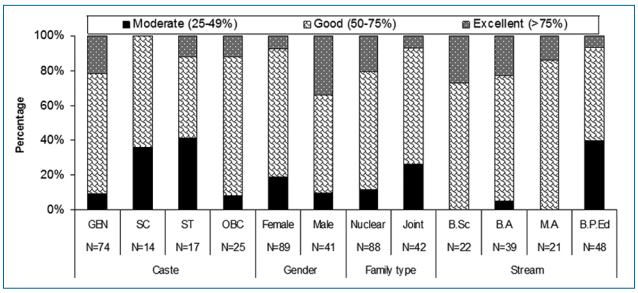

Figure 2: Effect of demographic and educational factors on the different grades of human immunodeficiency virus (HIV) knowledge level among the students. It was noted that family type ($\chi^2 = 6.997$; $P < 0.05$), caste ($\chi^2 = 18.757$; $P < 0.01$), stream ($\chi^2 = 34.447$; $P < 0.001$), and gender ($\chi^2 = 14.709$; $P < 0.001$) had been associated with the HIV knowledge level of the students

RESULTS AND DISCUSSION

The total number of participants in this study was 130, and the mean age was calculated 20.19 ± 4.06 (95% confidence interval [CI] = 19.43–20.95). Student participants had the mean average family members of 6.20 ± 3.82 (95% CI = 5.49–6.92). The study indicated that mean HIV knowledge score was 12.81 ± 3.03 (95% CI = 12.24-13.37) [Table 2].

HIV knowledge scores are categorized into different grades such as AA (outstanding), A^+ (excellent), A (very good), B^+ (good), B (average), and C (poor). From this study, we have observed that 4.60% of the college students were outstanding (i.e., AA), 11.50% of students were excellent (i.e., A^+), 20.00% of the students were very good (i.e., A), and 25.40% of the college students were good (i.e., B^+) HIV knowledge. Remaining 22.30% of students were average (i.e., (B) knowledge on HIV and 16.20% of students were very poor knowledge [Table 3].

Family Type

It was observed that the HIV knowledge level was significantly differed among the participants from nuclear

Table 4: The percentage of correct answer of the HIV knowledge-related statements

Q. No.	Statement	Correct answer (%)
1	HIV is the virus that causes AIDS	96.92
2	A person who is HIV positive has AIDS	21.54
3	There is no cure for AIDS currently	55.38
4	There is no vaccine against HIV currently	56.15
5	Having a STI can increase a persons' risk of getting HIV	73.08
6	People who have been infected with HIV quickly show serious signs of being infected	58.46
7	The acronym AIDS stands for	83.85
8	The acronym HIV stands for	82.31
9	Taking a test for HIV 1 week after having sex will tell a person if she/he has HIV	30.77
10	A pregnant HIV positive can transmit HIV to her baby	77.69
11	A mother who is HIV positive can infect her child through breastfeeding	51.54
12	Coughing and sneezing do not spread HIV	63.85
13	A person can get HIV by sharing a glass of water with someone who has HIV	79.23
14	Mosquito bites are one possible cause of infection	30.00
15	A woman cannot get HIV if she has sex during her period	52.31
16	A person can get HIV from oral sex	62.31
17	A woman can get HIV if she has anal sex with a man	69.23
18	Having multiple sexual partners increases the risk of getting HIV	80.77
19	Using Vaseline or baby oil with condom lowers the chance of getting HIV	55.38
20	Showering or washing ones genital/private parts, after sex, keeps a person from getting HIV	69.23

HIV: Human immunodeficiency virus, AIDS: Acquired immunodeficiency syndrome

to joint families (χ^2 = 6.997; P < 0.05). The Pearson product moment correlation also supported this finding as there is a negative association (r = 0.202; P < 0.05) between the HIV knowledge score and total number of family members, i.e. larger the family size, lower the HIV knowledge level.[17]

Gender

In this study, we have observed that the majority of the students were female (68.50%) and they had the mean knowledge score of 11.83 ± 2.83, while the male students had 13.95 ± 3.09 [Figure 1]. Thus, male students have significant better knowledge level of HIV infection than the female ones (t = 3.851; P < 0.001) and the males have most A (very good), A^+ (excellent), and AA (outstanding) than female (χ^2 = 14.709; P < 0.001) as shown in Figure 2.

Stream

Figures 1 and 2 indicate that the stream (such as arts, science, and physical education) of the students had a significant role on the knowledge (F = 10.584; P < 0.001; χ^2 = 34.447; P < 0.001). The students studying in Bachelor in Arts had the best score (13.59 ± 2.92) even than the students studying in Bachelor in Science (13.55 ± 2.24) and postgraduate students (13.48 ± 1.91). Students studying bachelor in physical education (10.71 ± 3.16) had the lowest score.

Caste

Significant caste discrimination (F = 7.885; P < 0.001 and χ^2 = 18.757; P < 0.01) was observed in the HIV knowledge. The students from general and OBC category had similar knowledge score, i.e. 13.18 ± 2.92 and 13.16 ± 2.32, respectively, while ST students scored 10.71 ± 3.46 and SC students scored most poor number 9.93 ± 2.46.

CONCLUSION

KAP study is very useful tools before any intervention to assess the extent to which individuals or communities are ready to adopt risk-free behaviors. From the above study, we can conclude that college students of Bankura, West Bengal, had moderate KAPs about HIV/AIDS. Negative attitudes to HIV/AIDS and risky practices were also present. Several educational programs with specific interventions to change practices along with knowledge and attitude are recommended to increase KAPs and to prevent new HIV infection among college students.

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