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Knowledge and awareness about sexually transmitted infections among higher secondary school students in Bajhang, Nepal

Abstract

Background: Sexually transmitted infections (STIs) have been conventionally recognized as a major public and social health problem for a number of years now, which largely influence the epidemiology of STIs.

Objectives: The objectives of this study are to determine the knowledge, awareness and relationship between socio-demographic factors and knowledge about STIs among higher secondary students. And to study the perception on school sexual health education program among higher secondary school students and teachers in Bajhang, Nepal.

Method and materials: This is a cross-sectional study design, conducted in Bajhang, Nepal. Study population was Government higher secondary school students of grade XI and XII. Multistage sampling method followed by simple random sampling technique was used to collect the data of 504 participants using semi-structured self-administered questionnaire. The data has been analyzed in SPSS version 16.00 and MS- Excel.

Results: Awareness of the respondents about sexually transmitted infections was good (i.e. 62.31%). Only 38.10% had good knowledge while others (61.90%) had poor knowledge about STIs. In comparison to other faculty students, science students had good knowledge. Regarding the perception of the sexual health education most of the respondents (96% teachers and 85% of students) agreed with the need of sexual health education to the school level students

Conclusion: The study shows that, the awareness and knowledge about STIs is poor but perception regarding sexual health education is found to be good.

Keywords: awareness, knowledge, sexually transmitted infections, nepal

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Background

STIs have been conventionally recognized as a major public and social health problem for a number of years.[1] STIs remain one of the major causes of acute illness and morbidity over the world.[2] More than 1 million STIs are acquired every day[3] and over 100 million STIs occur each year under the age of 25.[4] In 2015, 36.7 million people had HIV.[5] WHO estimate that 400,000 new cases of STIs daily occur in South East Asia Region (SEAR). Centre of Disease Control estimate that 19 million new infections occur each year, almost half of them among young people age 15-24.[6] In Nepal, the prevalence of HIV among 15-49 years of the age group is 0.17%[7] and practice of teenage marriage is high in Bajhang, Nepal. Hence this study is conducted to assess the awareness and knowledge about STIs.

Objectives

i. To determine the knowledge and awareness about Sexually Transmitted Infections among higher secondary school students.

ii. To determine the relationship between socio-demographic factors and knowledge of STIs among higher secondary school students.

iii. To study the perception on school sexual health education program among higher secondary school students and teachers.

Materials & method

This is a cross-sectional study design, conducted in Bajhang, Nepal and duration of the study was from January to May 2017. Study population was Government higher secondary school students of grade XI and XII. Ten schools were taken out of 29 school of district. And entire universe of teachers of these higher secondary schools of Bajhang were selected to determine the perception about sexual health education program. Multistage sampling method followed by simple random sampling technique was used to collect the primary data with sample size of 504 by using semi-structured self-administered pre-tested questionnaire. The data has been analyzed in SPSS version 16.00 and MS- Excel.

Results

The respondents were in the age group of 15-27 years with mean age 17.66 and standard deviation SD±17.66. Out of the selected participants 51% (258) were from the class XI and 49% (246)

from class XII. Among them 60.31% (304) were female. About 99.62% were from Hindu Religion. Most of respondents i.e. 59% (299) were from the education faculty (course of study), 15% (73) commerce, 14% (71) humanities and only 12% (61) from science. Regarding parental education status of the respondents, 24.21% of the respondents' father were literate, 18.25 illiterate, 14.68% had primary (class 1-5) education, 9.33% had lower secondary (class 6-8) education, 18.06% had secondary level (class 9-10) and 15.48% higher secondary and above level education. Nearly half (47.42%) of the respondent's mother were illiterate, (32.14%) literate, 10.12% primary level education, (4.96%) lower secondary level education, (2.79%) secondary level education and (2.58%) higher or above About 60.32%, paternal occupation was farming followed by self-employment/business which was 18.45%, 12.30%, formal employment (teacher, civil servants, INGOs/NGOs worker etc), 4.96% unemployment, 3.17% daily wages labour and 0.79% others (e.g. foreign employment etc). Most of the respondents' monthly household incomes were more than 20,000 (36.71%) and followed by less than 5000 (23.21%). In family size, majority (69.25%) of the families had 5-10 members.

Out of the 504 respondents, 99.6% (502) had heard the term sexual STIs. The major source of information to became aware about STIs were TV/Radio (33%), followed by teachers (25%), (16%) Hospital /Health worker, (14%) from school health program, and remaining (12%) got information from newspaper, friends/relatives. Among the 502 respondents, 66% were aware of HIV/AIDS as a STIs, 20% Syphilis, 11% Gonorrhoea, 4% hepatitis, 1% others (like cancer, scurvy etc) and 21% did response. Among 502 respondents, 74% had known that, through sexual contact STIs were transmit from one person to another person. In this study, it was found that more than two third of the respondents considered sexual contact is the mode of transmission of STIs. Regarding risk factors, 57% respondents reported more than one sexual partners is risk factors of STIs, 24% sex with someone who has STIs, 7% previous history of STIs, and 12% do not know. Out of 502 respondents, nearly two third (65%) respondents were aware about symptoms of STIs, among them, 54% gave right answer, 72% wrong answer and 60% did not response. Regarding symptoms, around 22.31% reported weight loss, 17% fever, 15% headache, 12% genital pain and itching, 12% penile/ vaginal discharge, 11.5% genital swelling, 9% burning micturation, and 60% of respondents did not response and around 18% reported others (cough, delay wound healing, blood in urine, appetite loss, rashes, vomiting etc) (Table 1).

Out of 502 respondents, 95% (476/502) responded that STIs can be prevented. Among the 476 respondents, 96% (455/476) reported that use of condom is the preventive measure of the STIs. More than two third, 78% (373/476) reported sexual contact with one uninfected faithful partner is preventive measure of STIs. About 81% (387/476) were accepted avoid sex with multiple partners as a preventive measure. Figure 1 revealed the awareness of respondents about STIs, nearly two third, 62.31% (214/504) had well but 37.69% (112) had still poor awareness about STIs. In case of knowledge only around one third 38.10% (114) respondents had good knowledge and remaining 61.90% (312) had poor knowledge about the STIs. The finding of the study showed, awareness level of the respondents about STIs was found to be good around in two third of the respondents, whereas good knowledge was with only in one third of the respondents (Table 2). The result in the bivariate analysis shows that there is the association between the faculty (course of study) and level of awareness. Awareness was found to be statistically significant with the faculty of the students with Chi- square = 53.484 and p-value < 0.001. Mother's educational status was found to be associated with the level of awareness about the STIs with Chi-square = 34.461 and p-value = <0.001 which is displayed in Table 3. Father's education status were found to be significant different with the level of awareness with Chi-square =16.237 and p-value 0.006.

There is no relationship between the level of awareness and class, age, gender, marital status, Religion, father's occupation, mother's occupation household monthly income and number of family members of the respondents.

Relationship between socio-demographic factors and knowledge about STIs

The result in the bivariate analysis shows that, there is an association between the faculty (course of study) and level of knowledge. Knowledge was found to be statistically significant with the faculty of the students with Chi- square = 48.584 and p-value < 0.001. Mother's educational status was found to be associated with the level of knowledge about the STIs with Chi-square = 23.834 and p-value = <0.001 (Table 4).

Table1 Knowledge about the symptoms of STIs (N= 504)

Symptoms	Percent
Weight loss	22.31
Fever	17
Headache	15
Genital pain and itching	12
Genital swelling	11.5
Genital discharge	12
Burning Micturation	9
Others	18
No response	60

Table 2 Perception of Students and teacher about sexual school health education (N = 504 students) (N = 37 teachers)

Statement regarding sexual health education		Perception of respondents about sexual health education				
		Strongly disagree Percent	Disagree Percent	Neutral Percent	Agree Percent	Strongly agree Percent
Necessity of sexual health education to students at schools	Students	6	5	4	37	48
	Teachers	0	0	2.7	24.32	72.97
Teachers feel shyness to provide sexual health education at school.	Students	17	31	8	29	15
	Teachers	16	24	3	46	11
Need of sexual health education for students to become responsible adults.	Students	4	7	6	45	38
	Teachers	4	5	5	32	54
Learning about sexual health encourages premarital sex	Students	16	31	9	26	18
	Teachers	30	40	14	11	5
Sexual health education is as against the Religion	Students	30	35	7	16	12
	Teachers	46	22	8	11	14
Needs of sexual health education for healthy relationship with the opposite sex	Students	5	8	7	47	33
	Teachers	2	14	5	51	27
Students feel shy to discussed on sexual health education with their teacher	Students	10	18	6	42	24
	Teachers	5	14	8	51	22

Relationship between socio-demographic factors and awareness about STIs

The result in the bivariate analysis shows that there is the association between the faculty (course of study) and level of awareness. Awareness was found to be statistically significant with the faculty of the students with Chi- square = 53.484 and p-value < 0.001. Mother's educational status was found to be associated with the level of awareness about the STIs with Chi-square = 34.461 and p-value = <0.001 which is displayed in Table 3.

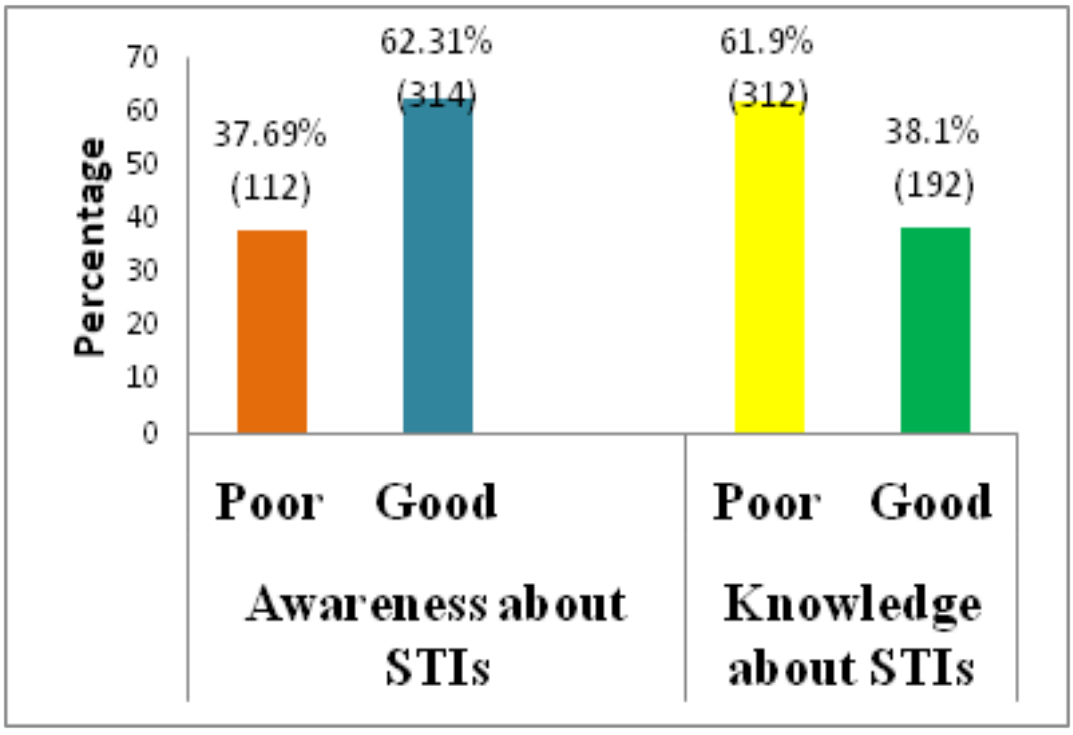

Figure 1 Level of awareness and knowledge about STIs.

Table 3 Relationship between course of study, Mother's education and Awareness about STIs

course of study	Poor (%)	Good (%)	Total	Chi-square	P-value
Education	151 (50.5)	148(49.5)	299		
Humanity	15 (21.1)	56 (78.9)	71	53.484	<0.001
Commerce	17 (23.3)	56 (76.7)	73		
Science	7(11.)	54 (88.5)	61		
Mother's education					
Illiterate	115 (48.1)	124 (51.9)	239		
Literate	39 (24.1)	123 (75.9)	162		
Primary (1- 5)	25 (49)	26 (51)	51		
Lower secondary (6 - 8)	6 (24)	19 (76)	25	34.461	<0.001
Secondary (9 - 10)	1 (7.1)	13 (92.9)	14		
Higher secondary and above	4 (30.8)	9 (69.2)	13		

Father's education status were found to be significant different with the level of awareness with Chi-square =16.237 and p-value 0.006.
There is no relationship between the level of awareness and class, age, gender, marital status, Religion, father's occupation, mother's occupation household monthly income and number of family members of the respondents.

Table 4 Relationship between Course of study, mother's education and Knowledge about STIs.

Course of study	Poor (%)	Good (%)	Total	Chi-square	P-value
Education	214 (71.6)	85 (28.4)	299		<0.001
Humanity	36 (50.7)	35 (49.3)	71		
Commerce	46 (63)	27 937)	73		
Science	16 (26.2)	45 (73.8)	61		
Mother's education	166 (69.5)	73 (30.5)	239		
Illiterate	90 (55.6)	72 (44.4)	162		
Primary (1- 5)	33 (64.7)	18 (35.3)	51		
Lower secondary (6-8)	16 (64)	9 (36)	25	23.834	< 0.001
Secondary (9 -10)	3 (21.4)	11 (78.6)	14		
Higher secondary and above	4 (61.9)	9 (38.1)	13		

Father's education status were found to have significant different with the level of knowledge with Chi-square = 15.069 and p-value = <0.010.
There is no significant difference between the class, gender, marital status, father's occupation, mother's occupation, and monthly household income, number of family members and level of knowledge about STIs.

Discussion

Awareness and knowledge about STI

In this study, the students were from various streams such as Education, Humanities, Commerce and Science. Among them around two third were from education course but the knowledge and awareness of education students was found to be less as compared to other course streams. Awareness and knowledge about the STIs was found to be more among science students than other course stream students. The possible cause of the variation in awareness and knowledge about STIs among these four course stream students may be due to the content of their course which includes human biology that has content regarding the disease and STIs whereas others don't have. The finding of the study showed, 99% of respondents heard about sexually transmitted infections but a study conducted in Kathmandu, Nepal (2010) on Knowledge about HIV/AIDS among secondary school level students showed 91.60% of respondents have heard about HIV/AIDS only,[7] this may be due to the dissemination of information through various sources.

The major source of information is TV/Radio (33%) teacher (25%) hospital Health worker, school health program 14%, friends 3%, parents 3%, newspaper 3% and seminar 3%. A study conducted in Kathmandu, Nepal (2015) on knowledge and perceptions regarding Sexual and Reproductive Health among high school students, source of information was friends' 71%, internet 61%, books/journal 48% teachers 44%, Radio/TV 44%, parents 43%.[8] The result of this study is different as compared to the result of the study of Kathmandu, Nepal,

because of rural-urban cultural divide. Regarding most common mode of transmission (MOT), results showed that nearly 3/4th (74%) of the respondents were aware about sexual contact. From this result it can be reiterated that majority of respondents have good awareness and knowledge about the mode of transmission. The awareness and knowledge about mode of transmission maybe due to the HIV/AIDS awareness programs conducted through the media (mainly Radio/TV) as well as from the department of health service. The finding of the study showed the result about the mode of transmission, 74% sexual contact, 12% infected blood and 9% parents to child.

When asked about symptoms of STIs as an open ended question, more than one-half (60%) of respondents did not respond and about 18% reported others like common cold, delayed wound healing, blood in urine, loss of appetite, rashes, vomiting etc. Around 22% reported weight loss, 17% as fever and 15% as headache. About 12% responded correctly as genital pain and itching, penile/vaginal discharge, genital swelling and burning micturation. A Chinese study conducted (2013) on sexual behaviours and awareness of sexually transmitted infections among Chinese University students showed that more than 75% of the respondents correctly identified the symptoms of STIs as burning micturition, penile /vaginal discharge, genital ulcer and unusual vaginal discharge.[9] The difference of knowledge about the symptoms of STIs may be because of the difference in the level of education between the two study groups and also due to the difference in the developmental, educational and economic status between China and Nepal. From this result it can be said that the respondent had poor knowledge about the symptoms of STIs although most of them had heard about STIs and modes of transmission which may be due to the lack of clinical knowledge at the higher secondary level. This explains the fact that the respondents had poor knowledge about the symptoms of STIs.

Regarding preventive measures 95% of the respondents were aware about prevention of STIs. Among them, around 96% reported that condom is the preventive measure of STIs. Of whom only 8% knew that condom does not completely protect the transmission of STIs. About 89% mentioned single sexual partner, 49% as abstinence, and 47% as vaccination as a preventive measure. From this result it can be analyzed that respondents have good awareness but lesser knowledge which probably is due to the lack of comprehensive health education apart from their other sources of information like school health programme, mass media program etc. In the study of Kathmandu, Nepal (2015) on knowledge and perceptions regarding Sexual and Reproductive Health among high school students showed 95% of respondents consider condom as a preventive measure, 8% single sexual partner, 4% vaccination, 6% female condom and 1% abstinenc.[8] Both the studies show that most of the responses were about condom as a preventive measure. This is probably due to aggressive mass media campaigns and social marketing of the use of condoms throughout the country.

In this study awareness about STIs was found to be good among 62.31% of the respondents. This result is supported by the KAP study conducted in Vadodara city, India (2016) on reproductive health and sexually transmitted diseases among the high school girls student where 69% of students were aware about the STDs and AIDS.[10] Another study conducted in Bangladesh (2014) on knowledge and awareness about STDs among adolescents showed that 70.6% respondents had awareness about the STIs.[11] This shows that the level of awareness about STIs among school children in the same age group is similar to that in the South East Asian region. About 38.10% students had good knowledge about STIs and the rest had poor knowledge. A study conducted in Ado Ekita, South Western Nigeria (2015) among secondary school students showed that 19.1% had poor knowledge and 74.1% had fair knowledge and 6.9% had good knowledge of sexually transmitted diseases.[12] The result of Nigeria study showed the better knowledge about STIs than the current study, the most probably reason for this result may be due to more HIV/AIDS focusing health education program in African countries because the prevalence of the HIV/AIDS there. This shows that the level of awareness about STIs is more as compared to the knowledge among school children which is not at a satisfactory level.

Perception on sexual health education

The result of this study showed that most of the (96%) teachers agreed about the need of sexual health education to the students at school and only 2.7% disagreed with the statement. Among students, about 85% agreed and 11% of the respondents disagreed. From this result it can be interpreted that both students and teachers had positive perception about the need of sexual health education. But more number of teachers felt the need than students which may be due to their better understanding about the needs of their students as compared to the needs of students themselves. In a study conducted in Calabar South Local Government Area of Cross River State, Nigeria (2013) on perception of students, teachers and parents towards sexuality education, 63.8% of students and 53% teachers agreed with sex education be made a compulsory subject in schools.[13] Our study showed better perception levels as compared to the Nigerian study among teachers and students. This may be attributed to the geographic, religious, socio-economic and cultural factors.[14]

The finding of the study showed, 16% of the teachers reported that sexual health education encourages premarital sex whereas less than half (44%) of the students perceived that it encourages premarital sex. From this result it can be analysed that most of the teachers have positive perception which is lacking among the student population. This may be due to the preset minds of the students that sexual health education is related to sex life owing to their adolescent ages. In a study conducted in Kathmandu, Nepal, in the year 2015 among high school students on Knowledge and perceptions regarding Sexual and Reproductive Health, 61% of the students reported that sexual health education leads to premarital sex.[8] This variation between the two study results may be due to the age difference of the respondents wherein the Kathmandu study had younger population and also because of educational level of the study population.

Conclusion

The main objective of this study was to determine the knowledge and awareness about STIs among the secondary school students in Bhajang, Nepal. All respondents with a few exceptions had heard about the STIs and majority of them were aware that STIs transmit by sexual contact from one to another person. Most of the respondents (about two thirds) were aware only about HIV/AIDS as a STI and just about one third knew about other common STIs. Majority (74%) of respondents had knowledge that sexual contact is the common route of HIV transmission. Majority of the respondents had awareness about the symptoms of the STIs and majority (96%) of them said that use of condom is the preventive measure. Majority (73%) of the respondent were aware of sexual health program about STIs more so with the

government health program (51%). More than half of the respondents (56%) had availed health education regarding STIs and surprisingly 96% preferred to undergo health education about the STIs.

The significant factors associated with awareness and knowledge about STIs were Faculty (course stream), father's education, mother's education and current living status which means that students from the science and humanities had high awareness and knowledge than the education faculty students. Likewise, respondents whose parent's education level was high had good awareness and knowledge about the STIs as compared to that of the respondents whose parents were illiterate. Regarding the perception of the sexual health education, majority of the respondents perceived sexual health education as a positive aspect of education but less number of them perceived it as a negative aspect such as leading to premarital sex, against the religion. Nearly 62.31% had well awareness but 37.69% had still poor awareness about STIs. Only around 38.10% respondents had good knowledge and 61.90% had poor knowledge about the STIs.

Recommendation

Teachers need to be trained to teach the students and IEC materials should be made available to the teachers.

a. There should be coordination between the District health education office and District public/health office to conduct the program in effective way.

b. Mass media program regarding health education should be made like Radio/ TV program according to the availability or approach of the school students.

Limitations

i. Being the cross-sectional study, recall bias will be the major limitation.

ii. To support the quantitative finding of this research, lack of qualitative research is another limitation of the study.

iii. Although we have taken the representative sample of the District because of geographical variation, culture, approach of media etc the result may not be generalize across the country.

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None.

Conflict of interest

The authors declare that there is no conflict of interest in publishing the article.

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