Knowledge, barriers and perceived needs of adolescent sexual and reproductive health services among higher secondary school students in Chitwan district

Niki Shrestha[1]*, Shishir Aryal[2], Sarbin Nepal[3], Achyut Marahatta[4], Bipana Gurung[5], Basant Sharma[6]

[1]Department of Community Medicine, Chitwan Medical College, Bharatpur, Chitwan, Nepal, [2]Chitwan Mutu Aspatal Pvt. Ltd., Bharatpur, Chitwan, Nepal, [3]Bharosa Hospital Chitwan Pvt. Ltd. Bharatpur, Chitwan, Nepal, [4]National City Hospital Limited, Bharatpur, Chitwan, Nepal, [5]Damauli Hospital, Damauli, Tanahu, Nepal, [6]Department of Obstetrics and Gynecology, Chitwan Medical College, Bharatpur, Chitwan, Nepal

ABSTRACT

Introduction: Adolescent is a unique and formative time which goes through the physical, emotional and social change including exposure to health issues like sexually transmitted infection, unwanted pregnancy and unsafe abortion. Hence, the study aims to find out the knowledge, perceived needs and barriers related to adolescent sexual and reproductive health services (ASRHS). **Methods:** A cross-sectional study was conducted among 1352 adolescents of higher secondary schools located in Bharatpur Metropolitan city of Nepal. Self-administered questionnaire method was used to collect the data on knowledge, perceived need and barrier on adolescent sexual and reproductive health services. Descriptive and inferentialanalysis was performed to present the data. **Results:** Of total, only 14.6% of the adolescents had good knowledge on the sexual and reproductive health. The perceived need for the sexual and reproductive health service was 65.4% among the adolescents while only 18.3% utilized the service to fulfill the felt need. Shyness (41.3%), communication barrier (40.3%) and lack of confidentiality (38%) were the major barriers perceived by the adolescent for taking services.The knowledge level and felt need of ASRHS, both, significantly varied as per sex, grade and academic discipline of students. **Conclusions:** Knowledge level on adolescent sexual and reproductive health service was low while the perceived need was high and the knowledge and perceived need differsignificantly by sex, grade and academic discipline of students.

Keywords: Adolescent sexual and reproductive health, barrier, knowledge, Nepal, perceived needs.

***Correspondence:**
Dr. Niki Shrestha
Department of Community Medicine
Chitwan Medical College, Bharatpur, Chitwan, Nepal
Email: shrestha.niki@cmc.edu.np
ORCID iD: 0000-0002-1074-2046

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INTRODUCTION

The World Health Organization (WHO) defines an adolescent as an individual aged from 10 to 19 years which accounts about 1.2 billion of world population.[1] In Nepal, they make up 24% (6.4 million) of total population.[2] Sexual and reproductive health (SRH) is the state of being free from all types of sexual abuse and coercion, unsafe abortion, unintended pregnancy, sexually transmitted diseases (STIs) including HIV, and mental and physical distress.[1]

Adolescents are likely to face a range of health and social challenges. For instance, initiation of sexual activity while they lack adequate knowledge and skills for protection places adolescents at a higher risk of unwanted pregnancy, unsafe abortion and sexually transmitted infections including HIV/AIDS. High prevalence of early marriage and childbearing in some of the Member States is associated with higher maternal mortality and morbidity as well as neonatal and infant mortality in adolescents.[3]The practice of early marriage is common in Nepal with nearly 29% of 15 to 19 years

women getting married.[4] In the adolescent (age group 15 to 19 years) of Nepal, only 14.2% of currently married, use modern contraceptives, 14% of women have ever been pregnant and 14.1% had knowledge about HIV prevention.[5]

Despite the fact that adolescents account for 24% of the population, their health requirements have not been well explored or addressed; notably, their sexual and reproductive health needs are frequently misunderstood, overlooked or underestimated. Numerous studies have revealed that adolescents are increasingly being engaged in premarital sex, often at a young age, thus leading to increase in number of teenage pregnancies. It not only puts the adolescent at risk of contracting STDs and HIV/AIDS but also towards having unsafe induced abortions.[6] Therefore, the purpose of this study was to assess the knowledge, barriers and perceived needs of adolescent sexual and reproductive healthservice (ASRHS) among higher secondary level students in Chitwan district.

METHODS

A cross-sectional study was conducted in the higher secondary school students of Chitwan district, Nepal from September 17, 2023 to January 10, 2024. Taking the prevalence of 15% from previous study,[7] level of significance of 5%, margin of error 2% and 10% non-response rate the sample size was calculated to be 1345. The schools included in the study were Valmiki Higher Secondary School (450 students), Orchid Higher Secondary School (401 students) and Aroma Higher Secondary School (501 students). Since there is no big difference between the required sample size (1345) and total student number (1352), the researcher has taken all the students of schools i.e, total/complete enumeration method. These three schools were chosen purposively based on the highest number of student in 11 and 12 classes.

Data were collected through self-administered questionnaire method using a self-constructed structured questionnaire. The questionnaire was developed based on the literature review and consultation with the experts.[4,7-11] It included four sections; socio-demographic, knowledge on adolescent sexual and reproductive health, barriers to accessing sexual and reproductive health services and perceived needs of sexual and reproductive health service. Knowledge of adolescent sexual and reproductive health was measured using 28 items with each correct response scoring one point (minimal score 0, maximum 28) and level of knowledge categorized as good knowledge: >60% correct answers (17 to 28 points), fair knowledge: 40% to 60% correct answers (11 to 16 points), poor knowledge: <40% correct answers (<11 points).

Collected data were entered and analyzed using statistical package for the social sciences (SPSS) version 11.5. Descriptive analysis was done using frequency and percentage for the variables. Cross-tabulations and chi-square tests were employed to examine associations between demographic variables (sex, class, and academic discipline) and knowledge levels. The significance level was set at 5% ($p<0.05$). Ethical clearance was obtained from the Institution Review Committee of Chitwan Medical College (Ref. No. 080/81-079). Along with this, written consent was taken from all the selected schools and participants. Participation was voluntary and responses were anonymized and used solely for the research purpose.

RESULTS

Out of 1352 respondents, 38.5% were of age 17 years followed by 16 years 36.2%, more than half (58.4%) were male and majorities (86.3%) of the respondents were Hindu. Half of the respondents (50.3% and 51.4%) were from class 12 and science academic discipline. (Table 1)

Table 1: Socio-demographic information of respondents (N=1352)

Variable	Frequency	Percentage (%)
Age of the respondents (in years)		
15	74	5.5
16	489	36.2
17	521	38.5
18	245	18.1
19	23	1.7
Sex of the respondents		
Male	790	58.4
Female	562	41.6
Religion of the respondents		
Hindu	1167	86.3
Buddhist	160	11.8
Christian	10	0.7
Muslim	8	0.6
Other	7	0.5
Class		
Class 11	672	49.7
Class 12	680	50.3
Academic discipline		
Science	695	51.4
Management	657	48.6

Table 2 shows the results of a study on adolescent's knowledge of sexual and reproductive health, regarding knowledge of sexual and reproductive health, 69.7% of the respondents defined reproductive health as a condition of whole physical, mental, and social well-being whereas 43.5% knew the WHO definition of the adolescent. When asked about the adolescent sexual and reproductive health issues and availability of adolescent friendly health service 45.1% and 42.8% of the participants responded correctly respectively.

Table 2: Knowledge regarding adolescent sexual and reproductive health (N=1352)

Knowledge related statements-	Frequency	Percentage (%)
Reproductive health		
Reproductive health is a state of complete physical , mental and social wellbeing and not merely the absence of reproductive disease and infirmity	943	69.7
Components of reproductive health are family planning, child health, safe motherhood, STIs/HIV, adolescent and reproductive health	496	36.7
Teenagers should receive information regarding sexual issues from internet, books/journals, doctors, teachers , TV/ radios, parents, health personals	333	24.6
Adolescent Sexual and Reproductive Health		
WHO definition of adolescent is transitional stage of physical and psychological and cultural development that generally occurs during period from puberty to adulthood	588	43.5
Causes for Adolescent sexual and reproductive health issues are gender inequity, cultural and religious taboos, lack of comprehensive sexual education in college	458	33.9
Adolescent sexual and reproductive health issues are sexually transmitted diseases, HIV/AIDS , early marriage and teenage pregnancy, menstruation related problems , domestic violence	610	45.1
Adolescent sexual and reproductive health rights are sex education at school , family planning and safe abortion, adolescent friendly sexual and reproductive health services	578	42.8
Adolescent friendly health services can possibly receive in hospitals, health care centers , NGOs, adolescent and youth clubs	507	37.5
ECpills can be taken within 72hoursof unprotected sex	514	38
Safe Motherhood		
Legal age of marriage with parental consent is 18 years	187	13.8
Legal age of marriage is 20 years	547	40.5
Conception is the process of fertilization i.e. fusion of ovum and sperm followed by implantation of embryo	586	43.3
10-17th day of period is the unsafe period of conception	197	14.6
Proper birth spacing duration between 2 child births is 3-5 years	794	58.7
Minimal antenatal visit is 8 times	597	44.2
Health risks related to teenage pregnancy are risks to mother's health, low birth weight	376	27.8
A women need to visit hospital 3 times after giving birth	336	24.9
Abortion		
Correct definition of Abortion is termination of pregnancy before 28 weeks of gestation	636	47
Abortion is legal in Nepal	584	43.2
Abortion is allowed legally upto 12 weeks of pregnancy at any condition	640	47.3
Abortion is allowed at any time of pregnancy in case of any condition if mothers health is at risk , in case of severe congenital anomaly of baby	719	53.2
STIs/HIV/AIDS		
Common types of Sexually transmitted diseases(STDs) are HIV/AIDS, gonorrhea, genital warts, herpes, syphilis	411	30.4
Common signs and symptoms of STDs are discharge per vagina/ penis, burning micturition, lower abdominal pain, ulcer/wound in genitalia	505	37.4
Modes of transmission of HIV/AIDS are unsafe sexual intercourse, sharing infected needle/syringe, infected blood transfusion and organ transplantation to healthy person, infected mother to child transmission	771	57
Prevention of HIV/AIDs is by using condom, avoiding multiple sex partners, strict blood testing before transfusion	776	57.4

In terms of family planning, only 27% are familiar with temporary devices of family planning and 38% recognize the time duration for the emergency contraceptive method. On legal age of marriage, 40.5% knew that 20 years and above is the legal age for marriage. Only 14.6% understand the unsafe period of the menstrual cycle and 44.2% were aware of the minimum number of antenatal visits. Just above one fourth of the participants understand the health risks related to teenage pregnancy and the recommended postnatal visits for mothers. Around half of theparticipants 47% and 47.7% correctly defined the abortion and its legal timeframe respectively. Regarding STIs/HIV/AIDS, 30.4% of respondents were aware of common types of STIs whereas more than half (57% and 57.4%) understand the modes of transmission and prevention of HIV/AIDS respectively (Table 3).

Table 3: Knowledge regarding adolescent sexual and reproductive health service (N=1352)

Knowledge related statements	Frequency	Percentage (%)
Family Planning (FP)		
Advantages of FPare to promote overall health of mother and family, limit number of children, prevent unwanted pregnancy	580	42.9
Temporary devices of FP are condom, oral contraceptive pills, Depo-Provera, implant (nor-plant), copper-T	365	27
Method of emergency contraception (EC) is oral contraceptive pills	616	45.6

Only 14.6% of the participants had good knowledge on adolescent sexual and reproductive health while half (50.4%) had poor knowledge. Majority of the respondent i.e. 65.4% experienced a need for sexual and reproductive health services, of which only 18.3% utilized the services to fulfill the felt need. When asked about the perceived barrier 41.9% and 40.3% respond that shyness and communication barrier hinder them from taking adolescent sexual and reproductive health services. (Table 4)

Table 4: Level of knowledge, perceived needs and barriers regarding adolescent sexual and reproductive health services (N=1352)

Variables	Categories	Frequency	Percentage (%)
Level of knowledge	Poor (< 11)	681	50.4
	Fair (11-17)	473	35
	Good (> 17)	198	14.6
Ever felt need	Yes	884	65.4
	No	468	34.6
Time of Felt Need (n=884)	Within 3 months	159	18
	3-6 months	103	11.7
	6-9 months	91	10.3
	9 to 12 months	69	7.8
	Couldn't remember	462	52.3
Response after felt need of SRH Services (n=884)	Did Nothing	315	35.7

	Utilized Services	162	18.3
	Talk with Family	207	23.4
	Talk with Friends	200	22.6
Perceived barrier (n=884)#	Communication Barrier	356	40.3
	Financial Barrier	153	17.3
	Healthcare workers not skilled enough	184	20.8
	Healthcare workers not knowledgeable enough	155	17.5
	Health center is Very far	128	14.5
	Shyness	370	41.9
	Social stigma	212	24
	Lack of Confidentiality	336	38

#denotes multiple responses

The level of knowledge regarding adolescent sexual and reproductive health has significant association with sex, class and academic discipline of the participants. Felt need for adolescent sexual and reproductive health among the respondent was significantly associated with sex, class and academic discipline of the participants. (Table 5)

Table 5: Distribution of Level of knowledge and felt need for adolescent sexual and reproductive health services according to other study variables (N=1352)

Variables		Level of Knowledge				Felt need for ASRH services		
		Poor (%)	Fair (%)	Good (%)	χ^2 / P-value	Yes (%)	No (%)	χ^2 / P-value
Sex	**Male**	350 (44.3)	330 (41.8)	110 (13.9)	39.581 < 0.001*	624 (79.0)	166 (21.0)	155.373 < 0.001*
	Female	331 (58.9)	143 (25.4)	88 (15.7)		260 (46.0)	302 (53.7)	
Class	**Class 11**	372 (55.4)	221 (32.9)	79 (11.8)	15.894 < 0.001*	405 (60.3)	267 (39.7)	155.373 < 0.001*
	Class 12	309 (45.4)	252 (37.1)	119 (17.5)		479 (70.4)	201 (29.6)	
Academic discipline	**Science**	331 (47.6)	226 (32.5)	138 (19.9)	31.46 < 0.001*	492 (70.8)	203 (29.2)	18.472 < 0.001*
	Management	350 (53.3)	247 (37.6)	60 (9.1)		392 (59.7)	265 (40.3)	

*p-value ≤ 0.05 is considered statistically significant

DISCUSSION

The cross-sectional study assessed the knowledge, perceived needs and barriers regarding adolescent sexual and reproductive health services. The study revealed that 14.6% of participant had good knowledge on adolescent sexual and reproductive health which is similar to a Syberian adolescent knowledge.[12] In contrast, the study from the Cameron, Italy, Ghana and Nepal showed 54%, 48.2%, 50% and 34%, 49% of adolescents had good knowledge.[11,13-16] This shows that in this study the overall knowledge of adolescent is low on sexual and reproductive health because only one fifth of the presented question were correctly answered by 50% of adolescents. It signifies knowledge gaps among the adolescent from this survey. In the present study sex, grade and academic discipline of the participants were significantly associated with level of knowledge which is consistent with the findings of the study conduct in Sindupalchowk district of Nepal.[11] Study from Sri Lanka, Myanmar and Nigeria has also shown association between sex and knowledge of sexual and reproductive health among adolescents.[17-19]

The perceived need of sexual and reproductive health services was found to be 65.4%. However, study conducted in Bhaktapur and Sindupalchowk district of Nepal found it to be 14.8% and 19.36%.[7,11] One third of the adolescents did not seek services although they felt need for it while findings from Nepal showed one fifth of the adolescents did nothing which is supported by study from Uganda.[11,20] The tendency of doing nothing after feeling the need for the service in adolescents might be due the shyness of utilizing the services which is shown in the study. Moreover, the gap between the felt need and utilization is high as only 18.3% of adolescent utilized service after the felt need for the SRH services as per this study. Further, this study showed that most trusted person to talk with after feeling the need of the SRH service was family followed by friend whereas in the study conduct in adolescent of Bhaktapur and Sindupalchowk district of Nepal showed friends followed by family.[7,11]

The study revealed shyness, communication barrier, lack of confidentiality, social stigma and financial challenges as major barriers to service utilization. The study from Nepal has showed privacy & confidentiality, feeling of shyness or shame as major barriers.[11,21] The study done in African Countries like Ethiopia, Ghana, Nigeria revealed that lack of money, shyness/feeling shame, social stigma, religion/ cultural norms and confidentiality were the barriers to service utilization.[22-25] Similarly, findings from California and Democratic Republic and review paper presented cost of service, confidentiality, shyness or shame and social stigma as barriers to service utilization.[26-29]

The findings of this study suggest for raising awareness among the adolescents on sexual and reproductive issues. Thus, the evidence can be used by the Bharatpur Metropolitan and other stakeholders to design awareness raising program targeting the adolescents of higher secondary schools. Moreover, the study can be used as baseline data for further studies that can be conducted in large scale. Quantitative design did not provide insight into the barrier perceived by the participant so; qualitative research would provide better perspective.

The study incurs the limitation of the cross-sectional

study design. Moreover, the study was conducted only in private schools so the finding may not be generalizable to all adolescent population.

CONCLUSIONS

The study on adolescents revealed the knowledge, perceived needs and barrier regarding adolescent sexual and reproductive health service. The knowledge of adolescent was relatively low on sexual and reproductive health. Although perceived needs of sexual and reproductive health service was high among the adolescents, most of them did not seek services. Shyness, communication barrier, lack of confidentiality and social stigma were the major perceived barriers for the adolescents to utilize the ASRH services. The knowledge level and felt need both are significantly varied by sex, grade and academic discipline of student.

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AUTHORS' CONTRIBUTION

NS conceptualized and designed the research, performed the statistical analysis, drafted and edited the manuscript, SA, SN, AM, BG developed the tool, collected and entered the data and BS reviewed and edited the manuscript. All authors read and approved the manuscript.

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