

**ORIGINAL RESEARCH ARTICLE****KNOWLEDGE REGARDING SEXUAL AND REPRODUCTIVE HEALTH AMONG ADOLESCENTS IN HIGHER SECONDARY SCHOOL**Kopila Shrestha^{1*}, Shanti Awale²¹Lecturer, JF Institute of Health Science/Little Angels' College of Higher Studies, Hattiban, Lalitpur, Nepal.²Sr. Lecturer, Lalitpur Nursing Campus, Sanepa, Lalitpur, Nepal***Correspondence to:** Ms Kopila Shrestha, Lecturer, JF Institute of Health Science/Little Angels' College of Higher Studies, Hattiban, Lalitpur, Nepal.Email: kopila1@gmail.com**ABSTRACT**

BACKGROUND: Adolescent reproductive health is one of the component of the reproductive health. It is most important issue in the world. Reproductive capability is taking place at an earlier age and adolescents are indulging in risk taking behaviors day by day. The objective of this study is to assess knowledge regarding sexual and reproductive health among adolescents. **METHODS:** A descriptive cross-sectional study was conducted in Kathmandu valley to assess the knowledge regarding sexual and reproductive health among adolescents. Total of 200 respondents were selected through non-probability purposive sampling technique. Self-administered written questionnaire was used for data collection. The collected data were analyzed by using descriptive statistics such as frequency, percentage, mean, standard deviation and inferential statistics such as Chi-square test. **RESULTS:** The findings revealed that most of the respondents had knowledge regarding transmission and protection of HIV/AIDS and STIs but still some respondents had misconception regarding it. The statistical analysis revealed that the total mean knowledge score with standard deviation was 45.02 ± 8.674 . Nearly half of the respondents (49.5%) had moderate level of knowledge, followed by inadequate level of knowledge 29.5% and adequate level of knowledge 21.0% regarding sexual and reproductive health. There was statistically significant association of level of knowledge with area of residence (p-value 0.002). **CONCLUSION:** Nearly half of the respondents possess some knowledge about sexual and reproductive health but still effective educational intervention is required to increase their knowledge.

Key words: Adolescent, Higher Secondary School, Reproductive Health, Sexual**INTRODUCTION**

Globally, adolescents (age 10-19 years) account for nearly one-fifth (18%) of the total population.¹ In Nepal, adolescents (age 10-19 years) comprise an even larger proportion of the population that is 24%.² This huge group faces unique emotional and physical health challenges.

Adolescent pregnancy carries an increased risk of adverse health outcomes in many countries. An estimated about 16 million girls aged 15-19 years give birth every year worldwide. Among them, 95% occurs in developing countries. Adolescents aged 15-19 years are twice as likely die in childbirth and those under 15 years are five times more likely to die in childbirth as women in their twenties. Infant and

child mortality is also higher among children born to adolescent mother. Adolescents suffer a significant and disproportionate share of deaths and disability from unsafe abortion practices. Adolescents account for an estimated 40% of all new HIV infections among adults worldwide.³

In India, the level of knowledge regarding reproductive health among urban adolescent girls was 35%. At least two or more modes of contraception were known to 80.7% of girls and oral contraceptive pills and Copper-T were the most common known methods. Sexual intercourse with an infected person and sharing needles were the most common modes of transmission of STIs/AIDS

was known to 73.9% of girls. Regarding abortion, 39.7% of girls knew that it can be performed at government and private health facilities but none of them knew about the indications, criterion for the place where legal abortion can be performed and person who can carry out legal abortion.⁴

In Nepal, 26% of female and 34% of male adolescents and youth had comprehensive knowledge about HIV and AIDS. The level of comprehensive knowledge among adolescents and youth varies by place of residence, education and marital status. About two in every five urban adolescents and youth, both male and female had comprehensive knowledge as compared to about one-third of young men and one-fourth of young women in rural areas.⁵

There were more research on knowledge regarding HIV/AIDS and STIs. Although there were few researches on knowledge regarding sexual and reproductive health among adolescents, comprehensive knowledge among them was inadequate. Therefore, there was a need to undertake research to assess knowledge regarding sexual and reproductive health among adolescents. General objective of the study is to assess the existing knowledge regarding sexual and reproductive health among adolescents in higher secondary school. Specific objectives of the study are to identify the knowledge regarding sexual health problems particularly on sexually transmitted infections like HIV/AIDS and STIs, to assess the knowledge regarding reproductive health particularly on family planning, marriage and child bearing, abortion and reproductive rights and to find out association between selected socio-demographic variables and knowledge regarding sexual and reproductive health.

METHODS

A descriptive cross-sectional research design was adopted to assess the knowledge regarding sexual and reproductive health among adolescents in certain higher secondary schools in Kathmandu valley. Non-probability purposive sampling technique was used to select the sample. Sample size was 200. Self-administered written questionnaire was used for data collection. Content validity of the instrument was maintained by developing the research questionnaire on the basis of the

objectives after reviewing literature and through consultation with research advisor, subject experts and faculty teacher. The reliability of the instrument was maintained by doing pre-test of the instrument among 10% of total sample size in a similar situation. Ethical approval was taken from the Institutional Review Board, Institute of Medicine, Tribhuvan University. Permission was taken from the concerned authorities in selected colleges. The purpose of the study was explained and verbal informed consent was obtained from each respondent prior to data collection. Anonymity was maintained by keeping code number in questionnaires. Confidentiality was maintained by using the obtained information for the purpose of study only. Collected data were checked, organized, reviewed and analyzed daily for the completeness and accuracy. Coding was done before data entry. Statistical Package for Social Science (SPSS) version 20 was used for data analysis. Data were analyzed by using descriptive statistics such as frequency, percentage, mean and standard deviation and inferential statistics such as Chi-Square test to find out association between selected socio-demographic variables and knowledge regarding sexual and reproductive health.

RESULTS

Table 1 Respondents' Age, Sex, Religion, Ethnicity and Residence

n= 200

Demographic characteristics	Frequency	Percentage
Age		
Below 18 years	147	73.5
18-19 years	53	26.5
Mean ± SD	17.03±0.820	
Sex		
Male	119	59.5
Female	81	40.5
Religion		
Hindu	155	77.5
Muslim	3	1.5
Christian	3	1.5
Buddhist	39	19.5
Ethnic group		
Brahman	41	20.5

Chhetri	48	24.0
Janajati	102	51.0
Underprivileged population	3	1.5
Others	6	3.0
Residence		
Rural	38	19.0
Urban	162	81.0

Above table 1 presents the socio-demographic characteristics of respondents. Out of 200 respondents, most of the respondents (73.5%) belonged to age group below 18 years, 59.5% were male, 40.5% were female, 77.5% were Hindu, more than half (51.0%) were Janajati (Rai, Limbu, Magar, Newar), minority (1.5%) were underprivileged population and 3.0% were from others like Chaudhari, Thakur, Khatun. Most of them (81.0%) were from urban area.

Table 2 Respondents' Knowledge regarding HIV/AIDS n=200

Items	Fre-quency	Per-centage
Knowledge regarding transmission of HIV/AIDS**		
Sexual contact*	196	98.0
Blood and blood product*	185	92.5
Sharing of used needle and syringe*	182	91.0
Mother to child*	175	87.5
Mosquito bite	24	12.0
Sharing of utensil and clothes of infected person	6	3.0
Sharing of food eaten by infected person	5	2.5
Knowledge regarding protection from HIV/AIDS**		
Using condom during sexual intercourse*	192	96.0
Avoiding multiple sex partner*	179	89.5
Not giving birth by HIV positive mother*	136	68.0
Using sterilized syringe*	127	63.5

**Multiple response

* Correct response

Above table 2 states the knowledge regarding HIV/AIDS. 100% respondents heard about the HIV/AIDS. Regarding transmission of HIV/AIDS, majority (98.0%) answered sexual contact, 92.5% answered blood and blood product, 91.0% stated sharing of used needle and syringe and 87.5% replied mother to child. Surprisingly, some respondents had misconceptions regarding transmission of HIV/AIDS. They stated that HIV/AIDS is transmitted through mosquito bite, sharing of utensil and clothes of infected person and sharing of food eaten by infected person. Regarding protection from HIV/AIDS, majority (96.0%) of respondents responded that use of condom during sexual intercourse will protect from HIV/AIDS, 89.5% replied avoiding multiple sex partner, 68.0% answered not giving birth by HIV infected mother and 63.5% stated using sterilized syringe.

Table 3 Respondents' Knowledge regarding Sexually Transmitted Infections (STIs) n=197

Items	Fre-quency	Percent-age
Meaning of Sexually Transmitted Infection		
Disease transmitted through sexual contact*	196	99.49
Disease transmitted through mosquito bite	1	0.50
Knowledge regarding types of Sexually Transmitted Infections**		
HIV/AIDS*	185	92.5
Syphilis*	134	67.0
Gonorrhoea*	113	56.5
Urinary tract infection	32	16.0
Hepatitis-B	26	13.0

** Multiple response

* Correct response

Above table 3 illustrates knowledge regarding sexually transmitted infections. Out of 200 respondents, majority (98.5%) had heard about sexually transmitted infection. Among them, although, most of them (98.0%) answered correctly the meaning of STIs that is disease transmitted through sexual contact, but 0.5% had misconception about STIs that is disease transmitted through mosquito bite. Most of the respondents (92.5%) had knowledge of HIV/AIDS as STIs, followed by syphilis 67.0% and gonorrhoea 56.5%.

Table 4 Respondents' Knowledge regarding Reproductive Healthn=192

Items	Frequency	Percentage
Meaning of reproductive health		
Health of people relating to the reproductive system and its function*	166	86.45
Physical health of mother and baby	22	11.45
Mental health of family members	4	2.08
Knowledge regarding components of reproductive health**		
Family planning*	157	78.5
Safe Motherhood*	135	67.5
Adolescent reproductive health*	99	49.5
Child health*	90	45.0
Care of elderly women*	18	9.0
Gender based violence*	12	6.0

** Multiple response

* Correct response

Above table 4 shows the knowledge regarding reproductive health. Most of (96.0%) the respondents heard about reproductive health. Among them, 86.45% responded correctly that reproductive health is the health of people relating to the reproductive system and its function. Regarding components of reproductive health, 78.0% answered family planning followed by 67.5% stated safe motherhood and less than half of respondents (49.5%) reported adolescent reproductive health.

Table 5 Respondents' Knowledge regarding Family Planning**n=200**

Items	Frequency	Percentage
Knowledge regarding meaning of family planning**		
Way of thinking and living that promotes health and welfare of family*	155	77.5
Maintaining health of mother and baby by control of birth*	149	74.5
Bringing wanted birth only*	107	53.5
Knowledge regarding temporary family planning devices**		
Condom*	194	97.0
Oral pills*	166	83.0
Copper- T*	110	55.0
Norplant*	79	39.5
Depo-provera*	42	21.0
Minilap/laprosopy	14	7.0
Vasectomy	9	4.5

** Multiple response

*Correct response

Above table 5 represents knowledge regarding family planning. Out of 200 respondents, 77.5% responded correctly that family planning is a way of thinking and living that promotes health and welfare of the family, 74.5% stated maintaining health of mother and baby by control of birth, 53.5% reported bringing wanted birth only and 1.0% didn't know the meaning of family planning. Regarding temporary family planning devices, majority (97.0%) replied condom followed by 83.0% stated oral pills, 55.0% answered copper- T

and some respondents had confusion about temporary family planning devices because 7.0% and 4.5% of respondents replied that minilap/laproscopy and vasectomy are also temporary family planning devices.

Table 6 Respondents' Knowledge regarding Marriage and Child Bearing

n=200

Items	Frequency	Percentage
Legal age for marriage with consent of parents		
16 years	2	1.0
18 years*	20	10.0
20 years	39	19.5
Don't know	139	69.5
Legal age for marriage without consent of parents		
Below 18 years	38	19.0
20 years*	35	17.5
Above 20 years	110	55.0
Don't know	17	8.5
Knowledge regarding how pregnancy occurs		
Sperm of male should combine with ovum of female*	180	90.0
Sperm of female should combine with ovum of male	5	2.5
Sexual intercourse between man and menstruating women	9	4.5
Don't know	6	3.0

*Correct response

Above table 6 illustrates knowledge regarding marriage and child bearing. Regarding response of legal age for marriage with consent of parents, only 10.0% of respondents responded correctly that 18 years is the legal age for marriage with consent of parent. Other 90.0% of respondents did not know the legal age for marriage with consent of parents. Likewise, knowledge regarding legal age for marriage without consent of parents, 17.5% of respondent gave the correct answer. Regarding how pregnancy occurs, majority (90.0%) of respondents responded correctly that pregnancy will occur when sperm of male combine with the ovum of female.

Table 7 Respondents' Overall Knowledge Score

n=200

Knowledge score	Frequency	Percentage
Inadequate	59	29.5
Moderate	99	49.5
Adequate	42	21.0

Above table 7 describes the overall knowledge level, where minimum obtained score was 18 and maximum of 62 out of total possible score of 74. The mean score was 45.02 ± 8.674 . Nearly half of respondents (49.5%) had moderate knowledge followed by 29.5% had inadequate knowledge and only 21.0% had adequate knowledge.

Table 8 Association of Level of Knowledge with Respect to Religion, Ethnicity and Residence

n=200

Items	Inad-equate	Moder-ate	Ad-equate	P-value
Religion				
Hindu	39	77	39	0.082*
Muslim	1	2	0	
Christian	2	1	0	
Buddhist	17	19	3	
Ethnic Group				

Brahman	5	24	12	0.114*
Chhetri	14	27	7	
Janajati	37	44	21	
Underprivileged population	2	1	0	
Others	1	3	2	
Residence				0.002*
Rural	18	9	11	
Urban	41	90	31	

Note: Chi-square test at p-value <.05

Above table 8 reveals the association of level of knowledge with respect to religion, ethnicity and residence. There is statistically significant association of level of knowledge at 5% significance level with residence (p-value 0.002) but no association with religion (p-value 0.082), ethnic group (p-value 0.114).

DISCUSSION

The socio-demographic findings revealed that majority (73.5%) of respondents belonged to age group below 18 years, 59.5% were male, 40.5% were female, majority (77.5%) were Hindu, more than half (51.0%) were Janajati (Rai, Limbu, Magar, Newar), 81.0% were from urban area. Regarding parents' education, 36.0% mothers were only literate and 36.5% fathers were from higher education. Regarding parents' occupation, 75.0% mothers were homemaker and 50.0% fathers were involved in business.

Regarding transmission of HIV/AIDS, majority (98.0%) reported sexual contact followed by 92.5% replied blood and blood product, 91.0% answered sharing of used needle and syringe and 87.5% stated mother to child. This finding is also supported by the findings of study conducted by Rana G., (2014) which revealed that 90% adolescence answered transmit through unprotected sexual contact, 84% through contaminated blood products, 90% through infected mother to child.⁶

Regarding reproductive health, majority (95.0%) heard about it. Among them, 86.45% of respondents responded correct meaning of reproductive health.

Regarding components of reproductive health, most of the respondents (78.0%) stated family planning followed by 67.5% answered safe motherhood, 49.5% replied adolescent reproductive health. This study is similar with the study findings conducted by Amanuel & Seme which showed that more than 67% of the adolescents had knowledge about reproductive health issues.⁷ This finding is also similar with the finding of study conducted by Mba, Obi & Ozumba which showed that all the respondents have heard of reproductive health.⁸ However, it is in contrast with the findings of Patanwar & Sharma that showed only 29.4 % had knowledge about correct scientific meaning of reproductive health.⁹

Regarding level of knowledge, majority (49.5%) had moderate level of knowledge which is similar with the finding of study conducted by Simkhada, et al. which showed that reproductive and sexual health knowledge among the respondents was moderate.¹⁰ Regarding association of knowledge with socio-demographic variables, there is significant association between area of residence and level of knowledge (p-value 0.002) but no association with religion (p-value 0.082), ethnic group (p-value 0.114). This finding contradicts with the finding of study conducted by Zhang, Yongyi, Maddock & Shiyue, which showed that knowledge scores were statistically significant (P < 0.01) between different socio-demographic.¹¹

This study was limited only in selected private colleges of Kathmandu valley with small sample size so findings of study can't be generalized in large population.

These research findings might be helpful to teachers and health workers for providing information regarding sexual and reproductive health to adolescents.

CONCLUSION

Knowledge regarding sexual and reproductive health is crucial for the development of the adolescents in Nepal. Nearly half (49.5%) of respondents had moderate level of knowledge, less than half (29.5%) had inadequate level of knowledge and only 21.0% had adequate level of knowledge regarding sexual and reproductive health. There was significant association between level of knowledge and area

of residence. Hence the study can conclude that overall knowledge regarding sexual and reproductive health is satisfactory but misconception is there in some aspects. Effective educational intervention is required in higher secondary schools to increase knowledge regarding sexual and reproductive health among adolescents. Sexual health education should be incorporated in the curriculum of higher secondary school. Sexual and reproductive health related information should be provided through mass media to improve their sexual and reproductive health. Sexual health messages can be broadcasted through social medias. Adolescents health messages, services and service providers should be adolescents friendly.

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