

**Reproductive Health Knowledge, Attitude and Health Services Utilization among Adolescents of Kaski district**Rajani Ghimire<sup>1</sup>, Sushila Baral<sup>2</sup>, Dipendra Kumar Yadav<sup>3</sup><sup>1</sup>Toi Ohomai Institute of Technology ,<sup>2</sup>Manmohan Memorial Institute of Health Sciences,<sup>3</sup>School of Health and Allied Sciences**ABSTRACT**

**Introduction:** Adolescent reproductive health has become a great concern today due to increasing rate of unwanted pregnancy, unsafe abortion and sexually transmitted disease. Hence, the objective of the study was to assess the reproductive health knowledge, attitude and health services utilization among adolescents in rural and urban areas of Kaski district.

**Methods:** A community based cross-sectional study was conducted among 419 adolescents (10-19 years of age) in rural and urban areas of Kaski district, Nepal. Multistage stratified random sampling technique was used to select required number of participants.

**Results:** Out of 419, majority (78.8%) of the respondents were known about family planning, among them only 70.0% of respondents were aware about family planning methods. Fifty-one percentages of the respondents were aware about the sexually transmitted diseases. Nearly twenty-six percentage of the respondents faced the reproductive health problems within one month. Out of 107 respondents, 57.9% did not utilize reproductive health services.

**Conclusion:** The overall level of knowledge towards reproductive health among adolescents was found low. However, levels of attitude towards different reproductive health components were found favorable. Only 42.1% of the respondents utilized reproductive health services among those who faced the reproductive health problems within one month.

**Keywords:** *Reproductive health, Knowledge, Attitude, Utilization*

**INTRODUCTION**

Reproductive health is a state of complete physical, mental and social well-being in all matters relating to the reproductive system and to its functions and processes. According to World Health Organization, (WHO) adolescence comprises individuals between the age group of 10–19 years.<sup>1</sup> Many adolescents in rural areas are less informed, less experienced for accessing reproductive health services.<sup>2</sup> Globally, it is estimated that 11 percent births are given by adolescent girls of age 15-19 annually.<sup>3</sup> It is estimated that over 60% of STI cases reported yearly occur among individuals under the age of 24 years with one fourth being between the ages of 15-19 years.<sup>4</sup>

Evidence shows that adolescents who have access to reproductive health information are more able to make informed decisions on reproductive health issues concerning their lives.<sup>5</sup> Moreover, mass media and community mobilization efforts engage parents, school teachers, community to promote health services for reproductive health.<sup>6</sup> Adolescents have difficulties in accessing adolescent and sexual reproductive health due to insufficient information and existing societal boundaries. The utilization of reproductive health services

is an important component in preventing adolescents from reproductive health problems.

Considering the importance of reproductive health services in preventing unintended pregnancy and other sexually transmitted diseases this study aimed to assess the knowledge, attitude and utilization of reproductive health services. This study assist to find out the hindering factor of utilization of reproductive health services and in future there will be the proper utilization of reproductive health services by adolescents and thereby reduce the burden of adolescent disease and disabilities associated with reproductive health.

**METHODS**

A community based cross-sectional study was conducted among adolescents (10-19 years of age) in rural and urban areas of Kaski district, Nepal. By taking confidence interval of 95% and “P” as 0.5 (estimated) and 10% non-response rate and total number of adolescent population in Kaski district was 117336. (Nepal Population and

**Correspondence:** Rajani Ghimire, Toi Ohomai Institute of Technology, Email : [rajanighimire16@gmail.com](mailto:rajanighimire16@gmail.com)

Housing Census, 2011). Thus, sample size was 426. Seven respondents didn't provide the full information so, total sample size was 419. Stratified sampling technique was used in the study. Kaski district was divided into two strata i.e. rural and urban area. Then name of all VDCs was recorded alphabetically and two VDCs were selected as randomly i.e. Arbavijaya VDC and Sarangkot VDC in rural areas. Similarly, two urban areas of municipality such as Pokhara Sub-metropolitan city and Lekhnath Municipality were selected for study areas. Four wards were selected randomly from two VDCs and two Municipalities and after that respondents were selected from each ward by using the simple random technique. The adolescents were selected equally from each ward who were present at home at the time of data collection during data collection by simple random techniques. If there were more than one adolescent in a house then one respondent was selected randomly. Interview schedule was used as data collection tool.

Informed consent was taken from participants and pretest was done to ensure validity and reliability of tools. Data were coded and completed questionnaire were entered EPI-data and analyzed in SPSS. Descriptive data were presented in terms of number and % while, p value and Odds ratio were used to assess the strength of association between independent and dependent variable.

Scoring of the knowledge and attitude responses from questionnaire (tool): Knowledge of reproductive health was measured based on respondent's ability to respond the questions related to reproductive health. Knowledge about RH that assigned a score of one for each "yes" response and zero for "no" responses. Total number of scores related to knowledge was 47 and respondent's score less than <50% was categorized as having low knowledge and those who score  $\geq 50\%$  were considered as having high knowledge on reproductive health based on study conducted by Kelbessa Z and et al <sup>7</sup> used this method of scoring successfully with their studies.

Attitude of reproductive health was measured based on Likert scale. It was scored according to this formula: for positively worded statements the scoring was 3 for Agree, 2 for neutral and 1 for disagree. For negatively worded statements the scoring would reverse as follows, agree 1, neutral 2, and disagree 3. The highest score in this scale used for measuring the attitude of reproductive health was  $27 \times 1 = 27$  and lowest score was  $9 \times 1 = 9$ . The average was obtained by adding all the total scores of the respondents and the sum was divided by the total number of the respondents e.g.  $X = \Sigma X/N$  i.e.  $6544/419 = 15.6$  The

respondent who obtained the total score which was above or equal to the average ( $\geq 15.6$ ) had a favorable attitude towards reproductive health. Those respondents who obtained the total score below the average ( $< 15.6$ ) had unfavorable attitudes towards reproductive health based on the study conducted by Sibaya and Majova<sup>8</sup> used this method of scoring successfully with their studies.<sup>8</sup>

The study was conducted after the approval of research proposal from Department of Public Health program, Pokhara University. Written informed consent was taken from the participants before initiation of interview and participants was assured that the collected information was only for study purpose and confidentiality was fully maintained.

## RESULTS

Out of 426 sample size, only 419 participants participated in the study and the remaining 7 participants were not participated in the research.

Table 1: Socio-demographic information of the participants (n=419)

Variable	Frequency	Percentage
<b>Age</b>		
Early adolescents (10-13)	52	12.4
Middle adolescents (14-16)	168	40.1
Late adolescents (17-19)	199	47.5
Mean age of the participants = $15.86 \pm 2.305$		
<b>Sex</b>		
Male	173	41.3
Female	246	58.7
<b>Religion</b>		
Hindu	372	88.8
Buddhist	41	9.8
Muslim	6	1.4
<b>Caste</b>		
Dalit	71	16.9
Disadvantaged janjati	81	19.3
Disadvantaged non-dalit terai caste	23	5.5
Relatively advantaged anjati	10	2.4
Upper caste groups	234	55.8
<b>Place</b>		
Rural	208	49.6
Urban	211	50.4
<b>Marital</b>		
Unmarried	394	94.0
Married	25	6.0

Table 1 reveals the mean age and standard deviation of the participants was  $15.86 \pm 2.305$ . More than half (58.7%) of the participants were females and 41.3 % were males. Majority of participants (88.8%) were Hindu and very few (1.4%) were Muslim. More than half (55.8%) of the participants belonged to upper caste. About half (50.4%) of the participants were from urban area. Majority (94.0%) of participants were unmarried.

Table 2: Information regarding knowledge of participants on reproductive health

Variable	Frequency	Percentage
<b>Know about reproductive health</b>		
Yes	339	80.9
No	80	19.1
<b>Know about menstruation (n=246)</b>		
Yes	216	87.8
No	30	12.2
<b>Know about family planning</b>		
Yes	330	78.8
No	89	21.2
<b>Know about abortion</b>		
Yes	218	52.0
No	201	48.0
<b>Know about pregnancy</b>		
Yes	240	57.3
No	179	42.7
<b>Know about STD</b>		
Yes	213	50.8
No	206	49.2

Table 2 reveals most of the participants (80.9%) knew about reproductive health. Majority (87.8%) of the participants knew about menstruation. More than three-fourth (78.8%) knew about family planning. More than half (52.0%) of the participants were aware about abortion. About half (50.8%) of the participants knew about sexually transmitted diseases.

Table 3: Attitude of the participants on reproductive health

Statement	Agree	Neutral	Disagree
Premarital sex is good (n=419)	98(23.4)	117 (27.9)	204(48.7)
Discussing condom or contraceptive with young people promotes promiscuity (n=419)	79(18.9)	107 (25.5)	233 (55.6)

Use of family planning method is good (if married or ever did sex) (n=34)	20(58.8)	5 (14.7)	9(26.5)
There is need to consult a partner for planning a child (n=419)	288(68.7)	99(23.6)	32(7.6)
ECP reduces the number of unplanned and unwanted pregnancy (n=419)	128(30.5)	269(64.2)	22 (5.3)
Adolescent should be taught about how to avoid AIDS (n=419)	332(79.2)	73(17.4)	14(3.3)
Reproductive health service is important for adolescent like you (n=419)	255 (60.9%)	157 (37.5 %)	7(1.7%)

Note: Figure in parenthesis shows percentage

Table 3 shows attitude of participants on reproductive health. Nearly half (48.7%) of participants disagreed on statement that "premarital sex is good" whereas nearly one-fourth (23.4%) of the respondents agree with the statement. More than half (55.6%) of the participants disagreed on statement "discussing condom or contraceptive with young people promotes promiscuity." Nearly two-third (68.7%) of participants were (agree on the statement that reveals need to consult a partner for planning a child. Majority (79.2%) of respondents agreed on the statement "Adolescents should be taught about how to avoid AIDS".

Table 4: Utilization of the reproductive health services

Variable	Frequency	Percentage
<b>Heard about reproductive health service (n=419)</b>		
Yes	231	55.1
No	188	44.9
<b>Reproductive health problem faced within one month (n=419)</b>		
Yes	107	25.5
No	312	74.5
<b>Ever utilize reproductive health service (n=107)</b>		
Yes	45	42.1
No	62	57.9
<b>Travelling time to reach health facility (n=107)</b>		
Less than 30 mins	31	29.2
30 mins to 1 hour	26	24.5
More than 1 hour	50	46.7

**Reasons for not utilizing reproductive health service**

(n=62)

Health care cost	7	11.3
Parent disapproval	7	11.3
Cultural influence	1	1.6
Transportation cost	17	27.4
Lack of information	9	14.5
Shy feeling and not necessary	23	33.9

Table 4 shows more than half (55.1%) of participants had heard about reproductive health services. About one-fourth (25.5%) of participants had faced reproductive health problem within one month. More than two-fifth (42.1%) participants had utilized reproductive health service ever and more than half (57.9%) of respondents didn't utilize reproductive health services. The reasons for not utilizing reproductive health services were due to shy feeling and not necessary (33.9%) followed by transportation cost (27.4%).

Table 5: Factors associated with Knowledge of reproductive health services

(n=419)

Variable	Level of knowledge		Pearson's chi-square ( $\chi^2$ )	p – value	O R	95% C.I
	High	Low				
Age of the participants						
10-13	8(15.4)	44(84.6)			3.806	1.632-8.874
14-16	50 (29.9)	117 (70.1)	7.930	0.019	1.480	0.952-2.301
17-19	71 (35.5)	129 (64.5)			1	
Sex of the participants						
Male	62 (25.2)	184 (74.8)	8.719	0.003	1.876	1.232-2.855
Female	67 (38.7)	106 (61.3)			1	
Place of residence						
Rural	54 (26.0)	154 (74.0)	4.515	0.034	1.573	1.034-2.391
Urban	75 (35.5)	136 (64.5)			1	

Table 5 shows respondent whose age was 10-13 years were more than three times (OR=3.806, 95% CI 1.632-8.874) likely to had low knowledge compared to 17-19 years. Male

respondents were more than one times (O R=1.876, 95% CI=1.232-2.855) likely to had low knowledge compared to females. Respondents who lives in rural areas were more than one times (OR:1.573, 95% CI:1.034-2.391) likely to had low knowledge compared to respondents residing in urban areas.

Table 6: Factors associated with utilization of reproductive health services

(n=419)

Variable	Utilization of reproductive health service (n=107)		Pearson's chi-square (χ <sup>2</sup> )	P – value	O.R	95% C.I
	Yes	No				
Age of the participants						
10-13	2(8.3)	22(91.7)			0.182	0.025-1.349
14-16	40 (54.1)	34 (45.9)	15.852	0.001	2.353	0.547-10.125
17-19	3 (33.3)	6(66.7)			1	
Sex of the participants						
Male	2 (25.0)	6(75.0)	1.03	0.30	-	-
Female	43 (43.4)	56 (56.6)			1	
Education of the participants						
Illiterate and primary	2 (22.2)	7(77.8)				
Secondary and above	43 (43.9)	55 (56.1)	1.586	0.298	-	-
Occupation of father						
House hold work	17 (40.5)	25 (59.5)				
External job	27 (45.0)	33 (55.0)	1.255	0.534	-	-
Pension	1(20.0)	4(80.0)				
Occupation of mother						
Household work	33 (40.7)	48 (59.3)				
External job	12 (46.2)	14 (53.8)	0.237	0.627	-	-
Discuss reproductive health issues with the parents(n=339)						
Yes	13 (61.9)	8(38.1)	5.540	0.019*	3.20	1.186-8.904
No	24 (33.3)	48 (66.7)				

Note: Figure in parenthesis shows percentage\* Statistically significant\*\* highly significant

Table 6 shows age of the participants was found statistically significant with utilization of reproductive health services. Participants aged 14-16 years were more than two times (p<0.001, OR: 2.353, 95% CI: 0.547-10.125) likely to utilize reproductive health services in comparison to age 17-19



years. Variables like sex, education and occupation of father and mother weren't found statistically significant with utilization of reproductive health services. Respondents who discussed reproductive health issues with their parents were more than three times ( $p < 0.019$ ; OR:3.20, 95% CI:1.186-8.904) likely to utilize the reproductive health services.

## DISCUSSION

Among the total respondents, 47.5% belonged to late adolescents (17-19 years). Over half (58.7%) of participants were females.

### Knowledge on Reproductive Health

In this study, 70.0% of the participants had knowledge about family planning method which was found similar with the study done in Tanzania which shows about 67.4% of the participants had adequate knowledge about family planning method.<sup>10</sup> In the present study, 50.8% were aware about sexually transmitted diseases which was higher than the study done in Ethiopia which indicates 68%.<sup>4</sup> It may be due to its social and cultural taboos and fear. Most of the respondents (81.4%) had not discussed reproductive health issues with their parents which was found consistent with the study done in Ethiopia.<sup>11</sup>

### Attitude on Reproductive Health

In this study 62.5% of respondents had favorable attitude towards reproductive health and 37.5% had unfavorable attitude towards it. The favorable attitude score was found correlate significant with sex and level of knowledge ( $p < 0.05$ ). Nonetheless, the participants age and education showed negligible correlation with attitude level ( $p > 0.05$ ). This may be due to failure to maintain confidentiality.

### Utilization of Reproductive Health Services

Use of reproductive health services had been found to have only significant association with age ( $p < 0.05$ ). However, sex, education displayed no significant association with the use of reproductive health services ( $p > 0.05$ ) which contradicts with a study conducted in Ethiopia which showed that age and educational status were found significant association with utilization of reproductive health services only sex had not shown significant association with it.<sup>4</sup> In this study, occupation of father and mother and the adolescents who discussed reproductive health issues with their parents had shown insignificant association with utilization of reproductive health services which was found inconsistent with the study done in Northern Ethiopia showed that occupation of father and mother had significant association with usage of reproductive health services.<sup>12</sup>

## CONCLUSION

The overall level of knowledge towards reproductive health among adolescents was found low. However, levels of attitude towards different reproductive health components were found favorable. Only 42.1% of the participants utilized reproductive health services for those facing reproductive health issues within one month which illustrated poor coverage of reproductive health services utilization. Health-care cost, parent disapproval, transportation cost were the major factors that hindered the utilization of reproductive health services. More efforts should be exerted towards arising and improving the awareness of reproductive health focusing on menstrual hygiene practices and family planning method, which may reduce unwanted pregnancies, abortion and different sexually transmitted diseases. Parents should encourage their children to ask questions related to reproductive health issues and encourage them to access the reproductive health services.

## REFERENCES

1. Shrestha N, Paneru DP, Janawali K. Sexual health behaviours of adolescents in Pokhara, Nepal. *Indian Journal of community health*. 2012;24(2)
2. Tegegan A, Yazachew M, Gelaw Y. Reproductive Health Knowledge and Attitude among Adolescents: A community-based study in Jimma Town, Southwest Ethiopia. *Journal of health development*. 2008; 22(3)
3. Seifu A, Fantahun M, Worku A. Reproductive health needs of out-of-school adolescents: a cross-sectional comparative study of rural and urban areas in northwest Ethiopia. *Ethiop.J.Health Dev*. 2006;20(1):10-17
4. Abajobi A A, Seme A. Reproductive health knowledge and services utilization among rural adolescents in east Gojjam zone, Ethiopia: a community-based cross-sectional study. *Abajobir and seme BMC health research* 2014;14-138
5. Botha J C. An Investigation into Adolescents' Access to Family Planning Services and Reproductive Health Information in Lilongwe District. University of Malawi college of medicine. 2010 Jan.
6. Tegegan A, Yazachew M, Gelaw Y. Reproductive Health Knowledge and Attitude among Adolescents: A community-based study in Jimma Town, Southwest Ethiopia. *Journal of health development*. 2008; 22(3).
7. Kelbessa Z, Baraki N, Egata G Level of health extension service utilization and associated factors among community in Abuna Gindeberet District, West Shoa Zone, Oromia Regional State, Ethiopia. *BMC Health Services Research*. 2014; 14:324  
Available from:<http://www.biomedcentral.com/1472-6963/14/324>

8. Sibaya P T, Majova C N. The secondary school learner's attitudes towards sex education. 31 Oct.2002
9. Feleke S A, Koye D N , Demssie A F, Mengesha Z B. Reproductive health service utilization and associated factors among adolescents(15–19 years old) in Gondar town, Northwest. Ethiopia. BMC Health Services Research. 2013; 13:294. Available from: <http://www.biomedcentral.com/1472-6963/13/294>
10. Dangat CM, Njau B. Knowledge, attitudes and practices on family planning services among adolescents in secondary schools in Hai District, northern Tanzania. Tanzania journal of health research. 2013 Jan 13; 15(1). Available from: <http://www.bioline.org.br/pdf?th13003>
11. Shiferaw K, Getahun F, Asres G. Assessment of adolescents' communication on sexual and reproductive health matters with parents and associated factors among secondary and preparatory schools' students in Debre markos town, North West Ethiopia. Journal on reproductive health. 2014; 11:2. Available from: <http://www.reproductive-health-journal.com/content/11/1/2>
12. Gebreyesus H, Teweldemedhin M, Mamo A. Determinants of reproductive health services utilization among rural female adolescents in Asgede-Tsimbla district Northern Ethiopia: a community based cross-sectional study. Reproductive Health. 2019 Dec; 16(1):1-0. Available from: <https://reproductive-health-journal.biomedcentral.com/articles/10.1186/s12978-019-0664-2>