

# Knowledge Regarding Unsafe Abortion and Legalization of Abortion among Adolescents

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## ABSTRACT

**Background:** The World Health Organization (WHO) defines abortion as pregnancy termination before 20 weeks gestation or a fetus born weighing less than 500gm. Nearly half of all abortions worldwide are unsafe. Each year more than one lakh abortions are done in Nepal and the number of women seeking abortion services is in increasing trend. It has been identified as one of the major public health problems in Nepal

**Methods:** A descriptive cross-sectional study design was conducted among 448 adolescent students of grade 10 in 7 different schools of different municipalities in Sarlahi district. Simple random sampling using 50% prevalence and structured-self-administered questionnaires were used. Data was entered and analysed by using SPSS version 16.0.

**Results:** Among all 448 respondents, it was found that 1.3% of them were married and only 41.3% of respondents had adequate knowledge of abortion, similarly only 46.2% know about its legalization in Nepal. Among them, the majority was male respondents but adequate knowledge of abortion was found high among females i.e. 51.14% and adequate knowledge of its legalization in Nepal was found high among males i.e. 58.75%.

**Conclusions:** This is to conclude that, there is no significant relationship between different variable of respondents and their knowledge on Abortion and its legalization in Nepal.

**Keywords:** Abortion; adolescents; knowledge; legalization; unsafe.

## INTRODUCTION

According to WHO, the risk rate for unsafe abortion is 1/270.<sup>1</sup> Over half of all estimated unsafe abortions globally occur in Asia.<sup>2</sup> About 55.7 million abortions occurred worldwide each year between 2010-14 where the proportion of unsafe abortions was significantly higher in developing countries than in developed countries (49.5% vs. 12.5%) which is a public health crisis.<sup>3</sup> Deaths and disabilities due to unsafe abortion are estimated to cause 65,000 to 70,000 deaths annually, in addition, nearly 5 million women suffered temporary or permanent disability, reproductive tract infections, and secondary infertility in 2007.<sup>4</sup> The MMR was 239 per 100,000 live births in 2016.<sup>5</sup> Unsafe abortion is a leading and easily preventable cause of maternal morbidity and mortality.<sup>6</sup> The study aims to assess the association between socio-demographic factors and knowledge about unsafe abortion along with the legalization of

abortion among adolescents along with assessment of knowledge regarding abortion and its legalization in Sarlahi District, Nepal.

## METHODS

This is a quantitative analytical cross-sectional study. The study area was secondary and higher secondary level government schools with students in grade 10 of Sarlahi district, Nepal. The assent form, guardian consent form, and gatekeeper consent form were prepared and translated into Nepali language, and consent was taken in written form. The information about voluntary participation and right to withdrawal was mentioned before conducting the study and purpose of conducting this research study was clearly stated to the respondents.. Ethical approval was taken from the Ethical Review Board of Nepal Health Research Council Ref 1327.

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Respondents under the age of 19 years studying at grade 10 were only included in the study. The sample size was calculated by using 50% prevalence of knowledge about adolescents on safe abortion and its legalization in Nepal. Following formula of infinite population is used to estimate the required sample size.  $Sample\ Size\ (n) = [z^2 \cdot p(1-p)] / d^2$  where, z is critical value which is equal to 1.96 in two-tailed test p is prevalence of 50% d is absolute sampling error that can be tolerated and it is fixed at 5%. The total sample size for the study was 385 Non-response rate was taken as 15%. Total 448 students participated in the study. A multistage sampling was conducted after the selection of district purposively; random sampling was done to select the school of different municipalities.

Data entry and analysis were done through statistical package for social science (SPSS) version 16.0, Microsoft office package Statistical significance was define as  $p\text{-value} < 0.05$ . 6 questionnaires were asked to test the knowledge about abortion including meaning of abortion, methods of abortion, reasons for undergoing abortion, meaning of unsafe abortion, possible risk of abortion and factors associated with unsafe abortion. 3 questions regarding whether abortion is legal in Nepal, date of abortion legalization and conditions under which women can have abortion in Nepal were asked to the participants. For inadequate knowledge score 1 was assigned and for adequate knowledge 2 score was assigned. Then, the total score was divided by the number of questionnaires. The data were analysed by using descriptive statistics method in terms of percentages, frequencies, mean and standard deviation

## RESULTS

**Table 1. Distribution of Socio-demographic characteristics of respondents.**

Variables	Frequency (n=448)	Percent (%)
<b>Age</b>		
10-13 years	1	0.2
13-16 years	75	16.7
16-19 years	372	83.1
<b>Gender</b>		
Male	229	51.1
Female	219	48.9
<b>Ethnicity</b>		
Brahmin	39	8.7
Chhetri	52	11.6
Dalit	70	15.6
Janajati	90	20.1
Madhesi	197	44.0
<b>Marital status</b>		
Married	6	1.3
Unmarried	442	98.7

The table 1 outlines that majority of the respondents belonged to the age group of 16 to 19 years studying at grade 10. A slightly high population of male students participated in the study as compared to female students. Similarly, among all 5 ethnic groups majority were Madhesi i.e. 44% and then 20.1% Janajati, 15.6% Dalit, 11.6% Chhetri and remaining 8.7% were Brahmin. Among all 448 respondents, 1.3% were found married before age 20 years.

**Table 2. Association between Knowledge on Abortion and different variable of respondents. (n=424)**

Variables	Knowledge level		Chi-square	P-value
	Inadequate	Adequate		
<b>Age</b>				
13-16 years	38 (52.8%)	34 (47.2%)	1.266	0.294
16-19 years	211 (59.9%)	141 (40.1%)		
<b>Gender</b>				
Male	127 (59.6%)	86 (40.4%)	0.142	0.767
Female	122 (57.8%)	89 (42.2%)		
<b>Ethnicity</b>				
Brahmin	24 (61.5%)	15 (38.5%)	1.149	0.886
Chhetri	26 (57.8%)	19 (42.2%)		
Dalit	41 (64.1%)	23 (35.9%)		
Janajati	49 (57.0%)	37 (43.0%)		
Madhesi & others	109 (58.7%)	81 (42.6%)		
<b>Marital status</b>				
Married	5 (83.3%)	1 (16.7%)	1.520	0.408
Unmarried	244 (58.4%)	174 (41.6%)		

The above table shows knowledge on abortion according to different variables of 424 respondents, where we can observe among respondents of age group 13-16 years less than half i.e. 47.2% have adequate knowledge on Abortion and among age group 16-19 years also only 40.1% respondents have adequate knowledge on abortion and majority of both age groups have inadequate knowledge on Abortion. And the p-value >0.05 shows there is no relation between the knowledge and age of respondents.

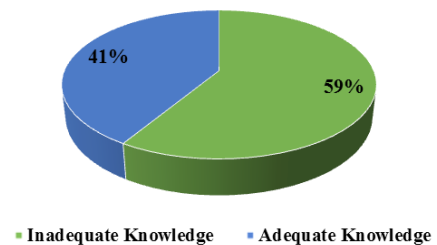
Similarly, among 424 respondents male participants are high in number but female are slightly high for adequate knowledge i.e. 89 (42.2%) than male 86 (40.4%), but majority of both male and female have inadequate knowledge on abortion and the p-value >0.05 shows no relationship between gender and knowledge on abortion.

Similarly, in all 5 ethnic groups respondents with adequate knowledge is less than half, where Madhesi are high in number with adequate knowledge on abortion i.e. 81 (42.6%) and then Janajati 37 (43%), Dalit 23 (35.9%), Chhetri 19 (42.2%) and Brahmin 15 (38.5%). The p-value >0.05 shows there is no relation between Ethnicity of respondents and knowledge on abortion.

Here, among 6 married respondents only 1 have adequate knowledge and among all 418 unmarried respondents less than half i.e. 41.6% have adequate knowledge on it

and the p-value >0.05 shows no significant relationship between marital status of respondents and knowledge on abortion.

**Knowledge on Abortion (n=424)**



**Figure 1. Knowledge about abortion.**

Figure 1 illustrates that less than half of the students had knowledge about abortion in the meantime most of the students did not have adequate knowledge about abortion on meaning of abortion, unsafe abortion, possible effects of abortion, factors associated with abortion, place of abortion, reasons for undergoing abortions and methods of abortion

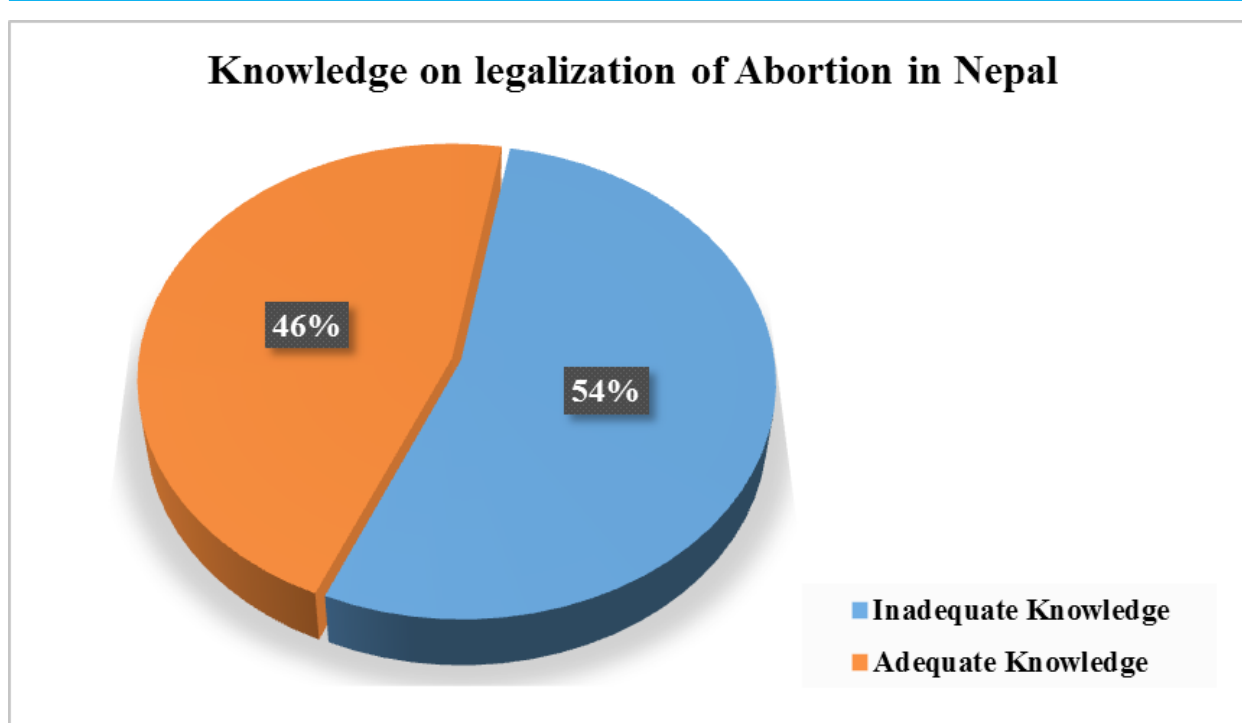


Figure 2. Knowledge on Legalization of Abortion in Nepal. (n=346)

Given Figure 2 gives information that among 346 respondents only less than half i.e. 160 (46.2%) have adequate knowledge on legalization of abortion in Nepal in comparison to remaining 186 (53.8%) respondents.

Table 3. Association between Knowledge on Legalization of Abortion and different variables of respondents. (n=336)

Variables	Knowledge level		Chi-square	P-value
	Inadequate	Adequate		
<b>Age</b>				
13-16 years	22 (42.3%)	30 (57.7%)	3.227	0.072
16-19 years	164 (55.8%)	130 (44.2%)		
<b>Gender</b>				
Male	97 (50.8%)	94 (49.2%)	1.515	0.234
Female	89 (57.4%)	66 (42.6%)		
<b>Ethnicity</b>				
Brahmin	17 (51.5%)	16 (48.5%)	2.016	0.733
Chhetri	20 (62.5%)	12 (37.5%)		
Dalit	31 (58.5%)	22 (41.5%)		
Janajati	34 (50.0%)	34 (50.0%)		
Madhesi and others	84 (52.5%)	76 (47.5%)		
<b>Marital status</b>				
Married	2 (40.0%)	3 (60.0%)	0.386	
Unmarried	184 (54.0%)	157 (46.0%)		

As per the Table 3, among 346 respondents, age group 16-19 years are high i.e. 130 (44.2% among the age group) in

adequate knowledge on legalization of abortion in Nepal in comparison to age group 13-16 years i.e. 30 (57.7% of the age group). Here, the p-value >0.05 denotes there is no significant relationship between age of respondents and knowledge on legalization of abortion in Nepal.

Among the respondents, female have more adequate knowledge on legalization of abortion in Nepal than male i.e. 94 (49.2% among female) than 66 (42.6% among male) but majority of both gender have inadequate knowledge on it. The p-value >0.05 shows there is no significant relationship between Gender and knowledge of respondents on legalization of abortion in Nepal.

Among all ethnic groups, majority (more than half) have inadequate knowledge on legalization of abortion in Nepal. Madhesi have more adequate knowledge on it i.e. 76 (47.5% among all Madhesi) and then Janajati, Dalit, Brahmin and Chhetri as 34 (50%), 22 (41.5%), 16 (48.5%) and 12 (37.5%) respectively. The p-value >0.05 show there is no significant relationship between Ethnicity and Knowledge of respondents on legalization of abortion.

Here, less than half i.e. 157 (46%) unmarried respondents and more than half i.e. 3 (60%) married respondents have adequate knowledge on legalization of abortion in Nepal. And the p-value >0.05 shows there is no significant relationship between marital status of respondents and knowledge on legalization of abortion in Nepal.

**Table 4. Source of Information about abortion. (Multiple choice question)**

Variables	Frequency	Percent (%)
Friends	153	43.7
Family members	164	46.9
Health care providers	137	39.1
FCHVs	56	16.0
Radio	159	45.4
Television	144	41.1
Internet	174	49.7
News paper	114	32.6
Other	64	18.3

Table 4 gives the information on source of information on abortion and its legalization that among total 350 respondents, 43.7% have heard from friend circle, 46.9% from family members as well, from Health care providers, FCHVs, Radio, Television, Internet, Newspapers as 39.1%, 16%, 45.4%, 41.1%, 49.7%, 32.6% and 18.3% respectively. Others contains teachers, books,

society, etc.

## DISCUSSION

Unsafe abortion is a leading and easily preventable cause of maternal morbidity and mortality.<sup>6</sup> A study conducted among undergraduates of state university in western province, Srilanka showed that among 839 respondents, 53.3% had good knowledge on unsafe abortion and the female had more good knowledge than males i.e. 55% vs. 45% respectively.<sup>7</sup> but our study shows that only 59% have adequate knowledge on unsafe abortion and as given in above study female had more good knowledge than male, p>0.05 in our study shows there is no association of age, gender, ethnicity and marital status with knowledge level, hence it does not support our study.

A study conducted among 12,862 women of reproductive age (15-49 years) in Nepal showed that women aware of abortion legalization is 5.5% only<sup>8</sup> but our study showed 54% which is higher than that study. NDHS 2016 showed that still three-fifths (59%) of the women of reproductive age group do not know that abortion has been legalized in Nepal<sup>9</sup> and a study completed among female youth in Nepal showed that 41% of the female youth was aware of abortion legalization in country<sup>10</sup> while our study in Sarlahi district shows that 46% adolescents have inadequate knowledge which almost supports the study. Similarly, slightly more than half (52%) do not know about a place where safe abortion service is available<sup>9</sup> while our study shows that only 23% do not know about it. A Nepal based study of 527 women presenting at hospitals due to complications from unsafe abortion detailed that 68% of respondents induced termination through medication<sup>11</sup>, overall, two in five (41%) women age 15-49 were aware that abortion is legal in Nepal<sup>9</sup> but our study showed 59% which is higher than that study.

A study conducted among women attended Marie stops clinics in Kathmandu valley showed that 62.4% of the respondents among 85 purposively selected women were not aware about the possible effects of abortion including incomplete abortion, backache, uterus problem, weakness, bleeding, abnormal pain and infertility<sup>12</sup>, while our study shows that only less than half of the respondents were aware of possible health risk of unsafe abortion like hemorrhage, incomplete abortion, uterine perforation, maternal death and the major reasons behind undergoing abortion were to limit the number of children and desire to postpone the children<sup>12</sup> which supports our study. Abortion has been included in the course of grade-10 in Subject Health and

Population studies, but even after that, majority of the respondents have inadequate knowledge on abortion, its legalization, associated factors and health risks of unsafe abortion in Nepal.

## CONCLUSIONS

It can be concluded that there is no significant association between socio-demographic factors with knowledge on abortion and legalization of abortion. Less than half of the students of grade 10 under the age of 17 years had adequate knowledge about abortion including meaning of abortion, unsafe abortion, possible effects of abortion, factors associated with abortion, place of abortion, reasons for undergoing abortions and methods of abortion. This study suggests to train the teachers on comprehensive sexual and reproductive health education, incorporate suitable and adequate comprehensive sexual and reproductive health education in the school curriculum along with use of effective Information Education Communication (IEC) and Behavior Chain Communication (BCC) materials. Health institutions must address the adolescent issues, monitor and track indicators within the respective municipalities

## CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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