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## Awareness regarding safe abortion among undergraduate students

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### Abstract

**Background:** Abortion is safe when they are carried out with a method that is recommended by (WHO, World Health Organization) and that is appropriate to the pregnancy duration, and when the person carrying out the abortion has the necessary skills. The aim of the study was to assess the level of awareness regarding safe abortion among undergraduate students at Bharatpur, Chitwan.

**Method:** A descriptive cross-sectional study was conducted at Bharatpur Hospital, Chitwan, from February to July 2023. Convenience sampling technique was used among the people who met the inclusion criteria. Ethical approval was obtained. The data were analyzed for knowledge, preventive practices, and socio-demographic association. The SPSS version 20 was used for descriptive as well as inferential statistics. A p-value < 0.05 was considered statistically significant.

**Result:** Out of 130 respondents, more than half 59.2% were adequately aware about of safe abortion whereas 40.8% were inadequately aware about of safe abortion. Statistically, there was a significant association between types of family and level of awareness ( $p=0.002$ )

**Conclusion:** More than half of the undergraduate students in this study had adequate awareness of safe abortion, but around half had limited knowledge about the timing, particularly that it is safe up to 12 weeks of gestation. An awareness program could improve understanding of all aspects of safe abortion.

**Keywords:** Awareness; Safe Abortion; Undergraduate Students

### How to cite

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## Introduction

Abortions are safe when they are carried out with a method that is recommended by WHO and that is appropriate to twelve weeks of gestation, and the service provider should have the necessary skills.<sup>1</sup>

Two-thirds of abortions annually are performed for ages between 15 and 30 years. Nearly 46% of women who die from unsafe abortions are younger than 24 years.<sup>2</sup> A survey showed 63 pregnancies per 1,000 unmarried women aged 15–24 years, of which 82.5% ended in abortion. A study of never-married, sexually active women aged 15–24 found that 13.8% had an unplanned pregnancy, of which 99.0% ended in abortion.<sup>3</sup>

Different studies have shown that young adults are still unaware of safe abortion services, despite the abortion is legal, they are compelled to perform unsafe abortion.<sup>4</sup>

Unfortunately, minimum research has been conducted in this area among the college students. Therefore, this study was conducted to find out the awareness regarding safe abortion services among undergraduate students.

## Method

A descriptive cross-sectional research design was conducted at Maiya Devi Girls College, Bharatpur-10. It is situated at Bharatpur Municipality, Chitwan district. Maiya Devi Girls College offers Bachelor level programs of Bachelor of Business Studies (BBS), Bachelor of Education (BEd), and Master level programs affiliated with Tribhuvan University, Nepal. The data were collected during 2 weeks from 19 Dec 2023 to 2 Jan 2024. The population of this study was female students studying BBS and BEd. Total number of students in BBS and BEd were 490. Students giving consent were included in the study and students of masters were excluded in the study.

Ethical approval was obtained and permission from the college as well as the concerned department was taken before the study. A convenience sampling technique was used to obtain the desired study sample.

A sample size of 130 students were recruited for the study. It was calculated by using the formula below:

The total number of students in BBS and BEd were 490.

Required sample size ( $n_e$ )

$$= z^2 p(1-p)/e^2$$

$$= (1.96 \times 1.96 \times 0.34 \times 0.66) / (0.07 \times 0.07)$$

$$= 176$$

Where,

$z$ =the value of standard variate at a given confidence level 95%=1.96

$e$ =margin of error=0.07

$p$ =prevalence, proportion 34%=0.34<sup>5</sup>

$$\text{Sample size } (n) = n_e / 1 + (n_e - 1) / N = 130$$

After getting ethical permission for data collection, the students from each section were selected conveniently and then they were informed to gather in one hall with the help of a teacher. The researcher introduced herself to the students and explained the purpose of the study. Then written informed consent was taken from each student. The dignity of the respondent was secured by giving the right to reject or discontinue the study at any time.

Confidentiality of the information was maintained by not disclosing the information to others as well as the data was merely used for the study purpose and was destroyed after the completion of the study. Clear instruction for data collection was given. The researcher kept two students on a desk and took the data.

A structured self-administered questionnaire was administered to collect the desired data. The time taken was 20 minutes. The content validity of the instrument was established based on an extensive literature review and consulting research advisors and subject experts.

A total score was calculated by summing up awareness-related items and further classified into 2 categories based on the median score.<sup>8</sup>

Scores were considered Adequate:  $\geq 50\%$  score; Inadequate:  $< 50\%$  score.

Statistical Package for Social Sciences version 20 and Microsoft Excel were used for data analysis.

Point estimate at 95% Confidence Interval was calculated along with frequency and proportion for binary data.

## Result

Out of 130 respondents, 80(61.5%) were of age group more than or equal to 20 years, and

120(92.3%) were Hindu. More than half 67(51.5%) of the respondents lived in joint families and 80(61.5%) were from BBS. Majority, 120(92.3%) were unmarried and 129(99.2%) had no any history of abortion, Table 1. Among 130 respondents, 79(60.8%) received information from mass media, Table 2.

**Table 1. Socio-demographic of undergraduate students for awareness of safe abortion (n=130)**

Variables	n	%
<b>Age group (Median=20 y, IQR=3, range= 8-26 y)</b>		
<20 years	50	38.5
≥20 years	80	61.5
<b>Religion</b>		
Hinduism	120	92.3
Others*	10	7.7
<b>Type of family</b>		
Nuclear family	63	48.5
Joint family	67	51.5
<b>Study stream</b>		
BBS (Bachelor in Business Studies)	80	61.5
Bed (Bachelor in education)	50	38.5
<b>Marital status</b>		
Married	10	7.7
Unmarried	120	92.3
<b>History of abortion</b>		
Yes	1	0.8
No	129	99.2

\*Others=Muslim, Kirat and Christian; #IQR=Interquartile range; min=Minimum; max=Maximum

**Table 2. Sources of information for awareness of safe abortion (n=130)**

Sources of information**	n	%
Mass media	79	60.8
Health personnel	15	11.5
Peers	5	3.8
Relatives/neighborhood	5	3.8
IEC materials	38	29.2

\*\* Multiple responses

Out of 130 respondents, 106(81.5%) gave the correct meaning of safe abortion, 50(38.5%) knew that up to 12 weeks of gestation it can be aborted safely, 79(60.8%) gave the correct response that up to 9 weeks of gestation can be aborted by medicine, 65(50%) were aware that pregnant woman consent is required before conducting a safe abortion, 46(35.4%) were aware of guardians' consent is necessary when

pregnant women are less than 18 years of age. Nearly half, 67(51.5%) were aware that gynecologists are allowed to conduct abortion after 12 weeks of gestation, and 105(80.8%) were aware of complications of unsafe abortion. On legality, 59(45.4%) were aware that sex-selective abortion is illegal, and only 60(46.2%) were aware that a woman

should go for a follow-up visit after 1 week of receiving safe abortion service, Table 3.

Among 130 respondents included in the study, the majority 77(59.2%) had adequate awareness of safe abortion, Table 4.

There was a statistically significant association between level of awareness on Safe Abortion and types of family with a p-value of 0.002, Table 5.

**Table 3. Awareness regarding safe abortion of undergraduate students in a survey (n=130)**

Statements	Correct responses	
	n	%
The meaning of safe abortion is the termination of pregnancy by a trained person in a health facility	106	81.5
The abortion can be safely carried out up to 12 weeks of gestation	50	38.5
Safe abortion service is provided in authorized health services (Marie Stopes, hospitals)	95	73.1
The methods of safe abortion are medical and surgical	95	73.1
Pregnancy can be aborted up to 9 weeks by medicine	79	60.8
Any health worker trained to conduct medical abortion is allowed to perform medical abortion	65	50.0
Oral and vaginal routes are allowed for medical abortion	81	62.3
Pregnant woman's consent is required before conducting safe abortion	65	50.0
Guardians' consent is necessary when the pregnant woman is less than 16 years of age	46	35.4
Gynecologists are allowed to conduct abortion after 12 weeks of gestation	67	51.5
Massive vaginal bleeding is a complication of unsafe abortion	105	80.8
Sex-selective abortion is illegal	59	45.4
Pregnant women and service providers can be punished if sex-selective abortion is done	43	33.1
Twelve months to five years imprisonment is given for sex-selective abortion	36	27.7
A woman should go for follow-up visits after 1 week of receiving safe abortion services	60	46.2

**Table 4: Level of awareness regarding safe abortion of undergraduate students in a survey (n=130)**

Level of awareness	n	%
Adequate ( $\geq$ median score)	77	59.2
Inadequate ( $<$ median score)	53	40.8

Median value of instrument=8, Minimum=3, Maximum=13; Possible Score: 0-15

**Table 5. Association between level of awareness of safe abortion and selected variables among undergraduate students (n=130)**

Variables	Level of awareness		$\chi^2$ value	p-value
	Adequate n(%)	Inadequate n(%)		
Study stream				
BBS	52(65.0)	28(35.0)	2.867	0.090
BEd	25(50.0)	25(50.0)		
Types of family				
Nuclear	46(73.0)	17(27.0)	9.619	0.002f
Joint	31(46.3)	36(53.7)		
Age				
<20 years	25(50.0)	25(50.0)	2.867	0.090
≥20 years	52(65.0)	28(35.0)		
Religion				
Hindu	73(60.8)	47(39.2)		0.315f
Others*	4(40.0)	6(60.0)		
Marital status				
Married	10(100)	0(0)	NA	
Unmarried	67(55.8)	53(44.2)		
History of abortion				
Yes	1(100)	0(0)	NA	
No	76(58.9)	53(41.1)		

Level of significance  $p \leq 0.05$ ; f=Fisher's exact test; \*Others =Muslim, Kirat, Christian, and Buddhist

## Discussion

Regarding socio demographic of 130 undergraduate students, the majority (61.5%) belonged age group more than and equal to 20 years and only (38.5%) respondents were less than 20 years. All the respondents' place of residence was Municipality. A majority were Hindu (92.3%) followed others (7.7%) which included Islam, Buddhism, Kirat, and Christianity. Similarly, 51.5% belonged to a joint family. More than half (61.7%) were BBS, and majority of students (92.3%) were unmarried. Only few (0.8%) had a history of abortion.

The present study findings revealed that among 130 respondents, (59.2%) had adequate awareness regarding safe abortion. This study finding is consistent with the findings of a study in which 62.3% of the study population knew about safe abortion.<sup>6</sup> It is further supported by a study showing 65.0% of the participants were aware of the legalization of abortion in the country.<sup>7</sup>

The findings of the present study are higher than

studies from Ethiopia, which revealed that 43% had good knowledge and 57% had poor knowledge.<sup>8</sup>

The findings of the study revealed that majority (81.5%) of respondents correctly responded to the meaning of safe abortion which is lower than other study reporting 100% of respondents correctly answering the meaning of safe abortion.<sup>9</sup> Findings of present study is consistent with other study which revealed that 74.2% of the respondents correctly answered that termination of pregnancy should be carried out by a trained person in a health facility.<sup>6</sup> This might be because in Nepal, students are taught subjects matters on health and population in school level, including basic information on fertility, mortality, human reproductive organs, menstruation, and sexually transmitted infections including HIV/AIDS and reproductive rights.<sup>10</sup>

The findings of this study showed that 38.5% of respondents were aware that abortion can be done safely up to 12 weeks of gestation which is

in contrast with the a in which 61.3% of respondent correctly answered that safe abortion is legally permitted up to 12 weeks of all pregnancy.<sup>6</sup> This is also not supported by the study in which only 8.6% had knowledge that abortion can be done safely up to 12 weeks of gestation.<sup>11</sup>

The finding of our study showed that 73.1% of respondents were aware regarding the place for safe abortions like Marie Stopes, hospitals. The finding of the study is supported by the study in which (85.2%) of respondents were aware of the place to provide safe abortion.<sup>12</sup>

We found that 35.4% of respondents were aware that a guardian's consent is necessary when the pregnant woman is less than 16 years of age. This is in contrast with the other reported studies in which 87.6% of respondents were aware that a guardian's consent is necessary if the pregnant woman is less than 16 years of age.<sup>9</sup> The study showed that 45.4% of respondents correctly answered that sex-selective abortion is illegal. This finding is much lower than 76.03% reported by other studies.<sup>13</sup> We found that 50% of respondents were aware that the pregnant mother has the right to terminate her baby. The finding of the study is similar in which 54.2% were aware that a pregnant mother has the right to terminate the baby if she wishes.<sup>14</sup>

We found a significant association between the level of awareness and types of family ( $p = 0.002$ ) unlike other studies possibly due to different socioculture.<sup>14</sup>

The findings showed that 80.8% of respondents correctly answered that massive vaginal bleeding is the complication of unsafe abortion which is not supported by the study in which 47% have answered that massive vaginal bleeding is the complications of unsafe abortion.<sup>15</sup>

The study found that there was significant association between level of awareness and types of family ( $p=0.002$ ) of respondents. The findings is in contradictory with the reported study.<sup>16</sup>

Some of the limitation of this study could be selection bias, as we conveniently chose urban school which may reflect different findings. Selecting a diverse respondent including students from multiple schools representing wider population in respect to socio-culture is necessary to find out true awareness and measure needed to address the awareness of undergraduate students towards safe abortion.

## Conclusion

More than half of the undergraduate students have an adequate level of awareness regarding safe abortion and half of the students had an inadequate level of awareness on the timing of safe abortion i.e. abortion can be safe up to 12 weeks of gestation. Therefore, an awareness program may be helpful to increase the level of awareness on all aspects of safe abortion among students.

## Authors contribution

Concept design- All; Literature review- All; Data collection analysis- All; Draft manuscript- All; Final manuscript accountability- All.

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## Conflict of interest

None

## Supplementary material

The data and supplementary material that support the findings of this study are available from the corresponding author upon reasonable request.

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