Knowledge on legislation of abortion and experience of abortion among female youth in Nepal: A cross sectional study

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Abstract

Background: Abortion has been legal in Nepal since 2002 and the country has made striking progress in rolling out induced abortion services. It led to well-known changes in reproductive behavior, however knowledge about legislation and abortion experience by female youth has been least investigated. This paper is an attempt to examine knowledge about legislation of abortion and abortion experiences among female youth in Nepal.

Methods: This paper uses data from the Nepal Demographic and Health Survey (NDHS 2011). The analysis is confined to female youth aged 15-24 (n = 5050). Both bivariate and multivariate analyses have been performed to describe the knowledge about law and experience of abortion. The bivariate analysis (chi-square test) was applied to examine the association between dependent variables and female youth’s demographic, socioeconomic, and cultural characteristics. Besides bivariate analysis, the net effect of each independent variable on the dependent variable after controlling for the effect of other predictors has also been measured through multivariate analysis (logistic regression).

Results: Only two-fifth (41 %) female youth was aware of abortion legislation in the country. Knowledge on at least one condition of abortion law is even lower (21 %). Less than two percent (1.5 %) female youth reported that they ever had an abortion. The multivariate analysis found that the knowledge and experience of abortion varied with different settings. Youth aged 20-24 [adjusted odds ratio (aOR) = 1.3; 95 % CI 1.7-5.0], who have higher education (primary aOR = 1.89; 95 % CI 1.5-2.5 secondary aOR = 4.6; 95 % CI 3.7-5.9), who were from rich households (aOR = 1.5; 95 % CI 1.2-1.7), who had high autonomy (aOR = 1.29; 95 % CI 1.02-1.64) were more likely to be aware compared to their counterparts about legislation of abortion. In the other hand, female from Dalit (aOR = 0.55; 95 % CI 0.5-0.7) and Janajati aOR = 0.72; 95 % CI 0.6-0.8) caste, who were married (aOR = 0.80; 95 % CI 0.7-0.9), who were from Muslim (aOR = 0.54; 95 % CI 0.3-0.9) and who resided in Hill (aOR = 0.63; 95 % CI 0.5-0.8) and Terai/plain area (aOR = 0.74; 95 % CI 0.6-0.9) were less likely to be aware about the law. Similarly, female youth who have knowledge on abortion law (aOR = 2.8; 95 % CI 1.6-4.8), who have primary (aOR = 5.2; 95 % CI 1.6-16.9) and secondary education (aOR = 3.8; 95 % CI 1.2-12.8), married (aOR = 7.7; 95 % CI 3.8-12.9), who had higher number of children ever born [1-2 children aOR = 1.9; 95 % CI 1.1-3.6 and 3 or more children aOR = 3.4; 95 % CI 1.1-10.9], who were from rich households (aOR = 2.62; 95 % CI 1.3-5.4), who have high autonomy (aOR = 3.0; 95 % CI 1.6-5.8), who had experienced sexual violence (aOR = 1.91; 95 % CI 1.1-8.7) were more likely to undergone abortion compared to their counterparts.

Conclusion: Knowledge about legislation of abortion and conditions of abortion law is low among female youth. Awareness program should target these youth as they are more likely to be sexually active. There is a need of comprehensive education about abortion to these youth which can help eventually reduce unsafe abortion that take a large toll on women’s life.

Keywords: Abortion, Legislation, Knowledge, Female, Youth, Nepal

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Abortion has been legal in Nepal since 2002 and the country has made striking progress in rolling out induced abortion services, establishing comprehensive abortion care (CAC) at 100% of public-sector sites at the regional, zonal, and district level and 46% of primary health-care centers. As a result, more than 500,000 Nepali women have been served with safe abortion care since 2002 [1].

Worldwide, about 287,000 women die annually from pregnancy-related causes [2]. Ninety percent of maternal deaths occur in less-developed countries [3]. A large number of women (approx. 47,000) died each year due to unsafe abortion [4]. It is also estimated that five million adolescents between the ages of 15 and 18 have unsafe abortion each year [5] and 70,000 abortion-related deaths occur among this age group every year [6]. In Nepal, the data suggest that more than a quarter (26%) of all pregnancies [7] and 41 percent of the last pregnancy among currently pregnant women [8] are unintended.

Table 1 Background characteristic of female youth

| Age group   | %   | N   |
|-------------|-----|-----|
| 15-19       | 54.5| 2753|
| 20-24       | 45.5| 2297|

Ethnicity

| Ethnicity       | % | N   |
|-----------------|---|-----|
| Brahmin/Chhetri | 31.9 | 1611 |
| Janajati        | 40.6 | 2053 |
| Dalit           | 15.1 | 762  |
| Other           | 12.4 | 625  |

Education level

| Education level | % | N   |
|-----------------|---|-----|
| No education    | 17.1 | 866  |
| Primary         | 17.6 | 887  |
| Secondary or above | 65.3 | 3298 |

Marital status

| Marital status | % | N   |
|----------------|---|-----|
| Never married  | 49.0 | 2476 |
| Ever married   | 51.0 | 2575 |

Number of children ever born (CEB)

| Number of children ever born (CEB) | % | N   |
|------------------------------------|---|-----|
| None                               | 65.7 | 3318 |
| 1-2                                | 30.4 | 1534 |
| 3 or more                          | 3.9  | 198  |

Religion

| Religion      | % | N   |
|---------------|---|-----|
| Hindu         | 83.8 | 4231 |
| Buddhist      | 9.1  | 458  |
| Muslim        | 4.1  | 207  |
| Kirat/Christian | 3.1 | 155  |

Ecological zone

| Ecological zone | % | N   |
|-----------------|---|-----|
| Mountain        | 6.3  | 316  |
| Hill            | 39.5 | 1996 |
| Terai           | 54.2 | 2738 |

Place of residence

| Place of residence | % | N   |
|--------------------|---|-----|
| Urban              | 13.7 | 692  |
| Rural              | 86.3 | 4358 |

Wealth index

| Wealth index | % | N   |
|--------------|---|-----|
| Poor         | 35.5 | 1794 |
| Middle       | 21.7 | 1095 |
| Rich         | 42.8 | 2162 |

Autonomy in household decision

| Autonomy in household decision | % | N   |
|--------------------------------|---|-----|
| No autonomy                    | 72.6 | 3667 |
| Moderate autonomy (involved in 1-2 issues) | 16.0 | 809  |
| High autonomy (involved in all 3 issues)   | 11.4 | 575  |

Physical violence by husband/partner

| Physical violence by husband/partner | % | N   |
|-------------------------------------|---|-----|
| No                                   | 96.0 | 4847 |
| Yes                                  | 4.0  | 204  |

Emotional violence by husband/partner

| Emotional violence by husband/partner | % | N   |
|--------------------------------------|---|-----|
| No                                    | 97.0 | 4898 |

Table 1 Background characteristic of female youth (Continued)

| Sexual violence by husband/partner | % | N   |
|-----------------------------------|---|-----|
| No                                 | 97.7 | 4936 |
| Yes                                | 2.3  | 115  |

Total | 100.0 | 5050 |

Background

Abortion has been legal in Nepal since 2002 and the country has made striking progress in rolling out induced abortion services, establishing comprehensive abortion care (CAC) at 100% of public-sector sites at the regional, zonal, and district level and 46% of primary health-care centers. As a result, more than 500,000 Nepali women have been served with safe abortion care since 2002 [1].

Worldwide, about 287,000 women die annually from pregnancy-related causes [2]. Ninety percent of maternal deaths occur in less-developed countries [3]. A large number of women (approx. 47,000) died each year due to unsafe abortion [4]. It is also estimated that five million adolescents between the ages of 15 and 18 have unsafe abortion each year [5] and 70,000 abortion-related deaths occur among this age group every year [6]. In Nepal, the data suggest that more than a quarter (26%) of all pregnancies [7] and 41 percent of the last pregnancy among currently pregnant women [8] are unintended.

About a fifth of the total population of Nepal comprise youth (between the ages of 15-24) [9]. While a majority of adolescents (64%) have their first sexual intercourse between 15 and 17 years of age, only 4.5% of adolescent women use a modern form of contraception [10]. Less than two-fifth adolescent aged 15-19 thought that abortion is legal in the country. Less than three

Table 2 Knowledge about abortion law and conditions

| Abortion is legal in Nepal | % | N (5050) |
|---------------------------|---|---------|
| Yes                       | 41.0 | 2070    |
| No                        | 34.1 | 1720    |
| Don't know                | 25.0 | 1261    |

Conditions of Abortion law

| Conditions of Abortion law | % | N (5050) |
|---------------------------|---|---------|
| Pregnancy of 12 weeks or less gestation for any woman | 13.0 | 659 |
| Pregnancy of 18 weeks if it is a result of rape or incest | 7.9 | 401 |
| Pregnancy of any duration if life of mother is at risk   | 2.8 | 143 |
| Pregnancy of any duration if mother's physical and mental health at risk | 3.8 | 192 |
| Fetus is deformed                                             | 2.3 | 115 |

At least one condition of abortion law | 21.0 | 1059 |

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Table 3 Knowledge of legalization of abortion law and experience of abortion by background characteristic of female youth

|                          | Knowledge on abortion law (%) | Have an abortion (%) | Total N |
|--------------------------|------------------------------|----------------------|---------|
|                          | No   | Yes  | No   | Yes  |                  |
| **Age group**            |      |      |      |      |                  |
| 15-19                    | 60.2 | 39.8 | 99.5 | 0.5  | 2753             |
| 20-24                    | 57.7 | 42.3 | 97.2 | 2.8  | 2297             |
| **Ethnicity**            |      |      |      |      |                  |
| Brahmin/Chhetri          | 45.4 | 54.6 | 98.4 | 1.6  | 1611             |
| Janajati                 | 57.4 | 42.6 | 98.3 | 1.7  | 2053             |
| Dalit                    | 72.3 | 27.7 | 98.4 | 1.6  | 762              |
| Other                    | 83.2 | 16.8 | 99.5 | 0.5  | 625              |
| **Education level of youth** |      |      |      |      |                  |
| No education             | 86.8 | 13.2 | 99.6 | 0.4  | 866              |
| Primary                  | 74.0 | 26.0 | 97.7 | 2.3  | 887              |
| Secondary or above       | 47.7 | 52.3 | 98.4 | 1.6  | 3298             |
| **Marital status**       |      |      |      |      |                  |
| Never married            | 54.6 | 45.4 | 100.0| 0.1  | 2476             |
| Ever married             | 63.3 | 36.7 | 97.1 | 2.9  | 2575             |
| **Number of children ever born (CEB)** |      |      |      |      |                  |
| None                     | 56.6 | 43.4 | 99.5 | 0.5  | 3318             |
| 1-2                      | 61.6 | 38.4 | 96.3 | 3.7  | 1534             |
| 3 or more                | 79.0 | 21.0 | 97.4 | 2.6  | 198              |
| **Religion**             |      |      |      |      |                  |
| Hindu                    | 57.5 | 42.5 | 98.5 | 1.5  | 4231             |
| Buddhist                 | 60.3 | 39.7 | 98.2 | 1.8  | 458              |
| Muslim                   | 90.7 | 9.3  | 99.4 | 0.6  | 207              |
| Kirat/Christian          | 54.8 | 45.2 | 98.4 | 1.6  | 155              |
| **Ecological zone**      |      |      |      |      |                  |
| Mountain                 | 54.3 | 45.7 | 99.0 | 1.0  | 316              |
| Hill                     | 57.9 | 42.1 | 98.4 | 1.6  | 1996             |
| Terai                    | 60.4 | 39.6 | 98.5 | 1.5  | 2738             |
| **Place of residence**   |      |      |      |      |                  |
| Urban                    | 52.0 | 48.0 | 97.6 | 2.4  | 692              |
| Rural                    | 60.1 | 39.9 | 98.6 | 1.4  | 4358             |
| **Wealth index**         |      |      |      |      |                  |
| Poor                     | 69.1 | 30.9 | 99.1 | 0.9  | 1794             |
| Middle                   | 64.4 | 35.6 | 99.2 | 0.8  | 1095             |
| Rich                     | 47.9 | 52.1 | 97.6 | 2.4  | 2162             |
| **Autonomy in household decision** |      |      |      |      |                  |
| No autonomy              | 59.7 | 40.3 | 99.6 | 0.4  | 3667             |
| Moderate autonomy (involved in 1-2 issues) | 58.3 | 41.7 | 96.9 | 3.1  | 809              |
| High autonomy (involved in all 3 issues) | 55.9 | 44.1 | 93.8 | 6.2  | 575              |
| **Physical violence by husband/partner** |      |      |      |      |                  |
| No                       | 58.1 | 41.9 | 98.5 | 1.5  | 4847             |
| Yes                      | 81.2 | 18.8 | 97.8 | 2.2  | 204              |
percent pregnancy had abortion before the age of 20 years [11]. Overall, unsafe abortion remains a leading cause of maternal morbidity and mortality in Nepal, accounting for an estimated 54 % of gynecological and obstetric hospital admissions and 42 % of maternal deaths in health sites [12].

Knowledge about abortion law among female youth is very important because it has implications for access to legal abortion services. Even when safe, legal abortion services are available, women who lack accurate information about the law may seek unsafe abortion because they do not know that they are eligible for the service or do not know the legal requirements for obtaining an abortion [13]. It is hypothesized that older female, who have higher education, who have higher level of autonomy in household decision, lead to high knowledge of abortion law and higher experience of abortion.

Research on awareness of abortion law and experience of abortion among female youth may help to inform policy makers and education planners in Nepal. Unfortunately, not much research has been conducted in this area among the female youth in the country. The aims of this study are to investigate awareness levels and factors influencing awareness of the abortion legislation among female youth in Nepal. Furthermore this study also explores the prevalence of abortion incidence among female youth in Nepal.

### Methods

Data for this paper were drawn from the Nepal Demographic and Health Survey, 2011. The primary purpose of the 2011 NDHS, a nationally representative sample survey, was to provide current and reliable data on fertility and family planning, child mortality, children’s nutritional status, utilization of maternal and child health services, domestic violence, and knowledge of HIV/AIDS. The 2011 NDHS was carried out under the aegis of the Population Division of the Ministry of Health and Population.

Interviews were completed for 12,674 women of reproductive age. The detail methods can be found in the NDHS report [11]. However, this analysis is confined to youth aged 15-24 women (n = 5050). Association between exploratory variables and knowledge on abortion law was assessed via bivariate analysis using chi-square tests. Then logistic regression was used to assess the net effect of each exploratory variable on knowledge on abortion law after controlling for several other independent variables.

### Results

Majority of the respondents were adolescent aged 15-19 (55 %). Almost two thirds had secondary or above education. Similarly, more than a half of youth were married. An overwhelming majority of youth lived in rural area (86 %). Almost three-fourth had no autonomy in household decision. Less than five percentages of female youth had experienced of physical, emotional and sexual violence by their husband/partner (Table 1).

Only two fifths female youth (41 %) were aware about the law. However, only a fifth (21 %) was aware at least one condition of abortion law. Association between exploratory variables and experience of abortion varied with different settings. A significantly higher proportion of youth from Brahmin/Chhetri (55 %) than Janajati (43 %) and Dalit (28 %) were aware about the law. Similarly, significantly higher proportions of the youth who had secondary or above education (52 %) than those who had primary (26 %) or no education (13 %) were aware about the law. It is found that a higher percentage of never married youth (45 %) compared with ever married (37 %) were aware of abortion legislation. Similarly, a significant proportion of youth who lived in urban area, who were from rich family, who did not experience physical, emotional and sexual violence were aware about the law than other groups. In regards to experience of abortion, significantly higher youth aged 20-24, who had primary level education, who were ever married, who were from rich family, who had high autonomy, who had experienced sexual violence had abortion than other group (Table 3).

Logistic regression was conducted to examine the net effect of exploratory variables on awareness on abortion law. Crude and adjusted odds ratio are presented in the

### Table 3 Knowledge of legalization of abortion law and experience of abortion by background characteristic of female youth (Continued)

| Emotion violence by husband/partner | No | Yes | *** | - |
|---|---|---|---|---|
| No | 58.5 | 41.5 | 98.5 | 1.5 |
| Yes | 77.2 | 22.8 | 96.9 | 3.1 |

| Sexual violence by husband/partner | No | Yes | *** |
|---|---|---|---|
| No | 58.5 | 41.5 | 98.5 | 1.5 |
| Yes | 79.4 | 20.6 | 96.0 | 4.0 |

| Total | 59.0 | 41.0 | 98.5 | 1.5 |

Note *** Significant at Chi-square test $p < 0.001$, ** = $p < 0.01$, and * = $p < 0.05$
Table 4 Adjusted odds ratio (aOR) and 95% confidence interval (CI) for having awareness on abortion law of the country among female youth by selected predictors

| Predictors                          | Crude | 95% CI | Adjusted | 95% CI |
|------------------------------------|-------|--------|----------|--------|
|                                    | OR    | Lower  | Upper    | OR     | Lower  | Upper    |
| Had an abortion                    |       |        |          |        |        |          |
| No                                 | 1.00  | 1.00   |          | 1.00   |        |          |
| Yes                                | 3.6***| 2.2    | 5.9      | 2.938***| 1.724  | 5.004    |
| Age group                          |       |        |          |        |        |          |
| 15-19                              | 1.00  |        |          | 1.00   |        |          |
| 20-24                              | 1.11  | 0.99   | 1.24     | 1.283**| 1.105  | 1.489    |
| Ethnicity                          |       |        |          |        |        |          |
| Brahmin/Chhetri                    | 1.00  |        |          | 1.00   |        |          |
| Janajati                           | .616***| .540  | .702     | .719***| .619   | .836     |
| Dalit                              | .318***| .264  | .384     | .552***| .450   | .678     |
| Other                              | .168***| .134  | .212     | .332***| .250   | .441     |
| Education level                    |       |        |          |        |        |          |
| No education                       | 1.00  |        |          | 1.00   |        |          |
| Primary                            | 2.3***| 1.796  | 2.945    | 1.894***| 1.460  | 2.457    |
| Secondary or above                 | 7.18***| 5.835 | 8.848    | 4.651***| 3.654  | 5.920    |
| Marital status                     |       |        |          |        |        |          |
| Never married                      | 1.00  |        |          | 1.00   |        |          |
| Ever married                       | 0.69***| .62   | 0.78     | .801*  | .658   | .975     |
| Number of children ever born (CEB) |       |        |          |        |        |          |
| None                               | 1.00  |        |          | 1.00   |        |          |
| 1-2                                | .812**| .718   | .919     | 1.155  | .946   | 1.410    |
| 3 or more                          | .348***| .246  | .493     | 1.081  | .706   | 1.654    |
| Religion                           |       |        |          |        |        |          |
| Hindu                              | 1.00  |        |          | 1.00   |        |          |
| Buddhist                           | 0.89  | 0.73   | 1.08     | .875   | .700   | 1.093    |
| Muslim                             | 0.14**| 0.86   | 0.22     | .540*  | .312   | .934     |
| Kirat/Christian                    | 1.12  | 0.81   | 1.54     | .976   | .694   | 1.373    |
| Ecological zone                    |       |        |          |        |        |          |
| Mountain                           | 1.00  |        |          | 1.00   |        |          |
| Hill                               | .863  | .680   | 1.096    | .632** | .487   | .819     |
| Terai                              | .777* | .615   | .982     | .744*  | .568   | .973     |
| Place of residence                 |       |        |          |        |        |          |
| Urban                              | 1.00  |        |          | 1.00   |        |          |
| Rural                              | 0.72***| .61   | .85      | 1.104  | .916   | 1.331    |
| Wealth index                       |       |        |          |        |        |          |
| Poor                               | 1.00  |        |          | 1.00   |        |          |
| Middle                             | 1.235**| 1.053 | 1.448    | 1.067  | .892   | 1.276    |
| Rich                               | 2.426***| 2.128 | 2.765    | 1.467***| 1.234  | 1.743    |
| Autonomy in household decision     |       |        |          |        |        |          |
| No autonomy                         | 1.00  |        |          | 1.00   |        |          |
| Moderate autonomy (involved in 1-2 issues) | 1.060 | .908  | 1.237    | 1.015  | .823   | 1.250    |
Tables 4 and 5. It is found that the variables age, ethnicity, education, marital status, religion, ecological zone, wealth index, autonomy in household decision were strong predictors for having awareness on abortion law. Those youth who had an abortion were almost 3 times more likely (aOR = 2.94; 95 % CI 1.72-5.0) to be aware of abortion law compared with those who never had an abortion. Similarly, respondents aged 20-24 were more likely to be aware about law (aOR = 1.28; 95 % CI 1.11-1.43) compared with respondents aged 15-19. Respondents from Janajati and Dalit were 28 percent and 45 percent respectively less likely to be aware about law compared with respondents from Brahmin/Chhetri. Similarly, youth who have secondary and above education were about 5 times more likely (aOR = 4.6, 95 % CI 3.65-5.92) than those who had no education. On the other hand, ever married female were less likely to be aware on abortion law (aOR = 0.80; 95 % CI 0.66-0.98) than unmarried female. Female from rich household were more likely to be aware about law (aOR = 1.5; 95 % CI 1.23-1.74) than female from poor household. Female who had high autonomy in household decision were more likely to be aware about law than those who did not have autonomy in household decision (Table 4).

Female youth who had knowledge on abortion law were almost 3 times (aOR = 2.8; 95 % CI 1.61-4.77) more likely to have an abortion than those who were not aware about the law. Similarly, those who have primary (aOR = 5.2; 95 % CI 1.58-16.9) and secondary or above (aOR = 3.8, 95 % CI 1.15-12.75) education, who had higher number of children (aOR = 1.9; 95 % CI 1.05-3.64 for those who had 1-2 children and aOR = 3.5, 95 % CI 1.09-10.97 for those who had 3 or more), who had higher autonomy in household decision (aOR = 3.01; 95 % CI 1.56-5.76) were more likely to have an abortion than their comparison group. It is found that women who had experienced of sexual violence from their husbands/partners were about twice (aOR = 1.9; 95 % CI 1.02-8.72) more likely to have an abortion than those who did not face sexual violence from their intimate partners (Table 5).

### Discussion

This study explored the awareness level and factors influencing awareness about abortion legislation among female youth in Nepal and their experience on abortion. In order to ensure that legalized abortion in Nepal improves reproductive health, people must know that abortion is a legal option in case of unintended pregnancy. Research shows that most youth had experienced unprotected sex and unintended pregnancy [8, 14]. In such cases, awareness about abortion law could play a critical role in reducing unintended birth and unsafe abortion.

Safe abortion is an effective means of preventing unintended birth, but unfortunately the large numbers of youth are unaware of it. The awareness of law among female youth was 41 %, which is low compare to study conducted in South African women (69 %) [15], slightly higher than Mexican youth (45 %) [16] and Latvia (57 %) [17].

Similarly, our study found that older youth were more aware about the law. It could be due to that older youth feel comfortable to talk about reproductive health issues than younger female. On the other hand, female youth from Janajati and Dalit were less likely to be aware about the law compared with Brahmin/Chhetri.

As expected, youth with higher education were more likely to be aware about the abortion law than those who did not have education. This could be due to these students could talk the issues such as about family

### Table 4

Adjusted odds ratio (aOR) and 95 % confidence interval (CI) for having awareness on abortion law of the country among female youth by selected predictors (Continued)

|                                | aOR 95 % CI         |
|--------------------------------|---------------------|
|                                |                    |
| High autonomy (involved in all 3 issues) | 1.169* 1.092 1.396 1.295* 1.023 1.640 |
| Physical violence by husband/partner |                    |
| No                              | 1.00               |
| Yes                             | .320*** .224 .457 .543 .266 1.108 |
| Emotional violence by husband/partner |                    |
| No                              | 1.00               |
| Yes                             | .416*** .284 .610 .923 .481 1.771 |
| Sexual violence by husband/partner |                    |
| No                              | 1.00               |
| Yes                             | .367*** .233 .579 .768 .390 1.512 |
| Constant                        | .297***            |
| -2 Log likelihood               | 6023.9             |
| Cox & Snell R Square            | .149               |

Note *** p < 0.001, ** = p < 0.01, and * = p < 0.05
| Predictors                  | Crude OR | 95% CI lower | 95% CI upper | Adjusted OR | 95% CI lower | 95% CI upper |
|----------------------------|----------|--------------|--------------|-------------|--------------|--------------|
| **Knowledge on abortion law** |          |              |              |             |              |              |
| No                        | 1.00     |              |              | 1.00        |              |              |
| Yes                       | 3.626**  | 2.204        | 5.967        | 2.771***    | 1.610        | 4.771        |
| **Age group**             |          |              |              |             |              |              |
| 15-19                     | 1.00     |              |              | 1.00        |              |              |
| 20-24                     | 5.883*** | 3.242        | 10.675       | 1.142       | .589         | 2.214        |
| **Ethnicity**             |          |              |              |             |              |              |
| Brahmin/Chhetri           | 1.00     |              |              | 1.00        |              |              |
| Janajati                  | 1.082    | .649         | 1.804        | 1.374       | .768         | 2.459        |
| Dalit                     | .986     | .495         | 1.965        | 1.428       | .668         | 3.055        |
| Other                     | .303*    | .092         | .993         | .392        | .082         | 1.861        |
| **Education level**       |          |              |              |             |              |              |
| No education              | 1.00     |              |              | 1.00        |              |              |
| Primary                   | 5.655**  | 1.818        | 17.587       | 5.186**     | 1.584        | 16.978       |
| Secondary or above        | 3.973*   | 1.349        | 11.694       | 3.823*      | 1.146        | 12.752       |
| **Marital status**        |          |              |              |             |              |              |
| Never married             |          |              |              |             |              |              |
| Ever married              | 8.356    | 5.378        | 13.227       | 7.709***    | 3.762        | 12.964       |
| **Number of children ever born (CEB)** |          |              |              |             |              |              |
| None                      | 1.00     |              |              | 1.00        |              |              |
| 1-2                       | 8.243*** | 4.663        | 14.569       | 1.957*      | 1.051        | 3.644        |
| 3 or more                 | 5.698**  | 2.064        | 15.729       | 3.462**     | 1.092        | 10.970       |
| **Religion**              |          |              |              |             |              |              |
| Hindu                     | 1.00     |              |              | 1.00        |              |              |
| Buddhist                  | 1.175    | .564         | 2.448        | 1.154       | .503         | 2.647        |
| Muslim                    | .370     | .059         | 2.298        | 2.374       | .226         | 24.890       |
| Kirat/Christian           | 1.073    | .303         | 3.805        | .903        | .237         | 3.439        |
| **Ecological zone**       |          |              |              |             |              |              |
| Mountain                  | 1.00     |              |              | 1.00        |              |              |
| Hill                      | 1.569    | .500         | 4.928        | 1.144       | .343         | 3.811        |
| Terai                     | 1.456    | .469         | 4.521        | 1.094       | .324         | 3.689        |
| **Place of residence**    |          |              |              |             |              |              |
| Urban                     | 1.00     |              |              | 1.00        |              |              |
| Rural                     | .572*    | .330         | .993         | .702        | .375         | 1.313        |
| **Wealth index**          |          |              |              |             |              |              |
| Poor                      | 1.00     |              |              | 1.00        |              |              |
| Middle                    | .945     | .412         | 2.169        | .982        | .406         | 2.374        |
| Rich                      | 2.871*** | 1.619        | 5.089        | 2.617**     | 1.254        | 5.460        |
| **Autonomy in household decision** |          |              |              |             |              |              |
| No autonomy                | 1.00     |              |              | 1.00        |              |              |
| Moderate autonomy (involved in 1-2 issues) | 7.539*** | 3.999        | 14.216       | 1.624       | .828         | 3.183        |
planning methods, abortion, or sex-related issues with their friends and colleague without reluctant [18]. However, married youth were less likely to be aware about the abortion law than those unmarried.

Ecological differences in awareness level can be found in this study. Youth from hill and terai region were less likely to be aware about the abortion law than those who live in mountain region. Those who were rich and who had higher level of autonomy were more likely to be aware about the law than their comparison group. However, this finding also requires further investigation.

There are some limitations in the interpretation of the results of this study. First, as pointed out previously, we restricted our subjects to only female youth, so our results regarding the awareness about the abortion law and the prevalence of abortion incidence should not be generalized to all women in Nepal. Second, because the cross-sectional design of the study and all of the items analyzed in the logistic regression analysis came from information at the time of survey, the analysis can only provide evidence of statistical association between those items and knowledge on abortion law and cannot show cause-effect relationships.

### Conclusion

Awareness about abortion legislation among female youth was low which indicates that there is a need among female youth for information on abortion. Health education initiatives should target such youth as they are more likely to be sexually active. It can help to reduce unintended birth, many of which result in unsafe abortion and take a large toll on women’s health.

### Competing interests

The author declares that he has no competing interest.

### Authors’ contributions

RA conducted data analysis, interpretation, and drafted the manuscript.

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