



Original Research

## Adolescent awareness on Sexual and Reproductive Health in Nepal

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### Abstract

#### Introduction

Adolescents face various sexual and reproductive health challenges, including teenage pregnancy, sexually transmitted infections (STIs), and lack of parental communication regarding sexual health. Despite the importance of SRH education, many adolescents in Nepal still have limited access to reliable and comprehensive SRH information. This study explores the level of adolescent awareness regarding sexual and reproductive health in Kathmandu.

#### Methods

A school-based, analytical cross-sectional study was conducted with 200 adolescents aged 16 to 19 years in Kathmandu. Google sheet was used for the data collection from 2025 Feb to March 2025 using self-administered questionnaires consisting of socio-demographic information, knowledge on SRH. Descriptive statistics (mean, percentage, and frequency) and inferential statistics (chi square test) were applied to analyze the data using SPSS version 26 v.

#### Results

Out of 200 adolescents, 60% of the participants were aged 18-19 years, with a higher percentage of male students (57.5%). Majority of participants' (80%) have adequate knowledge on sexual and reproductive health. A majority of the participants (67.5%) of participants felt they had enough SRH information, yet 53% were uncertain whether all participants had the necessary knowledge. Parent-adolescent communication on SRH was generally low, with friends being the most common source of SRH information (36.5%). There is significant association between knowledge level on sexual and reproductive health with age, gender, ethnicity and religion (p0.00).

In conclusion, while adolescents in Nepal demonstrate a basic understanding of sexual and reproductive health, there is a need for improved communication and information dissemination to address gaps in knowledge and enhance overall sexual health outcomes.

**Key Words:** Adolescent, Awareness, Sexual and Reproductive Health.



## Background

Adolescence is a critical stage in human development, characterized by significant physical, psychological, and social changes. This period marks the transition from childhood to adulthood, during which individuals undergo rapid changes in their bodies, thoughts, emotions, and behaviors. As adolescents experience these transitions, their awareness of sexual and reproductive health (SRH) becomes increasingly important. The World Health Organization (WHO) emphasizes that sexual and reproductive health encompasses not only biological aspects but also emotional, mental, and social well-being in relation to sexuality and reproduction [1].

In many societies, discussions about SRH remain taboo, especially for young people, leading to significant gaps in knowledge and understanding of key issues. This knowledge gap can result in risky behaviors such as early sexual initiation, unprotected sex, unintended pregnancies, and sexually transmitted infections (STIs), including HIV/AIDS [2]. Adolescents who lack accurate and comprehensive information are more vulnerable to these risks. In many low- and middle-income countries, including Nepal, such issues are compounded by cultural norms, limited access to formal education on SRH, and stigma surrounding discussions on sexuality [3].

In Nepal, adolescent awareness of SRH is influenced by various factors, including their educational level, parental education, access to sexual health education, and societal attitudes [4]. Pokharel et al. reported that the majority of adolescents received information about SRH from peers, social media, or other non-formal sources, rather than from trusted adults like parents or educators [4]. Such reliance on non-formal sources can lead to incomplete parents or educators [5].

Such reliance on non-formal sources can lead to incomplete or inaccurate knowledge, perpetuating myths and misconceptions about contraception, pregnancy, STIs, and safe sexual practices [6].

While many adolescents in Nepal are aware of basic aspects of SRH, such as pregnancy risk and contraceptive use, their understanding of more complex topics—like STI transmission modes, safe abortion practices, and the emotional aspects

of sexual relationships—remains limited.[6] Although many report knowledge of contraceptive methods, there is a gap in their ability to use them effectively [7].

A key determinant of adolescent SRH awareness is the level of communication between parents and children [8]. In many cultures, including Nepal, parents often struggle to discuss sexual health due to embarrassment, fear, or cultural taboos. This communication gap further limits adolescents' access to accurate information. Conversely, open dialogue between parents and adolescents is associated with healthier sexual behaviors and reduced risk-taking [9]. Despite efforts by governmental and non-governmental organizations to improve SRH education in Nepal, significant challenges remain—especially in rural areas where traditional norms may inhibit access to knowledge and youth-friendly services. A lack of comprehensive sex education, untrained educators, and limited SRH resources in schools contribute to inadequate awareness among adolescents [10].

Therefore, understanding the current level of SRH awareness and its influencing factors is essential to inform effective interventions. Empowering adolescents with appropriate knowledge and skills will enable them to make informed decisions, improving their health outcomes and facilitating their overall development [11].



## Methodology

A school-based, analytical cross-sectional study was conducted to assess adolescents' knowledge of sexual and reproductive health (SRH) in Kathmandu. The total sample size was calculated using Cochran's formula. With a 90% response rate, 200 participants were included; incomplete responses were excluded. Data were collected via a self-administered Google Form questionnaire. Participants included adolescents studying in grade 10 and those enrolled in Science, PCL Pharmacy, PCL Dental Hygiene, Management, and Humanities streams. Schools were contacted through their administrative departments.

The survey tool comprised two sections:

- **Part One:** Socio-demographic data, pubertal changes, and adequacy of SRH information, based on literature from Adhikari and Sharma et al [12, 13].
- **Part Two:** Seven items assessing SRH knowledge.

Content and face validity were ensured through expert consultation and pretesting (n=20). However, full psychometric validation was not conducted and is acknowledged

as a limitation [13.]

Ethical clearance was obtained from the Institutional Review Committee (IRC), YHSA (Reference No. 2079-080-281). Four higher secondary schools in Kathmandu were purposively selected. After administrative permission, data were collected from students in grades, 10, 11 and 12, as well as PCL Pharmacy and Dental Hygiene programs. Written parental consent was obtained; adolescents also provided assent after the study objectives were explained. Completion time was approximately 20–25 minutes. Data were

checked for completeness and anonymity ensured through unique participant codes. Participants were informed they could withdraw at any time during data collection.

**Statistical Analysis:** Descriptive statistics (frequency, percentage, mean, standard deviation) were computed. The chi-square test was used to assess the relationship between knowledge and independent variables using SPSS version 26.0. The total maximum score was 11. A cut-off score of  $\geq 6$  indicated adequate knowledge, based on standard scoring practices in KAP (Knowledge, Attitude, Practice) studies [14].

## Results:

Table 1: Distribution of participants according to socio-demographic characteristics

Variables	Frequency	Percentage (%)
<b>Age Group</b>		
16-17	80	40.0
18-19	120	60.0
<b>Gender</b>		
Male	115	57.5



Female	85	42.5
<b>Ethnicity</b>		
Brahmin/Chhetri	141	70.5
Janajati	57	28.5
Others*	2	1.0
<b>Religion</b>		
Hinduism	181	90.5
Buddhism	14	7.0
Others**	5	2.5
<b>Residence</b>		
Urban	151	75.5
Rural	49	24.5
<b>Family Type</b>		
Single	138	69.0
Joint	62	31.0

\*Others include Muslim, Madhesi \*\*others include Christianity, Muslim

Table 1 shows sociodemographic information of 200 participants. Majority of the participants (60%) belong to age groups 18-19 years. More than half (57.5%) were male followed by Brahmin/Chhetri (70.5%) religion. Almost all of the participants were Hindu (90.5%) and resides in urban (75.5%) and stay in single family type (69%).

**Table 2: Pubertal Changes Information**

**n = 200**

Variables	Frequency	Percentage (%)
<b>Pubertal changes on girls****</b>		
Growth of pubic hair	45	22.5
Breast Development	64	32.0
Menstruation	57	28.5
Changes in Voice	39	19.5
<b>Pubertal Changes on boys****</b>		
Growth of pubic hair	45	22.5
Growth of muscles	53	26.5
Experience of Wet dreams	56	28.0



Variables	Frequency	Percentage (%)
Changes in voice	60	30.0
<b>Experiencing Pubertal changes</b>		
Yes	196	98.0
No	4	2.0
<b>Reproductive and Sexual Information provider</b>		
First Degree relatives	36	18.0
Friends	73	36.5
Social Media	33	16.5
All of the above	52	26.0
Others***	6	3.0
<b>Types of Information</b>		
Ready for marriage	24	12.0
Interspouse life	27	13.5
Pregnancy or impregnate	24	12.0
Sexual Hygiene	80	40.0
Sexual intercourse	44	22.0

\*\*\*Others includes teachers, aunt, uncle, cousin

\*\*\*\*Multiple responses

Table 2 depicts various questions related to puberty changes. It includes five questions with two multiple response questions.

**Table 3: Knowledge on Sexual and Reproductive Health**

n = 200

Variables	Frequency	Percentage (%)
<b>Risk of early age sexual intercourse#</b>		
Poor grades in school performance	18	9.0
Female will get pregnant	91	45.5
Might contract STI/HIV/AIDS	76	38.0
No any impact	15	7.5
<b>Pregnancy knowledge#</b>		
Before menstruation: 14 days before	89	44.5
After menstruation: 14 days after	83	41.5



Variables	Frequency	Percentage (%)
During Menstruation	16	8.0
Anytime	12	6.0
<b>Familiarity with contraceptives</b>		
Yes	163	81.5
No	37	18.5
If yes,		
Pills	35	17.5
Condom	103	51.5
Pills, Condom, Depo	36	18.0
<b>Acceptable for use of contraceptives</b>		
Yes	158	79.0
No	42	21.0
<b>Any side effects if abortion is done</b>		
Yes	176	88.0
No	24	12.0
<b>Information on AIDS/STIs</b>		
Yes	189	94.5
No	11	5.5
<b>Mode of transmission of STI/AIDS#</b>		
Unprotected sexual contact	169	28.4
Multiple partners	151	26.2
Blood transfusion	141	22.4
Syringe sharing	146	23.0

#Multiple responses2

Table 3 presents data on adolescents' knowledge of sexual and reproductive health (SRH) among a sample of 200 participants. It details their understanding of risks associated with early sexual intercourse, pregnancy knowledge, familiarity with contraceptives, acceptance of contraceptive use, awareness of abortion side effects, information on AIDS/ STIs, and modes of STI/AIDS transmission.

This data highlights areas where SRH education may need enhancement to better inform and protect adolescents.

**Table 4: Adequacy of sexual and reproductive health information****n = 200**

Variables	Frequency	Percentage (%)
<b>All adolescents might know about sexual and reproductive health</b>		
Yes		41.0
No		6.0
I don't Know	106	53.0
<b>Enough information on sexual and reproductive health</b>		
Yes	135	67.5
No	65	32.5
<b>Like to receive sexual/reproductive information</b>		
Alone	98	49.0
In group	102	51.0

Table 4 presents data on the adequacy of sexual and reproductive health (SRH) information among 200 adolescents. It reveals that 41% believe all adolescents should be knowledgeable about SRH, while 53% are uncertain. Regarding their own SRH information, 67.5% feel adequately informed, whereas 32.5% do not. Preferences for receiving SRH information are nearly split, with 49% favoring individual sessions and 51% preferring group settings. These findings highlight the need for targeted educational strategies to address knowledge gaps and accommodate diverse learning preferences among adolescents.

**Table 5: Level of Awareness on sexual and reproductive health****n=200**

Knowledge Level	Frequency	Percentage (%)
Adequate Knowledge	160	80.0
Inadequate Knowledge	40	20.0

Table 5 depicts that Majority of adolescence have adequate knowledge while only 20%of them have inadequate knowledge.

**Table 6: Association between Level of knowledge and selected socio-demographic variables**

n=200			
Variables	Adequate Knowledge (n, %)	Inadequate Knowledge (n, %)	p-value
<b>Age Group</b>			
16–17 years	64 (80.0%)	16 (20.0%)	0.000
18–19 years	96 (80.0%)	24 (20.0%)	
<b>Gender</b>			
Male	92 (80.0%)	23 (20.0%)	0.000
Female	68 (80.0%)	17 (20.0%)	
<b>Ethnicity</b>			
Brahmin/Chhetri	113 (80.1%)	28 (19.9%)	0.000
Janajati/Others	47 (79.7%)	12 (20.3%)	
<b>Religion†</b>			
Hinduism	145 (80.1%)	36 (19.9%)	0.000
Buddhism/Others	15 (78.9%)	4 (21.1%)	
<b>Family Type</b>			
Single	110 (79.7%)	28 (20.3%)	0.000
Joint	50 (80.6%)	12 (19.4%)	

† *p-value calculated using Fisher's Exact Test.*

Table 6 depicts that there is significant association between knowledge level on sexual and reproductive health with age, gender, ethnicity and religion ( $p=0.00$ )





## Discussion

### Adolescent Knowledge on Sexual and Reproductive Health in Nepal

Adolescent awareness of sexual and reproductive health (SRH) in Nepal has significant implications for improving public health and addressing adolescent-specific challenges. This study's findings provide critical insights into the socio-demographic factors influencing SRH knowledge among adolescents. This discussion elaborates on key results and their implications within the Nepali context.

### Socio-Demographic Characteristics of the Sample

Most participants (60%) were aged 18–19, aligning with the typical higher secondary school age. This period is marked by rapid biological, emotional, and social transitions that increase vulnerability to SRH risks.[15] The slight male predominance (57.5%) may reflect urban education trends in Nepal, where boys often have more access to academic resources [16].

The majority of respondents were Brahmin/Chhetri (70.5%), reflecting the region's demographic makeup [17]. Similarly, most participants were Hindu (90.5%), aligning with national census data [18]. A large portion resided in urban areas (75.5%), which is consistent with urbanization trends in the country [19]. Furthermore, 69% lived in single-family households, suggesting a shift toward nuclear family structures in urban Nepal [20].

### Pubertal Changes and Information Sources

Almost all participants (98%) reported experiencing pubertal changes, aligning

with global adolescent health data [21]. However, peers (36.5%) were the main source of SRH information, followed by family members (18%) and social media (16.5%). The reliance on peers is concerning due to the possibility of misinformation [22]. Cultural stigma may contribute to parents' reluctance to discuss SRH openly with their children [20]. Adolescents reported the most awareness on sexual hygiene (40%) and sexual intercourse (22%), while critical topics like pregnancy and marital readiness were less frequently discussed (12%), indicating gaps in comprehensive SRH education [23].

### Knowledge on Sexual and Reproductive Health

While many adolescents recognized the risks of early sexual activity 45.5% mentioned pregnancy and 38% STIs including HIV/AIDS 7.5% reported no perceived negative outcomes, underscoring significant gaps in awareness. This supports the need for comprehensive, school-based SRH programs. A promising 81.5% of participants were aware of contraceptive methods, and 79% expressed support for their use. However, only 36% used more than one method (e.g., condoms and pills), possibly due to barriers such as stigma, misinformation, or limited availability [24]. Awareness of the risks of unsafe abortion was also high (88%), indicating improved understanding of its consequences, which are a leading cause of maternal morbidity in Nepal [25].

Overall, 80% demonstrated adequate SRH knowledge, but 20% had insufficient awareness. This improvement may be due to



ongoing health and education initiatives [26]. However, the remaining knowledge gap highlights a need for broader and more inclusive interventions.

Factors such as limited access to reliable information, prevailing taboos, and rural-urban disparities contribute to knowledge gaps [27]. Girls and adolescents from marginalized backgrounds are especially at risk [28]. Adolescents from joint families may face communication restrictions, whereas those from single-parent households may benefit from more open dialogue [29].

### **Adequacy of SRH Information and Learning Preferences**

While 67.5% believed they had sufficient SRH knowledge, 32.5% felt inadequately informed. Preferences for group (51%) and individual (49%) education formats were nearly equal, supporting the need for flexible delivery methods tailored to different learning styles.

### **Implications for SRH Education and Communication**

These findings suggest an urgent need to strengthen SRH education in urban schools. The limited role of parents highlights the importance of involving families and communities to break cultural taboos [26]. School curricula should incorporate culturally appropriate, evidence-based SRH content [20].

With peers and digital media emerging as key influencers, it is essential to provide accurate SRH information through peer-led sessions and social media platforms [30]. These strategies can improve reach, credibility, and engagement among adolescents.

### **Statistical Associations and Knowledge Gaps**

Chi-square analysis revealed significant associations between SRH knowledge and socio-demographic factors:

- **Age:** Older adolescents (18–19) had higher knowledge levels, likely due to greater exposure and maturity [31.]
- **Gender:** Males had better knowledge, possibly reflecting gender disparities in access to information [32].
- **Ethnicity:** Brahmin/Chhetri adolescents had more adequate knowledge, likely linked to socioeconomic advantages.
- **Religion:** Hindu adolescents showed greater knowledge, possibly due to varying religious openness to SRH discussions.
- **Family Type:** Adolescents from single-parent households were more informed, possibly due to more direct parent-child communication.

### **Recommendations**

1. **Strengthen SRH Education in Schools:** Introduce culturally appropriate, age-sensitive content early in the curriculum.
2. **Promote Parental Involvement:** Develop training programs to help parents initiate SRH conversations.
3. **Leverage Peer Education:** Train adolescents as peer educators with support from health professionals.
4. **Utilize Social Media:** Launch targeted, evidence-based digital campaigns to promote SRH literacy.
5. **Improve Access to Contraceptives:** Expand adolescent-friendly services, especially in rural areas.
6. **Community-Based Interventions:** Involve local leaders and youth groups to normalize SRH discourse.



7. **Address Cultural Barriers:** Design respectful, community-endorsed initiatives to reduce stigma.

8. **Further Research:** Investigate rural and marginalized adolescents' SRH Knowledge and needs.

### Conclusion

The study underscores the need for improved SRH education in Nepal,

especially in urban settings. Although a majority of adolescents have adequate SRH knowledge, significant disparities persist Based on age, gender, ethnicity, and family Structure.

Comprehensive and inclusive educational efforts, coupled with community and parental engagement, are essential for improving SRH outcomes.

## მოზარდების ცნობიერება სქესობრივი და რეპროდუქციული ჯანმრთელობის შესახებ ნეპალში

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### აბსტრაქტი

#### შესავალი

მოზარდები სხვადასხვა სქესობრივი და რეპროდუქციული ჯანმრთელობის გამოწვევების წინაშე დგანან, მათ შორის მოზარდობის ორსულობა, სქესობრივი გზით გადამდები ინფექციები და სქესობრივი ჯანმრთელობის შესახებ მშობლებთან კომუნიკაციის ნაკლებობა. რეპროდუქციული ჯანმრთელობის შესახებ განათლების მნიშვნელობის მიუხედავად, ნეპალში ბევრ მოზარდს ჯერ კიდევ შეზღუდული წვდომა აქვს სანდო და ყოვლისმომცველი რეპროდუქციული ჯანმრთელობის შესახებ ინფორმაციაზე. წარმოდგენილი შრომა იკვლევს მოზარდების ცნობიერების დონეს სქესობრივი და რეპროდუქციული ჯანმრთელობის შესახებ კატმანდუში.

#### მეთოდები

კატმანდუს სკოლაში ჩატარდა ჯვარედინი ანალიტიკური კვლევა 16-დან 19 წლამდე ასაკის 200 მოზარდზე დაკვირვებით. მონაცემთა შესაგროვებლად გამოყენებულ იქნა Google Sheet მეთოდი 2025 წლის თებერვლიდან მარტამდე პერიოდისათვის, თვითშევისებადი კითხვარების გამოყენებით კითხვარები შეიცავდა სოციალურ-დემოგრაფიულ ინფორმაციასა და ცოდნას სქესობრივი ჯანმრთელობის შესახებ. მონაცემების გასაანალიზებლად გამოყენებული იქნა აღწერითი სტატისტიკა (საშუალო, პროცენტული მაჩვენებელი და სიხშირე) და ინფერენციული სტატისტიკა (ხი-კვადრატის ტესტი).



## შედეგები

200 მოზარდიდან მონაწილეთა 60% 18-19 წლის იყო, მათ შორის უფრო მაღალ პროცენტულ მაჩვენებელს შეადგენდა მამრობითი სქესის სტუდენტები (57.5%). მონაწილეთა უმრავლესობას (80%) აქვს საკმარისი ცოდნა სქესობრივი და რეპროდუქციული ჯანმრთელობის შესახებ. მონაწილეთა უმრავლესობას (67.5%) მიაჩნდა, რომ მათ ჰქონდათ საკმარისი ინფორმაცია სქესობრივი და რეპროდუქციული ჯანმრთელობის შესახებ, თუმცა 53% არ იყო დარწმუნებული, ჰქონდა თუ არა ყველა მონაწილეს საჭირო ცოდნა. მშობელსა და მოზარდს შორის კომუნიკაცია სქესობრივი და რეპროდუქციული ჯანმრთელობის შესახებ ზოგადად დაბალი იყო, მეგობრები კი ინფორმაციის ყველაზე გავრცელებული წყარო იყო (36.5%). მნიშვნელოვანია კავშირი სქესობრივი და რეპროდუქციული ჯანმრთელობის შესახებ ცოდნის დონესა და ასაკს, სქესს, ეთნიკურ კუთვნილებასა და რელიგიას შორის ( $p=0.00$ ).

## დასკვნა

მიუხედავად იმისა, რომ ნეპალში მოზარდები ავლენენ სქესობრივი და რეპროდუქციული ჯანმრთელობის საბაზისო ცოდნას, საჭიროა გაუმჯობესებული კომუნიკაცია და ინფორმაციის გავრცელება ცოდნაში არსებული ხარვეზების აღმოსაფხვრელად და სქესობრივი ჯანმრთელობის საერთო შედეგების გასაუმჯობესებლად.

**საკვანძო სიტყვები:** მოზარდი, ცნობიერება, სქესობრივი და რეპროდუქციული ჯანმრთელობა.

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