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REPRODUCTIVE HEALTH AWARENESS AND ADVICE-SEEKING BEHAVIOUR OF UNMARRIED COLLEGE-GOING GIRLS IN HIMACHAL PRADESH: A CROSS-SECTIONAL STUDY

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ABSTRACT

Background: Adolescence and young adulthood are critical periods for developing healthy sexual and reproductive behaviours. In India, unmarried college-going girls often face sociocultural barriers, misinformation, and limited access to youth-friendly services, adversely affecting their health-seeking behaviour and reproductive outcomes. **Objectives:** 1) To assess awareness regarding reproductive and sexual health (RSH) issues among unmarried girls. 2) to examine utilization patterns and barriers in accessing RSH services. 3) o evaluate their perceived reproductive health needs before marriage. **Material and Methods:** A cross-sectional study was conducted among 97 unmarried female college students aged 18–25 years using a semi-structured, self-administered online questionnaire. Information on socio-demographic profile, RSH awareness, attitudes, misconceptions, and advice-seeking behaviour was collected. Data were analysed using descriptive statistics and presented as frequencies and percentages. **Results:** Awareness of adolescent-friendly health clinics was low 32 (33.0%). Although all participants 97 (100.0%) had heard of HIV/AIDS, only 15 (15.4%) knew that AIDS is not curable. Correct knowledge regarding pregnancy at first intercourse was limited 9 (9.2%), and only 37 (38.1%) identified at least one contraceptive method. Misconceptions and uncertainty persisted regarding pregnancy risk 38 (39.1%) unsure and masturbation 41 (42.2%) unsure. Only 33 (34.0%) had ever sought RSH services. Teachers were the primary 88 (90.7%) and preferred 86 (88.6%) source of information. Nearly half 47 (48.4%) expressed the need for more RSH information, and 53 (54.6%) desired premarital counselling. **Conclusion:** The study highlights significant gaps in reproductive health awareness, persistent misconceptions, and suboptimal advice-seeking behaviour among unmarried college-going girls. There is a need of strengthened comprehensive reproductive health education addressing socio-cultural stigma and expansion of adolescent-friendly services.

KEYWORDS: Adolescent health; Reproductive health awareness; Sexual health; Unmarried women; Health-seeking behaviour; Misconceptions; Premarital counselling; Adolescent-friendly health services.

INTRODUCTION

Reproductive health refers to a condition of complete physical, psychological, and social well-being in relation to the reproductive system and its functions, rather than simply the absence of illness. It encompasses the ability of individuals to enjoy a safe and fulfilling sexual life, to reproduce, and to exercise autonomy in decisions regarding the timing, spacing, and number of children.[1]

Adolescents aged 10–19 years and young adults between 15–24 years together account for almost one-third of India's population, making them a population group with distinct sexual and reproductive health (SRH) requirements.[2] This life stage is characterized by significant biological changes, including puberty and the onset of reproductive capability, alongside psychological development and changing social responsibilities.

Young girls are susceptible to engaging in unsafe sexual practices, experimentation, and experiences of sexual abuse, increasing their risk of sexually transmitted infections (STIs), including HIV/AIDS, unintended pregnancies, unsafe abortions, and related mental health consequences.[3] In India, individuals aged 15–24 years account for a substantial proportion of newly diagnosed HIV infections, highlighting the importance of timely and accurate reproductive health education during this critical period.[4]

Existing evidence indicates that a large proportion of unmarried young women have limited or incorrect knowledge regarding puberty, menstruation, contraception, pregnancy, and sexually transmitted infections.[5] In the absence of structured and credible information sources, adolescents often depend on peers, mass media, or internet platforms, which may contribute to the spread of misinformation and myths.[6] Additionally, factors such as social stigma, fear of negative judgment, concerns regarding privacy, and perceived disapproval from healthcare providers act as barriers to seeking reproductive health information and services.[7]

Although initiatives such as the Adolescent Reproductive and Sexual Health (ARSH) strategy have been introduced to address adolescent health needs, reproductive health services for unmarried adolescents continue to be fragmented, inconsistently implemented, and inadequately utilized.[8] Interventions including premarital counseling and youth-friendly reproductive health services have been identified as effective measures to correct misconceptions, encourage safe practices, and enable young women to make informed decisions about their sexual and reproductive health.

Enhancing awareness of sexual and reproductive health among unmarried girls is critical for delaying early marriage, reducing teenage pregnancies, preventing sexually transmitted infections, and improving menstrual health and hygiene practices. Addressing these concerns is closely aligned with the Sustainable Development Goals (SDGs), particularly those related to universal access to sexual and reproductive healthcare, gender equality, and reproductive rights.[9]

Sexual and reproductive health (SRH) issues of unmarried girls remain inadequately addressed, largely due to prevailing socio-cultural norms and taboos surrounding discussions of sexuality. Sexual and reproductive health awareness of unmarried girls is especially important as it influences both immediate health behaviours and future reproductive outcomes.

In this context, assessing reproductive health awareness and advice-seeking behaviour of unmarried college-going girls is essential for identifying existing gaps, informing policy development, and strengthening youth-friendly reproductive health interventions. The study aimed to assess reproductive health awareness, attitudes, misconceptions, and advice-seeking behaviour among young women enrolled in higher educational institutions with the following objectives.

OBJECTIVES

1) To assess awareness regarding reproductive and sexual health issues among unmarried girls.
2) To examine utilization patterns and barriers in accessing RSH services.
3) To evaluate their perceived reproductive health needs before marriage

METHODOLOGY

Study design and setting

A cross-sectional study was conducted among unmarried college-going girls in Himachal Pradesh during September 2019 to March 2020. The study population included unmarried female students aged 18–25 years who were currently pursuing undergraduate, postgraduate, or doctoral courses. Participants who provided informed consent and completed the questionnaire were included in the study. Married students and those unwilling to participate were excluded.

Sample size and sampling technique

The sample size was calculated assuming a prevalence of 50% for adequate reproductive health awareness among unmarried young women, as region-specific estimates were unavailable and this assumption provides the maximum sample size. With a 95% confidence level and an absolute precision of 10%, the minimum required sample size was estimated to be 96. A total of 97 complete responses were received and included in the final analysis.

A non-probability sampling approach was adopted due to the sensitive nature of sexual and reproductive health topics and the lack of accessible institutional sampling frames. Participants were recruited using convenience sampling among eligible students.

Data collection tool

Data were collected using a semi-structured, self-administered questionnaire developed after reviewing relevant literature and established reproductive health frameworks. The questionnaire comprised four sections: socio-demographic characteristics; awareness and knowledge of reproductive and sexual health; attitudes, perceptions, and misconceptions; and advice-seeking behaviour along with perceived barriers to accessing reproductive health services.

The questionnaire was assessed by subject experts to ensure content validity and was pilot tested among a small group of students to evaluate clarity, comprehension, and relevance. Feedback obtained during the pilot phase was incorporated into the final version of the tool.

Data collection procedure

The questionnaire was administered online using a secure Google Forms platform. The online mode ensured anonymity and confidentiality, which was expected to encourage honest responses and reduce social desirability bias. Participants were recruited through academic networks and peer referrals, and informed consent was obtained electronically prior to data collection.

Ethical concerns

Participation in the study was voluntary. No personally identifiable information was collected, and confidentiality of responses was strictly maintained. Ethical guidelines were followed for conducting the study.

Statistical analysis

Descriptive statistics, including frequencies and percentages, were used to summarise socio-demographic characteristics, reproductive health awareness, attitudes, misconceptions, and advice-seeking practices. The results were presented in tabular form to facilitate interpretation**.** Statistical Package for the Social Sciences (SPSS-20) was used for data analysis.

RESULTS

Socio-demographic information of study participants is given in Table -1.The majority of participants were aged 22–23 years 51 (52.5%), followed by 20–21 years 25 (25.6%) and 24–25 years 15 (15.2%), while only 6 (6.0%) were aged 18–19 years. Regarding educational status, 53 (54.6%) were postgraduates, 42 (43.2%) were graduates, and 2 (2.0%) were doctoral scholars. Nearly half belonged to the medical stream 45 (46.3%), followed by commerce 19 (19.5%), arts 18 (18.5%), non-medical 14 (14.4%), and others 1 (1.0%). Participants were almost equally distributed by residence, with 50 (51.5%) from rural areas and 47 (48.5%) from urban areas.Nearly equal representation from rural and urban areas was observed, and a substantial proportion belonged to medical and allied streams, indicating a relatively educated sample with potential prior exposure to health-related information.

Table 1: Socio-demographic characteristics of participants.

Characteristic	n (%)
Age (years)	
18–19	6 (6.0)
20–21	25 (25.6)
22–23	51 (52.5)
24–25	15 (15.2)
Educational status	
Graduation	42 (43.2)
Post-graduation	53 (54.6)
Doctorate	2 (2.0)
Stream of study	
Medical	45 (46.3)
Commerce	19 (19.5)
Arts	18 (18.5)
Non-medical	14 (14.4)
Others	1 (1.0)
Residence	
Rural	50 (51.5)
Urban	47 (48.5)

Knowledge regarding contraceptive methods and STI prevention, particularly condom use, was present among many respondents but was not universal as shown in Table-2. Only 32 (33.0%) participants were aware of adolescent-friendly health clinics, whereas 65 (67.0%) were not aware. Correct knowledge that pregnancy can occur during first intercourse was reported by 9 (9.2%), while 88 (90.8%) were incorrect or unsure. Although awareness of HIV/AIDS was universal 97 (100.0%), only 15 (15.4%) correctly knew that AIDS is not curable. Awareness of other sexually transmitted infections was reported by 44 (45.4%). Just 37 (38.1%) could identify at least one contraceptive method, while 80 (82.7%) identified condom use as a preventive method against STIs.

Table b2: Awareness and knowledge regarding reproductive and sexual health.

Component	n	%
Aware of adolescent-friendly health clinics	32	33.0
Not aware of adolescent-friendly health clinics	65	67.0
Correctly knows pregnancy can occur at first intercourse	9	9.2
Incorrect / unsure about pregnancy at first intercourse	88	90.8
Aware of HIV/AIDS	97	100.0
Correctly knows AIDS is not curable	15	15.4
Aware of other sexually transmitted infections	44	45.4
Can identify at least one contraceptive method	37	38.1
Identifies condom use as STI prevention method	80	82.7

Table -3 presents attitudes, misconceptions, and stigma faced by study participants concerning reproductive health. Regarding pregnancy during first intercourse, 50 (51.5%) correctly acknowledged the possibility, 38 (39.1%) were unsure, and 9 (9.2%) believed it could not occur. Only 3 (3.0%) believed that physical growth stops after first intercourse, while 48 (49.4%) were unsure. Misconceptions regarding masturbation were present in 3 (3.0%), and 41 (42.2%) were uncertain about its effects. Embarrassment in visiting health facilities was reported

by 15 (15.6%). Concerns regarding confidentiality were notable, with 36 (36.6%) unsure if confidentiality is maintained. Additionally, 24 (24.2%) felt uncomfortable asking reproductive and sexual health (RSH)-related questions.

Table -3: Attitudes, misconceptions, and stigma related to reproductive health.

Opinion	n	%
Believes pregnancy cannot occur during first intercourse	9	9.2
Unsure about pregnancy at first intercourse	38	39.1
Correctly knows pregnancy can occur at first intercourse	50	51.5
Believes growth stops after first intercourse	3	3.0
Unsure whether growth stops after first intercourse	48	49.4
Believes masturbation causes health damage	3	3.0
Unsure about effects of masturbation	41	42.2
Feels embarrassed to visit a health facility	15	15.6
Unsure if confidentiality is maintained in health facilities	36	36.6
Feels uncomfortable asking RSH-related questions	24	24.2

Advice-seeking behaviour of study participants is given in Table-4**.** Only 33 (34.0%) participants had ever visited a health facility for RSH concerns, while 64 (66.0%) had never sought care. Among those who visited, 18 (54.5%) attended a government hospital, 8 (24.0%) a government clinic, and 7 (21.2%) a private facility. Of these, 18 (54.5%) felt comfortable during the visit, and 13 (39.3%) reported that confidentiality was maintained. Teachers were the primary source of information, cited by 83 (85.5%) for puberty knowledge and 88 (90.7%) for RSH knowledge. Persistent misconceptions remained, with 9 (9.2%) believing pregnancy cannot occur during first intercourse, 38 (39.1%) unsure about it, and 3 (3.0%) believing masturbation harms health. Embarrassment in visiting facilities 15 (15.6%) and uncertainty regarding confidentiality 36 (36.6%) were also reported.

Table -4: Advice-seeking behaviour, service utilization, and perceived needs.

Advice-seeking behaviour	N	%
Ever visited a health facility for RSH concerns	33	34.0
Never visited a health facility for RSH concerns	64	66.0
Visited government hospital	18	54.5
Visited government clinic	8	24.0
Visited private health facility	7	21.2
Felt comfortable during health facility visit	18	54.5
Reported confidentiality maintained	13	39.3
Teachers as source of puberty knowledge	83	85.5
Teachers as source of RSH knowledge	88	90.7
Perceptions and Misconceptions		
Believes pregnancy cannot occur during first intercourse	9	9.2
Unsure about pregnancy at first intercourse	38	39.1
Believes masturbation harms health	3	3.0
Feels embarrassed to visit a health facility	15	15.6
Unsure if confidentiality is maintained in health facilities	36	36.6
Feels uncomfortable asking RSH-related questions	24	24.2

Table-5 presents perceptions concerning reproductive health needs and preferred sources of information. More than half of the participants expressed a need for premarital counselling and preferred teachers and healthcare professionals as sources of reproductive health information (88.66%) followed by Doctors (55.6%), indicating unmet informational needs despite prior exposure. Premarital counselling was desired by 53(54.6%) respondents and mostly they desired information on safe sexual practices.

Table-5: Perceptions of participants concerning reproductive health needs and preferred sources of information.

Perception	n	%
Feels need for more RSH information	47	48.4
Prefers teacher as information source	86	88.6
Prefers doctor as information source	54	55.6
Prefers mother as information source	52	53.6
Expressed need for premarital counselling	53	54.6
Wants information on safe sexual activity	47	48.4

Wants information on contraception	37	38.1
Wants information on pregnancy	34	35.0

DISCUSSION

This study examined awareness, knowledge, and perceptions ofcollege-going girls aged 18–25 years concerning reproductive and sexual health (RSH) services among unmarried in two districts of Himachal Pradesh. The findings reveal both areas of strength and significant gaps in understanding and behaviour related to RSH. The mean age of respondents was 22.09 years, with most participants enrolled in postgraduate (54.6%) or graduate (43%) programmes.

Awareness and Source of Information

In the present study, all participants had heard of HIV/AIDS, correct understanding of key reproductive health facts such as the possibility of pregnancy during first intercourse and the non-curable nature of AIDS was limited. Awareness of adolescent-friendly health services and other sexually transmitted infections was reported by only a subset of participants. Nearly half (46.3%) of the participants were from medical disciplines, which may have influenced some aspects of knowledge but did not uniformly translate into accurate RSH understanding.

Teachers were cited as the primary current source of information on puberty (85.5%) and reproductive health (90.7%), and overwhelmingly as the preferred source (87%). These proportions are notably higher compared to previous state data where teachers were sources for puberty (69.26%) and reproductive health (56.75%).[10] Mothers were important sources for puberty information (72%) but less so for reproductive health knowledge (14.4%), despite over half of participants preferring maternal guidance. Studies from urban India also highlight that parent-to-child communication on sexual health remains limited, even when information is desired.[11] Doctors were an underutilized current source (4.6%) despite being a preferred future source for 56% of respondents, indicating a gap between preference and practice that has been observed in other college settings.[12]

Sex-Related Concerns and Sexual Activity

Nearly half of respondents (48.4%) reported sex-related worries and a desire for detailed information, reinforcing evidence that young women frequently feel under-informed about sexual health.[13] Only 6% reported being sexually active, which aligns with national estimates showing low premarital sexual activity among young women in India.[14] Among those sexually active, 100% reported condom use, with an additional 16.6% using oral contraceptives alongside condoms. While promising, national data suggest inconsistent condom use remains common in youth populations.[15]

Knowledge Gaps and Misconceptions

A considerable proportion of participants expressed uncertainty regarding basic reproductive health concepts, including pregnancy during first intercourse and perceived effects of sexual practices. Misconceptions and uncertainty coexisted alongside correct knowledge. Additionally, feelings of embarrassment, concerns about confidentiality, and discomfort in asking reproductive health–related questions were reported, indicating the presence of attitudinal and psychosocial barriers to care-seeking. Knowledge gaps about reproductive biology were evident: only 9.2% correctly knew that pregnancy can occur at first intercourse, and substantial proportions were uncertain about basic reproductive facts. Misconceptions about masturbation were uncommon compared to studies where a large proportion of adolescents viewed it as harmful.[16] Awareness that condoms prevent pregnancy and sexually transmitted infections (STIs) was relatively high (89.6% and 82.7%, respectively), in line with recent evidence showing improved condom awareness among Indian youth.[17]

Awareness and Knowledge of HIV/AIDS and Other STIs

Awareness of HIV/AIDS was universal, yet only 15.4% correctly understood that AIDS is not curable, indicating persistent misinformation. Similar gaps in HIV knowledge have been reported among Indian college students.[18] Less than half of participants could correctly identify common signs and symptoms of STIs, consistent with findings from other student populations. About 92.7% recognized sexual contact as a mode of STI transmission, but knowledge of non-sexual transmission routes was less widespread, similar to other reports of variable STI transmission awareness.[19]

Awareness and Utilization of Government Services

In our study, nearly half of the participants 47 (48.4%) expressed a need for more RSH information. Teachers were the most preferred source 86 (88.6%), followed by doctors 54 (55.6%) and mothers 52 (53.6%). More than half 53 (54.6%) expressed the need for premarital counselling. Information needs were reported regarding safe sexual activity 47 (48.4%), contraception 37 (38.1%), and pregnancy 34 (35.0%). Only one-third of participants had ever sought reproductive or sexual health services from a health facility. Among those who had accessed services, government facilities were more commonly utilized than private facilities. Teachers emerged as the primary source of information on puberty and reproductive health, while reported comfort and confidentiality during health facility visits varied among users. A considerable proportion of participants expressed uncertainty and misconceptions regarding basic reproductive health facts, along with discomfort and confidentiality concerns while seeking care. Utilization of Government RSH services such as Adolescent Reproductive & Sexual Health Programmes (ARSH) and Kishori centres was very low (2% and 4%, respectively), although awareness of these programmes

was moderate (36–42%). This reflects broader national challenges in engaging youth with available adolescent health services.[20]

Perceived Needsof Reproductive and Sexual health education:

The findings of this study indicate that majority of unmarried college-going girls desired reproductive and sexual health education from teachers while open communication within families remains limited. It also indicates gaps in the adequacy and effectiveness of existing reproductive and sexual health education. The preference for teachers and healthcare professionals as future sources of information reflects a demand for reliable, confidential, and non-judgmental guidance.More than half (54.6%) of respondents expressed that premarital counselling should be offered, particularly on topics such as sex and intimacy, children, and partner behaviours. This aligns with emerging evidence that young Indians increasingly value structured counselling on relationship and sexual health matters.[21]

Present study has several merits in terms of exploring an important public health issue by focusing on reproductive and sexual health awareness and advice-seeking behaviour among unmarried college-going girls. Inclusion of participants from diverse educational streams and both rural and urban backgrounds enhanced the heterogeneity of the sample and provided a broader perspective on reproductive health knowledge and misconceptions.Findings of present study has potential of utilizing results in designing and rescheduling reproductive health education strategies and youth-friendly health service interventions among unmarried girls with emphasis on premarital counselling.

The findings of this study should be interpreted in light of certain limitations. The cross-sectional design of the study restricts the ability to establish causal relationships between reproductive health awareness and advice-seeking behavior. The use of non-probability sampling techniques limits the generalizability of the findings beyond the study population.Data were collected using a self-reported questionnaire, which may be subject to recall bias and social desirability bias, particularly given the sensitive nature of sexual and reproductive health topics. Additionally, the online mode of data collection may have excluded individuals with limited internet access, potentially affecting the representativeness of the sample. Despite these limitations, the study provides valuable insights into reproductive health awareness, misconceptions, and information-seeking behavior among unmarried college-going girls and highlights important areas for intervention.

CONCLUSION

The present study identified considerable deficiencies in accurate knowledge of reproductive and sexual health (RSH) among unmarried college women in Himachal Pradesh. Widespread misconceptions related to contraception, safe premarital sexual practices, and communication regarding sexual health reflects the strong influence of socio-cultural stigma and prevailing gender norms on reproductive health awareness and help-seeking behavior. These findings underscore the urgent need to reinforce comprehensive, age-appropriate sexual and reproductive health education, enhance the quality and scope of school-based interventions, and improve access to adolescent-friendly health services. Integrating structured RSH education into college curricula and strengthening youth-friendly service delivery mechanisms are essential steps toward addressing these gaps. Following recommendations may be given based on the study.

- Comprehensive and developmentally appropriate sexual and reproductive health education should be systematically incorporated into formal educational settings. School- and college-level programs should be extended beyond basic biological information to address prevalent misconceptions regarding contraception, sexually transmitted infections, and premarital sexual health, while remaining culturally sensitive and context-specific.
- The establishment and strengthening of adolescent- and youth-friendly health services are crucial to ensure confidential, non-judgmental, and accessible care for unmarried young women. Sensitization of healthcare providers to adolescent-specific concerns is desired to reduce stigma and facilitate positive help-seeking behavior. Integrating reproductive health counseling into routine primary healthcare services may further enhance service utilization.
- Supportive parent–adolescent communication should be promoted for addressing community-level stigma through awareness initiatives for empowering young women to make informed and responsible decisions regarding their sexual and reproductive health.

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