

## Utilization of Adolescent-Friendly Health Services and Associated Factors among Adolescents in Biratnagar: Mixed Method Study

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### ABSTRACT

**Background:** Adolescence, the transition between childhood and adulthood (ages 10–19), is a critical period for physical and mental well-being. Adolescent Sexual and Reproductive Health (ASRH) services provide essential support for health concerns. This study aimed to assess the utilization of Adolescent Friendly Health Services (AFHS) and associated factors among adolescents in Biratnagar.

**Methodology:** A cross-sectional quantitative study supplemented by qualitative inquiry was conducted from March 15 to April 15, 2023. The quantitative data were collected from 255 grade 10 students at Satya Narayan Secondary School, Biratnagar, via a self-administered structured questionnaire. Qualitative data were gathered through focus group discussions and key informant interviews and analyzed thematically, whereas quantitative data were processed by using SPSS.

**Results:** The mean age of the respondents was 15.71±1.02 years. Nearly one-third (29%) of the adolescents utilized AFHSs. Factors influencing utilization included embarrassment in seeking services and service hour feasibility. Adolescents who felt embarrassed were less likely to access services. The qualitative findings identified three key factors affecting utilization: health system-related issues, societal influences, and individual barriers.

**Conclusion:** This study revealed that only a minority of adolescents used AFHSs, with embarrassment and inconvenient service hours being major barriers. Enhancing awareness through local government initiatives, school collaboration, and community involvement is essential.

**Keywords:** Adolescent, Adolescent Friendly Health Service, Utilization

### INTRODUCTION

Adolescents aged 10 to 19 undergo significant physical, psychological, and social changes that put them at high health risk.<sup>1</sup> They make up 16% of the global population, with 90% residing in low- and middle-income countries,<sup>2</sup> including 125 million in conflict-affected areas.<sup>3</sup> In Nepal, these individuals constitute 24% of the total population, making their well-being, especially their sexual and reproductive health (SRH), a priority.<sup>4</sup>

Adolescent Sexual and Reproductive Health (ASRH) focuses on adolescents' well-being with respect to their reproductive system,<sup>5</sup> whereas adolescent-

friendly services (AFS) provide a supportive environment for accessing SRH care without discrimination.<sup>6</sup> These services include counseling, family planning, voluntary counseling and testing (VCT), and STI treatment. To be effective, AFS must be accessible, affordable, and confidential.<sup>7</sup>

Despite these services, adolescent SRH remains a concern. In Nepal, 70% of premature adult deaths originate from adolescent behaviors.<sup>8</sup> Although contraception awareness is high, utilization remains low, with 19.7% of safe abortion seekers aged 10–19. Additionally, reproductive tract infections (RTIs) and HIV/AIDS pose significant risks, with only 18.3%

of Nepalese adolescents having comprehensive HIV/AIDS knowledge.<sup>9</sup>

Factors affecting AFHS utilization include age, education, maternal education, ethnicity, awareness, and stigma.<sup>10</sup> Utilization rates in Nepal range from 24.7%<sup>11</sup> to 48.7%,<sup>10</sup> which is lower than Ethiopia's 54.6%.<sup>12</sup> The Nepalese government introduced the National Adolescent Health and Development (NAHD) Strategy in 2000AD. However, gaps persist in both the availability and utilization of services.<sup>7</sup>

Given the limited research on adolescent-friendly health services in Nepal, particularly in Biratnagar, this study aims to assess the level of utilization of AFHSs and the associated factors. The findings will guide policymakers and health planners in designing targeted interventions to improve adolescent health outcomes.

## METHODOLOGY

A cross-sectional quantitative study supplemented by qualitative inquiry was conducted to assess the utilization of adolescent-friendly health services (AFHS) and associated factors among adolescents in Biratnagar Metropolitan City. The study focused on Satya Narayan Secondary School, which was selected purposively from 21 secondary-level public schools.

The target population included Grade 10 students, with a sample size of 314 determined via a single population proportion formula with the following assumption: the utilization of adolescent-friendly health services by adolescents was 24.7%,<sup>11</sup> a 5% margin of error, and 95% confidence level. After accounting for nonresponses, 255 students participated. Qualitative data were gathered through five key informant interviews (KIIs) with health service providers and two focus group discussions (FGDs) with 30 adolescents (15 male, 15 female).

Ethical clearance was obtained from the Institutional Review Board, TU, IOM, with informed consent from all participants. For minors, parental consent and assent were secured. Quantitative data were collected through a self-administered structured questionnaire covering sociodemographic characteristics and health service-related factors. The questionnaire, which was pretested at Adarsha Higher Secondary School, was translated into Nepali and revised accordingly.

Qualitative data were gathered via semi-structured interview guides, recorded, and transcribed.

Data analysis was conducted via SPSS Version 16, which employs descriptive statistics and multivariable logistic regression. Statistical significance was set at  $p < 0.05$ . Thematic analysis identified key qualitative insights, ensuring confidentiality and voluntary participation throughout.

## RESULTS

The study revealed that more than half (54.9%) of the respondents were aged 16–19 years. Males (58%) were more prevalent than females (42%). With respect to ethnicity, 43.5% of the respondents belonged to the disadvantaged non-Dalit Terai group, and the majority (87.5%) identified as Hindu. In terms of family structure, 48.6% of the respondents were from nuclear families, whereas only 3.5% were from extended families. The family size distribution revealed that 76.9% of the respondents had fewer than six members, whereas 23.1% had more than six members.

Parental education and occupation played a significant role in the respondents' backgrounds. Nearly half (45.1%) of the respondents' fathers had completed secondary-level education, 36.5% had attained higher secondary education, and only 2% had completed primary-level education. With respect to fathers' occupations, 39.6% were engaged in small businesses, while the least represented group (5%) was unemployed. Similarly, 39.2% of the respondents' mothers had completed secondary education, 16.5% had higher secondary education, and 5.1% had only primary education. The majority (59.6%) of mothers were engaged in household work, whereas only 1.6% worked as wage laborers. Additionally, 62% of the respondents reported living in their own homes.

When health-seeking behavior was examined, more than one-third (33.3%) of the respondents' first point of contact for health concerns was a pharmacy. Approximately 70.6% had heard about adolescent-friendly health services (AFHS), with one-third (34.1%) receiving information from teachers. Access to healthcare facilities was relatively good, as 38% had a health facility within walking distance, and 76.5% could reach a facility in less than 30 minutes. With respect to service utilization, 61.6% of the respondents

sought sexual and reproductive health (SRH) services immediately when symptoms developed, whereas the others waited until home remedies failed (32.9%) or until the condition worsened (5.5%). Almost half (49.8%) of the respondents preferred discussing SRH-related concerns with friends. (Table 1)

Among the respondents, 29% had used counselling services, primarily for reproductive health issues such as menstrual problems (22.9%), family planning services (12.9%), emergency contraception (4.9%), voluntary counselling and testing (VCT) for HIV (3.9%), and sexually transmitted infection (STI) treatment (2.7%). Service satisfaction varied; 19.6% reported that service hours were feasible, whereas 32.5% reported that counselling was provided during their visit. Additionally, 31% felt that their questions were answered adequately and that the service providers were friendly and nonjudgmental. However, 24% of the respondents reported waiting times of 30–60 minutes before receiving services. (Table 2)

With respect to preferences for SRH services, 46.5% of the respondents preferred private health facilities, whereas 60% prioritized facilities near

their residences. Furthermore, 72.9% preferred to access AFHSs within 30 minutes of travel. Special hours (38.4%) and special days (38.8%) designated for adolescents were also preferred. With respect to service settings, 39.2% favored a separate room within a health facility, and 45.5% preferred visiting the facility with friends. Almost half (49%) preferred a mature, same-sex service provider, whereas confidentiality (90.6%) and friendly, nonjudgmental behaviour (88.6%) were considered essential service attributes. (Table 3)

In the multivariate analysis, embarrassment in seeking services and service hour feasibility were the primary factors associated with AFHS utilization. Respondents who felt embarrassed were significantly less likely to use AFHSs (AOR 0.29, CI 0.11–0.76), and service hour feasibility also showed a strong association (AOR 0.13, CI 0.01–0.31). However, fathers' education, mothers' education, fathers' occupation, fear of being seen by parents, and distance to the health facility were not significantly associated with AFHS utilization (Table 4).

**Table 1: Health Service-Related Characteristics of the Study Population** n=255

Variable	Frequency	Percentage
<b>First contact point for Seeking Treatment</b>		
Pharmacy	85	33.3
Private Hospital	77	30.2
Public Hospital	56	22.0
PHC	20	7.8
HP	12	4.7
dhami/Jhakri	5	2.0
<b>Heard about Adolescent Friendly Health Services</b>		
Yes	180	70.6
No	75	29.4
<b>Source of Information who heard about AFHS(multiple chice question)</b>		
Teachers	87	34.1
Radio/Television	34	13.3
Friends	25	9.8
Health Services	15	5.9
Health Services	15	5.9
News Paper	3	1.2
FCHVs	2	0.8
<b>Means of Transportation to Reach Nearest Health Facility</b>		

Walking	97	38.0
Public Vehicles	90	35.3
Private Vehicles	68	26.7
<b>Average Time to Reach Nearest Health Facility</b>		
Less than 30 minutes	195	76.5
30-60 minutes	50	19.6
More than 60 minutes	10	3.9
<b>Need Felt to get SRH services</b>		
As soon as the illness develops	157	61.6
After home remedies	84	32.9
As the condition gets worse	14	5.5
<b>Preference of communication about SRH</b>		
Friends	127	49.8
Parents	90	35.3
Teachers	21	8.2
Siblings	17	6.7

**Table 2: Utilization of Adolescent-Friendly Health Services by Study Population** n=255

Variable	Frequency	Percentage
<b>Utilization of AFHS*</b>		
Counseling Service	74	29.0
Reproductive-related health problem	57	22.9
Family Planning Service	33	12.9
Emergency contraceptives	12	4.9
VCT/HIV Services	8	3.9
Treatment of STI	6	2.7
<b>Related to service listed above</b>		
Service Hour Feasible	50	19.6
Need to pay to get the service	47	18.4
Satisfaction with service provided	52	20.4
Confidentiality maintain when service provide	62	24.3
Provided counseling service	83	32.5
Answered adequately	79	31.0
Behavior of health service provider friendly and non judgmental	79	31.0
Waiting time to get the service	76	29.0
Less than 30 minutes	24	9.4
30-60 minutes		
Waiting period long	71	27.8
Poster and pamphlets related to ASRH	64	25.1
<b>Satisfaction with physical facility</b>		
Toilet	79	31.0
Waiting area	75	29.4
Water	74	29.0
Again visit the health facility	70	27.5
Feel embarrassed in seeking ASRH	44	17.0
Feel fear of being seen by parents or others in seeking ASRH	55	21.6

\*Multiple Responses

**Table 3: Health Service Preference by Study Population****n=255**

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Preference by place</b>		
Private health facility	118	46.3
Government health facility	107	42.0
Does not matter	30	11.8
<b>Preference by distance from residence</b>		
Health facility nearby residence	153	60.0
Health facility far from residence	68	26.7
Does not matter	34	13.3
<b>Preference by average distance to utilize AFHS</b>		
Less than 30 minutes	186	72.9
30-60 minutes	58	22.7
More than 60 minutes	11	4.3
<b>Preference by time</b>		
Special hours for adolescent	98	38.4
24 hour	73	28.6
Usually, working hour	55	21.6
Does not matter	29	11.4
<b>Preference by Day</b>		
Special day	99	38.8
Everyday	72	28.2
Working day	59	23.1
Does not matter	25	9.8
<b>Preference by place</b>		
Inside the Health Facility with Separate Room	100	39.2
School health services Separate adolescent health institution	89	34.9
Separate adolescent health institution	49	19.2
Does not matter	13	5.1
Youth center	4	1.8
<b>Preference of companion to visit the health facility</b>		
With friends	116	45.5
With parents	107	42.0
Alone	31	12.2
With relatives	1	0.4
<b>Preference of service provider</b>		
Matured and same sex	125	49.0
Young and of same sex	95	37.3
Young and any of sex	18	7.1
Does not matter	11	4.3
Matured and any of sex	6	2.4
<b>Confidentiality required</b>	233	90.6
<b>Service provider behavior should be friendly and nonjudgemental</b>	226	88.6

**Table 4: Association of AFHS Utilization with Demographic variables and Service Characteristics (multivariate analysis)**

Variables	Unadjusted OR	Adjusted OR	CI	P value
<b>Education fathers</b>				
Illiterate	0.24-7.58	1.28	0.06-26.91	0.872
Can read and write	1.57-15.11	2.45	0.49-12.29	0.275
Primary	0.07-6.15	0.29	0.02-4.29	0.372
Secondary		Reference		
<b>Education mothers</b>				
Illiterate	0.33-3.80	0.39	0.45-3.53	0.408
Can read and write	1.00-4.84	2.09	0.74-5.88	0.159
Primary	0.09-1.20	0.46	0.11-1.84	0.273
Secondary and above				
<b>Occupation fathers</b>				
Business	0.53-2.83	1.75	0.62-4.93	0.290
Service	0.47-2.14	1.00	0.38-2.61	0.986
Agriculture	1.12-6.27	2.76	0.93-8.12	0.065
Others				
Feel embarrassed in seeking services	5.54	0.29	0.11-0.76	0.011*
Fear of being seen by parents and others	3.84	0.78	0.30-2.01	0.68
<b>Distance to health facility</b>				
<30 minutes	1.93	0.69	0.33-1.46	0.33
≥ 30 minutes				
Service hour feasible	7.76	0.13	0.01-0.31	0.000*

### Qualitative Data Analysis

First, the perspectives of the health workers were written, and then, the opinions and experiences shared by the adolescents during the focus group discussions were recorded.

Key informant interviews with service providers and focus group discussions with adolescents revealed that the following points related to adolescent-friendly health services were identified: health concerns for adolescents, health care-seeking behavior, barriers, and overcoming barriers.

Reproductive health (RH) problems facing adolescent girls and boys

Most of the service providers said that adolescents are anxious about physical changes. They are afraid of hair growth and night falls for males and menstrual problems (irregular and late periods) for girls.

Consequences of unprotected sex include pregnancy and abortion.

One service provider said that “a case where a 20-year-old married woman sought an abortion under coercion from her husband. After counseling, she decided to keep the baby with support from her in-laws.”

Another service provider said, “Adolescents frequently use counselling and contraceptive services, though some hesitate due to social stigma.”

Additionally, other male service providers expressed that “concerns about the rising trend of *live-in-together* and its implications for unintended pregnancies and unsafe abortions.”

Furthermore, another female service provider stated, “Adolescents used to come with problems such as irregular menstruation, general RH problems along with problems such as stomachache. Adolescents

mostly come from maternity and gyno-OPD and prefer the facility of contraceptives.”

FGD with female adolescents revealed issues such as irregular periods, painful menstruation (dysmenorrhea), and a lack of knowledge about menstruation. The participants also highlighted limited access to or knowledge of contraceptives, which can lead to unintended pregnancies. Other concerns included body image and self-esteem issues; inadequate healthcare access; and anxiety, depression, and stress related to reproductive health. Some of the challenges and problems experienced by female adolescents are as follows.

For Participant 1, *“One of the biggest issues for me is the lack of information about menstruation when it first started. I was scared and didn’t know what was happening to my body. My family didn’t truly talk about it, so I felt alone.”*

**Participant 2:** *“Yes, I agree. The first time I got my period, I wasn’t prepared. I didn’t know how to use sanitary pads properly, and it was embarrassing to ask anyone for help.”*

**Participant 3** said, *“For me, it is the pressure and confusion around relationships and sex. There are many mixed messages about what is expected from girls, but no one explains things such as consent or how to protect you from STIs.”*

**Participant 4** said, *“I think schools should teach more about reproductive health, including things such as how to manage your period and understand your body. It shouldn’t be something we’re afraid to talk about.”*

Similarly, the FGD with male adolescents revealed several key concerns related to reproductive health. The participants expressed insufficient knowledge about puberty, sexual health, and reproductive functions, highlighting a need for better education in these areas. They also discussed issues related to contraceptive use and awareness, indicating a gap in understanding that could lead to risky behaviours. Additionally, some adolescents reported experiencing erectile dysfunction and sexual performance anxiety, which contribute to stress and negatively impact self-esteem. Overall, the discussion underscores the prevalence of stress, anxiety, and depression linked

to sexual and reproductive health issues among male adolescents.

**Participant 1:** noted, *“One issue I have noticed is a lack of reliable information about male puberty and sexual health. Most of what I know comes from friends or the internet, and it is hard to tell what’s accurate.”*

**Participant 2:** *“Yeah, I agree. I remember being confused about wet dreams and erections when I first started experiencing them. There wasn’t anyone to explain that it’s normal, so I just felt embarrassed.”*

**Participant 3:** said, *“I also think that the stigma around talking about sexual health is a problem. It feels like guys are not supposed to ask questions about things such as contraception or sexual health, so we stay in the dark.”*

Attitude toward AFHSs

AFHS aims to provide comprehensive physical and mental health services tailored to adolescents, including sexual and reproductive health education and access to contraception. However, the opinions of health workers vary. Some believe that contraceptives should be freely available to adolescents, whereas others argue that they should be provided only in cases of medical necessity.

A service provider noted, *“Many service providers remain judgmental toward adolescents, which discourages them from seeking services. This approach must change to ensure that adolescents feel comfortable and supported.”*

Conversely, another provider expressed concern: *“Unmarried adolescents should not be given contraceptives unless necessary, as it could encourage unnecessary use.”*

#### Adolescents’ Perspectives:

**Participant 1:** said, *“I hesitate to seek healthcare because I fear being judged. I only go when the issue becomes serious.”*

**Participant 2:** *“Privacy is my biggest concern. I worry that my parents will determine if I visit a clinic.”*

**Participant 3:** *“If I know someone else who’s had a good experience at a clinic, I’ll feel more confident going there. However, if I’ve heard negative things, it makes me think twice.”*

**Participant 4:** *“We need health services designed specifically for adolescents, where we can openly discuss our concerns.”*

#### Barriers to providing AFHSs

Several barriers hinder the effective utilization of, including inadequate training for healthcare providers, societal stigma, resource constraints, and lack of privacy in health facilities.

#### Challenges faced by health service providers:

*“The major challenge or barrier that I’ve encountered is a lack of public awareness, which makes it difficult to provide health services and a lack of proper resources to provide AFHS.”*

*“Many adolescents hesitate to seek contraceptive services owing to fear and stigma.”*

*“Our facility lacks the resources, manpower, and private spaces needed to provide adolescent-friendly services.”*

*“Owing to construction issues, we are currently incapable of having a separate wing for AFHS, but despite that, we are continuously providing AFHS.”*

#### Challenges faced by adolescents (males and females, FGD participants)

**Participant 1** said, *“Healthcare providers don’t seem trained to handle adolescent-specific issues. Their judgmental attitudes discourage us from seeking care.”*

**Participant 2** said, *“Yeah, I’ve noticed that too. Some of the doctors or nurses have truly conservative views, and it feels that they are judging us for even asking questions about sexual health. It makes me not want to go back.”*

**Participant 3** said, *“Another problem is that there’s no privacy. If I want to talk about something sensitive, such as contraceptives or mental health, I do not feel comfortable doing it because the consultation rooms aren’t private.”*

**Participant 4** stated, *“And not all health centers offer adolescent-friendly services. In some places, they do not have the resources we need, such as contraceptives or counseling services. It feels like they’re not prepared to help us with everything we might need.”*

**Participant 5:** *“Cultural norms make it difficult to discuss sexual and reproductive health openly.”*

**Participant 6:** *“Clinic hours don’t fit with our school schedules, forcing us to choose between education and healthcare.”*

#### Recommendation for improving AFHS

##### Service providers’ recommendation

*“In my perspective, resources should be maintained properly and effectively, and services should be provided without any judgment”.*

*“I suggest that adolescents from diverse backgrounds attend school, where they can gather information from teachers and friends. We can visit various schools to provide information about our adolescent-friendly health services (AFHS). The most important aspect is raising awareness among adolescents within their schools. Promoting school health programs is crucial and serves as the primary way to advance AFHS.”*

##### Adolescents’ recommendations

*“Extending clinic hours would make it easier for us to visit without having to miss school or other commitments.”* (18-year-old female and 19-year-old male adolescent)

*“Healthcare providers should be supportive and nonjudgmental to encourage us to seek help.”* (16-year-old female and 19-year-old male adolescent)

*“Private consultation rooms and same-sex providers would make us more comfortable.”* (18-year-old female and 17-year-old male adolescent)

*“Clinics should be well-stocked with contraceptives and mental health support.”* (18-year-old female and 17-year-old male adolescent)

*“Cultural sensitivity is crucial to breaking down barriers to reproductive health discussions.”* (17-year-old female and 19-year-old male adolescents)

## DISCUSSION

### Health-Seeking Behavior

More than one-third (33.3%) of the respondents identified pharmacies as their first point of contact for health concerns, a finding reinforced by focus group discussion (FGD) results. This aligns with studies conducted in Nepal (35.3%)<sup>11</sup> and the Kumbungu district of Ghana (30.5%)<sup>12</sup> but contrasts with another study where 44.13% of respondents sought healthcare first at health posts or primary healthcare centers.<sup>13</sup> Approximately 70.6% of the respondents had heard of adolescent-friendly health services (AFHS), which is higher than the 59%<sup>14</sup> and 60%<sup>11</sup> reported in other studies in Nepal. Furthermore, 38% of the respondents had a health facility within their walking distance, and 76.5% could reach a facility within 30 minutes. These findings are higher than those from previous studies, which reported accessibility rates of 63.5%, 45%, and 55.5%, respectively.<sup>14, 11, 15</sup> Furthermore, 61.6% of the respondents sought sexual and reproductive health (SRH) services immediately after the onset of illness, which is 38.2% higher than that reported in a study in the Bhaktapur district.<sup>11</sup> Additionally, 49.8% of the respondents preferred discussing SRH-related issues with friends, a significantly lower percentage than the 80.1% reported in the Bhaktapur district study.<sup>11</sup>

### Utilization of Adolescent-Friendly Health Services

The utilization rate of AFHS in this study was 29%, which is higher than the 9.2%<sup>16</sup>–14.5%<sup>17</sup> reported in previous studies in Nepal, 12.6% reported in Vanuatu,<sup>18</sup> and 21.5% reported in Ethiopia.<sup>19</sup> AFHSs are tailored healthcare services designed to provide adolescents with a comfortable and confidential environment to access SRH services. Other studies in Nepal reported higher AFHS utilization rates of 48.7%<sup>14</sup> and 67.5%,<sup>13</sup> whereas studies from Ghana and Tanzania reported even higher rates of 54.1%<sup>12</sup> and 75%,<sup>20</sup> respectively. This discrepancy may be due to variations in service availability and accessibility.

In this study, the most frequently utilized service was counseling (29%), followed by services related to reproductive health issues such as menstrual problems (22.9%). Prior studies have reported higher utilization rates, including 38.6%,<sup>21</sup> and 54.8%.<sup>17</sup> The

utilization rate of family planning services (12.9%) in this study was consistent with findings from other studies<sup>17</sup> but lower than the 35.5% reported in Nepal.<sup>13</sup> The use of emergency contraception (4.9%) and STI treatment (2.7%) was similar to findings from the Bhaktapur district,<sup>11</sup> although another study reported that 32.3% of respondents obtained emergency contraceptive pills and that 9.7% sought STI diagnosis and treatment.<sup>16</sup> The utilization of HIV counseling and voluntary counseling and testing (VCT) services (3.9%) was lower than that reported in studies from Ethiopia<sup>22</sup> and Nepal.<sup>13</sup>

Approximately 76.5% of respondents stated that it took less than 30 minutes to reach a health facility, a figure comparable to the 79% reported in a study from Sunsari district, Nepal,<sup>17</sup> but lower than findings from another Nepalese study.<sup>11</sup>

### Perceptions and Barriers to AFHS Utilization

Only 19.6% of the respondents reported that service hours were feasible, whereas 32.5% reported receiving counseling services during their visits. Qualitative findings revealed that extending clinic hours would make it easier for adolescents to visit health facilities without missing school or other commitments. Flexible hours were deemed essential for integrating healthcare into adolescents' busy schedules. Only 31% of the respondents felt that their questions were adequately addressed and that service providers were friendly and nonjudgmental. However, FGD and key informant interview (KII) findings indicate that service providers often exhibit judgmental attitudes toward adolescents. Many providers still question adolescents before offering services, a practice that should be discontinued, as it creates discomfort and hesitation. Additionally, 24% of the respondents reported waiting times of 30–60 minutes before receiving services. These barriers to AFHS utilization are supported by findings from a study conducted in Jumla,<sup>13</sup> whereas a contrasting study from the Dang district of Nepal<sup>14</sup> identified individual, social, and systemic barriers to service utilization.<sup>23</sup> Thus, it is crucial for stakeholders to foster supportive environments within communities and healthcare facilities to increase AFHS accessibility.

### Preferences for SRH Services

Nearly half (46.3%) of the respondents preferred private health facilities for SRH services, which was supported by the FGD results. This preference aligns with studies conducted in the Jumla and Sunsari districts of Nepal, as well as in Ethiopia.<sup>13, 17, 24</sup> However, a study in Bhaktapur district reported that pharmacies were the first point of contact for SRH concerns.<sup>11</sup>

Furthermore, 72.9% of the respondents preferred that travel time to AFHS facilities not exceed 30 minutes, which aligns with findings from a study by Panta.<sup>17</sup> This percentage is lower than that reported in studies conducted in Dang and India.<sup>14, 15</sup> Additionally, 38.4% of the respondents preferred special hours, whereas 38.8% favored special days designated for adolescent SRH services. These preferences were supported by KII and FGD findings, although another study reported that half of the students preferred accessing AFHSs on Fridays and Saturdays.<sup>13</sup> Similarly, 39.2% of the respondents preferred receiving services in a separate room within health facilities, and 45.5% preferred visiting health facilities with friends. However, 49% of the respondents favored receiving services from a mature, same-sex provider, a preference supported by FGD findings. In contrast, another study reported that 27.5% of respondents were comfortable with any service provider, regardless of gender or age.<sup>14</sup> Confidentiality was a crucial factor influencing service utilization, with 90.6% of respondents prioritizing privacy. Many adolescents refrained from fully utilizing AFHS because of concerns over confidentiality, inconvenient service hours, and long wait times.<sup>11</sup>

### Factors influencing AFHS utilization

Multivariate analysis identified feelings of embarrassment and service feasibility as the primary factors affecting AFHS utilization. These results were reinforced by FGD findings, highlighting that embarrassment significantly reduces service utilization.<sup>11, 14, 25</sup> Cultural norms also play a crucial role in shaping adolescents' attitudes toward seeking SRH services. Studies suggest that having feasible service hours can significantly impact adolescent health-seeking behavior.<sup>25</sup>

### CONCLUSION

The study concludes that nearly one-third of the respondents utilized AFHS and that feeling embarrassment in seeking services and feasibility of service hours were the factors associated with utilization. Health education regarding sexual and reproductive health should be provided by school collaboration with school health nurses. By creating an enabling environment such as feasibility of service hours and communication with parents, the positive attitudes of service providers could result in positive gains in service utilization.

### Conflict of Interest

No any conflict of interest

**Funding:** This study is funded by Biratnagar Nursing Campus, TU, IoM, under a departmental mini-research grant.

### ACKNOWLEDGEMENTS

We would like to extend our sincere gratitude to Biratnagar Nursing Campus, TU, IoM for providing the grant to conduct the study. We would like to thank the Principal of Satya Narayan School and all students for their participation in the study.

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