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Assessing the availability and readiness of health facilities to deliver adolescent health services in Bangladesh: Evidence from nationally representative Bangladesh Health Facility Survey 2022

Rifath Binta Modasser
rifath.moddaser@icddrb.org
International Centre for Diarrhoeal Disease Research
Anindita Saha
International Centre for Diarrhoeal Disease Research
. Ashiquzzaman
International Centre for Diarrhoeal Disease Research
Mohammad Imrul Hakim Kaowsar
International Centre for Diarrhoeal Disease Research
Mahbuba Mehjabin
International Centre for Diarrhoeal Disease Research
Modabbir Mostofa
International Centre for Diarrhoeal Disease Research
Anisuddin Ahmed
International Centre for Diarrhoeal Disease Research
Abu Bakkar Siddique
International Centre for Diarrhoeal Disease Research

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Abstract

Background

Adolescent health is a global public health priority, as this life stage involves significant physical, mental, and social changes. Worldwide, pregnancy and childbirth complications are the second most common cause of death among girls aged 15 to 19. In Bangladesh, one in four teenage girls in this age group got pregnant in 2023. Despite having a large adolescent population, their needs are often ignored due to a lack of gender-sensitive health services. To date, no prior studies have been identified that assess the availability and readiness of health facilities providing adolescent health services using a nationally representative sample. This paper aims to use the 2022 Bangladesh Health Facility Survey (BHFS) to assess the availability and readiness of facilities providing Adolescent Health Services (AHS) in Bangladesh.

Methods

We analyzed data from 1,557 health facilities included in the BHFS 2022. Facility readiness was assessed using a composite readiness score. Descriptive analyses were conducted by facility type, managing authority, and administrative division.

Results

Overall, 84% of health facilities provided AHS. Service availability exceeded 90% in Maternal and Child Welfare Centers (MCWCs), Union Health and Family Welfare Centers (UH&FWCs), Community Clinics (CCs), and NGO clinics, but only 30% of private hospitals offered AHS. Only 15% of facilities had a dedicated room for adolescent services, with the lowest availability in private hospitals (6.5%). Adolescent health service guidelines were unavailable in most facilities, particularly in private hospitals (1%), Union Sub-Centers/Rural Dispensaries (11%), and CCs (26%). Nearly 90% of District Hospitals (DHs) and Upazila Health Complexes (UHCs) had trained staff, compared with fewer than half of private hospitals. The overall readiness score was 49, ranging from 43 in USCs/RDs to 76 in UHCs, with modest variation across divisions (47–52).

Conclusions

Although adolescent health services are widely available in Bangladesh, facility readiness remains inadequate because of gaps in infrastructure, guidelines, underscoring the need for enhanced training and resources. Regular monitoring and evaluation of these services are essential. Future research should include wider areas to confirm these findings and provide evidence for shaping national health policies.

Background

Given that adolescence is a critical life stage marked by significant physical, mental and social changes, adolescent health continues to be a global public health concern (Patton et al., 2016). However, adolescence phase is also a chance to identify and address health issues early (Sivagurunathan, 2015). Pregnancy and childbirth-related complications are the second leading cause of mortality among adolescent girls aged 15–19, while 95 percent of the adolescents (girls aged 15–19) deliver in low- and middle-income countries globally (Ghose and John, 2017). The The World Health Organization (WHO) says that better healthcare facilities lead to improved health and help address mental health issues, substance use, and sexual and reproductive health problems among adolescents (Joshi et al., 2017a; Schraeder et al., 2020; Vanderkruik et al., 2021; World Health Organization, 2024). Studies also show that adolescent girls and young women have a higher risk of pregnancy termination compared to older women (Leppalahti et al., 2012; Onukwugha et al., 2020). Adolescent mothers (aged 10–19) are at higher risks of eclampsia, puerperal endometritis, and systemic infections compared to older mothers. Their babies are more likely to have low birth weight, be born preterm, and face severe neonatal conditions (World Health Organization, 2024). In Lower- and Middle-Income Countries (LMIC's), 21 million females aged between 15 and 19 became pregnant in 2019, and 12 million of then gave birth. Every second pregnancy was unintended, and 55% of them ended with unsafe abortions (World Health Organization, 2024b) .

Following the 1994 International Conference on Population and Development, greater attention has been given on improving adolescent health, especially sexual and reproductive health. However, it is still challenging to create effective solutions and provide full support for health and human rights (Kabiru, 2019; Bhutta et al., 2020).

Approximately 19% of Bangladesh's total population consists of adolescents, and one-fifth of the female population is adolescent girls aged 10–19 (Bangladesh Bureau of Statistics, 2023). According to the Bangladesh Sample Vital Statistics 2023, 50% of all marriages occurred before the age of 18 years (child marriage). Of these, 42% were marriages involving adolescents aged 15–17 years, while the remaining 8% occurred before the age of 15 years (Statista Research Department, 2024). In Bangladesh, there were 70.81 births per 1,000 women aged 15 to 19 in 2024 (Statista Research Department, 2024). The SVRS report shows that in 2023, 25.18% of all pregnancies were among girls aged 15–19, and 10% of these pregnancies ended in miscarriage or abortion (Bangladesh Bureau of Statistics, 2023). This results in high fertility rates and low use of contraceptives, which increases maternal mortality and the risks of unsafe abortions (Sultana and Tareque, 2019).

During adolescence, challenges like poverty, lack of education, limited access to information and services, societal norms, discrimination, early marriage, and early childbearing affect decision-making. These issues lead to risky sexual behaviors, poor health care, and negative health outcomes (Ministry of Health and Family Welfare, 2016).

Bangladesh can accelerate progress toward the Sustainable Development Goals (SDGs) by investing in adolescent health (Ministry of Health and Family Welfare, 2016). Preventing adolescent pregnancy and child marriage directly supports SDG indicators on adolescent birth rate and early marriage (World Health Organization, 2024a). Improving adolescents' access to health facilities and reproductive health services can increase awareness of contraception and family planning, reduce pregnancy-related complications, and contribute to better maternal and newborn health outcomes in Bangladesh.

In Bangladesh, a national strategy of adolescent reproductive health was developed in 2006 to improve adolescent health. But it didn't cover all the health aspects of adolescents. In Bangladesh, due to higher early marriage rates, many adolescents become sexually active, particularly among girls. They require complete sexual and reproductive health (SRH) services, including information on contraceptives, services, maternal and child health care etc. Currently, these services are accessible at the public hospitals including district hospitals, MCWC, and union level hospitals for women, including married adolescents, (Ainul, Ehsan, et al., 2017). Unmarried adolescents have limited and often inadequate opportunity to avail SRH information and services from current healthcare facilities in Bangladesh (Ainul, Bajracharya, et al., 2017). Additionally, adolescents frequently identify Government and NGO health facilities as "family planning clinics," which creates a major barrier for them to visit these centers for counseling and services. The Ministry of Health and Family Welfare (MOHFW) of Bangladesh has made adolescent health a top priority and is responsible for addressing their health needs. In early 2015, Bangladesh introduced adolescent-friendly health services (AFHS) at public health facilities by establishing adolescent-friendly health corners (AFHCs) with support from stakeholders. The MCH Services Unit of the Directorate General of Family Planning (DGFP) has been working in collaboration with stakeholders, such as Plan International Bangladesh, USAID, and EKN to create AFHCs in existing public facilities, aiming to broaden AFHS and provide sexual and reproductive health services specifically to unmarried adolescents (Ainul, Ehsan, et al., 2017). The AFHCs are designed in a way to provide the married and unmarried adolescent boys and girls (ages 10–19) services including with adolescent friendly counseling, information, and menstruation services, RTIs/STIs, tetanus vaccine, puberty, safe sex, early marriage and pregnancy, contraceptives and family planning (for married adolescents only), anemia, gender-based violence (GBV), and substance abuse (Ainul, Ehsan, et al., 2017). According to accreditation guideline, health facilities are mandated to provide health services to the adolescents [Supplementary table S1] (Ministry of Health & Family Welfare, 2019). It is also notable that relatively fewer adolescent boys utilize the AFHCs and, and available service statistics indicate that those who do primarily seek care for general illness, rather than SRH services. To find out the reasons for boys' lower attendance at AFHCs, further evaluation is needed (Ainul, Ehsan, et al., 2017). Again, in 2017, the MOHFW launched the National Strategy for Adolescent Health, 2017–2030, to make sure that every adolescent in Bangladesh has a healthy, productive life in a supportive and secure environment by 2030 (Ministry of Health and Family Welfare, 2016).

Health facilities providing adolescent-friendly services need to be evaluated to better understand and strengthen investments in adolescent health. Monitoring and evaluation are essential for assessing the availability, readiness, and functionality of adolescent health services in health facilities, which can ultimately improve adolescents' health outcomes and knowledge. Although one previous study assessed the availability and readiness of adolescent health services in Bangladesh, it was limited to 56 public health facilities (61 facilities surveyed) across four districts (Gazipur, Tangail, Jamalpur, and Khulna). As a result, its findings are not nationally representative and cannot be generalized to the country's health system. Furthermore, that assessment primarily applied the generic health facility service readiness indicators suggested by the WHO, the U.S. Agency for International Development (USAID), the World Bank, the International Health Facility Assessment Network (IHFAN), and other policymakers through the WHO Service Availability and Readiness Assessment (SARA) framework. While these indicators provide a standardized approach for assessing health system capacity, they do not fully capture the requirements of Bangladesh's national standards for adolescent-friendly health service (Haseen et al., 2017).

To our knowledge, this is the first nationally representative study in Bangladesh to assess the availability and readiness of adolescent health services using the national accreditation guidelines and the WHO SARA framework. Using BHFS 2022 data, this study addresses an important evidence gap and provides nationally representative estimates by facility type, managing authority, and administrative division to inform policy, planning, and quality improvement.

Method

Study design:

This study utilized secondary data from the BHFS 2022. The National Institute of Population Research and Training (NIPORT), conducted this survey with the technical assistance of icddr,b. Associates for Community and Population Research (ACPR) from Dhaka collected the data, and icddr,b provided technical assistance with monitoring and quality checks. The Government of Bangladesh (GoB) and USAID provided the funding. The Stakeholders Advisory Committee (SAC) and the Technical Working Committee (TWC) handled policy and technical aspects of the survey. The 2022 BHFS was a cross-sectional study that used a stratified random sample of 1,640 health facilities covering all formal-sector health facilities in Bangladesh. The general aim of the survey was to gain an understanding of the service availability and readiness of health facilities in maternal and child health, family planning, selected NCDs (diabetes and cardiovascular diseases (CVDs)) and tuberculosis. The survey also evaluated the availability of human resources, basic services, and logistics such as equipment, essential drugs, laboratory services as well as infection control mechanisms among the health facilities, using standard procedures.

Sampling process:

In 2022, the BHFS employed a method of stratified random sampling, categorizing health facilities based on their administrative units. The BHFS collected data from 1,557 health facilities out of the sample of 1,640, as 83 were closed on the day of the visit. During the health facility survey, 6,209 providers were interviewed. The process of stratification involved segregating health facilities by their types within each division.

In BHFS 2022, two validated structured questionnaires were used to assess facility readiness and provider characteristics, adapted and pretested for Bangladesh. Data were collected electronically by trained teams between September–December 2022 under icddr,b supervision with quality monitoring and informed consent. The details can be found on BHFS 2022 report (National Institute of Population Research and Training (NIPORT) and icddr,b, 2024).

Outcome of interest:

Outcome of interest:
There are two outcomes of variables in this study. One of the outcome variables is the 'availability of adolescent health services by facility types, managing authority, and division. And another variable is the readiness of health facilities offering the adolescent health services by facility type, managing authority, and divisions in Bangladesh. Service availability was determined by whether facilities provided adolescent-friendly health services. For calculating service availability, eight tracer indicators were considered.

Readiness was assessed based on the presence of required items on the visit day. Total 15 indicators were used to access the readiness of health facilities offering adolescent health services. The average adolescent health service readiness score reflects the overall preparedness of health facilities to deliver this service. It is derived from a composite indicator based on a selection of those 15 indicators. Each indicator for service availability and readiness was chosen based on the WHO SARA Manual and the National Accreditation Guideline for Adolescent-Friendly Health Services, 2019 (World Health Organization, 2015; Ministry of Health & Family Welfare, 2019). The mapping of tracer items for selecting indicators are shown in Supplementary **figure S1** and the details are in Supplementary Table **S2**.

Statistical Analysis:

Data were analyzed using Stata version 18. The analysis accounted for sample weights to generate nationally representative estimates.

As per the national AFHS Accreditation guideline, all DHs, MCWCs, UHCs, UH&FWCs, CCs, NGOs, and Private clinics are directed to provide facility-based adolescent health services through outpatient departments. Here, we analyzed all 62 DHs and 100 functioning MCWCs, while limiting our analysis to 157 UHCs, 293 UH&FWCs, 141 USC/RDs, 488 CCs, 127 NGO clinics, and 189 private hospitals as denominators; however, for the readiness index, we only used facilities offering AHS as denominators.

Descriptive statistics (percentages) were utilized to report availability and readiness for each item, with estimates categorized by facility type (DHs, UHCs, UH&FWCs, MCWCs, USC/RDs, CCs, Private hospitals, and NGO clinics) and by managing authority (public, NGO, and private).

For readiness score calculation, we used the formula:

$$Readiness\ score\ for\ a\ specific\ domain = (Number\ of\ available\ tracer\ indicators\ in\ the\ health\ facilities\ offering\ AHS\ for\ specific\ d$$

To measure readiness score for adolescent health services, four domains were considered: basic amenities, guidelines and trained staff, medicines, and commodities and vaccines. The maximum score for each domain was 25, which was assigned when all tracer indicators within that domain were present. The total readiness score was calculated by summing the scores across the four domains. As each domain had a maximum score of 25, the overall readiness score ranged from 0 to 100.

Results

Table 1 summarizes the characteristics of health facilities included in the 2022 Bangladesh Health Facility Survey and the availability of adolescent health services (AHS). Overall, 84% of facilities provided AHS. Service availability was highest in MCWCs (94%), UH&FWCs (92%), CCs (91%), and NGO clinics (90%), while UHCs (87%) and USCs/RDs (85%) also reported high coverage. In contrast, availability was lower in DHs (79%) and particularly poor in private hospitals (30%). Overall, AHS were widely available in public and NGO facilities but remained limited in the private sector.

Table 1
Distribution of surveyed health facilities and facilities offering adolescent health services, by background characteristics

Background characteristic	% of surveyed health facilities (weighted)	Number of facilities surveyed		% of health facilities offering adolescent health services (weighted)
		n (weighted)	n (unweighted)	
Facility type				
DH	0.3	4	62	79.0
MCWC	0.4	7	100	93.9
UHC	1.9	30	157	86.5
UHFWC	14.5	225	293	92.2
USC/RD	5.4	85	141	84.9
Community clinic (CC)	63.8	994	488	91.1
NGO clinic/hospital[1]	1.9	29	127	90.1
Private hospital	11.8	183	189	29.6
Division				
Barishal	7.1	111	152	93.3
Chattogram	18.7	291	244	88.5
Dhaka	20.4	317	264	80.5
Khulna	13.5	210	208	67.2
Rajshahi	13.7	214	212	85.7
Rangpur	12.4	193	190	90.9
Sylhet	6.4	99	136	74.4
Mymensingh	7.8	122	151	91.0
Total	100.0	1,557	1,557	83.5

[1]The NGO category includes facilities run by local government.

Figure 1 illustrates that the mean number of days providing adolescent health service across the health facilities offering the adolescent health services. Adolescent health services were available for five to six days per week across the assessed health facilities. DHs, UHCs, NGO facilities, and private facilities provided services six days per week, while MCWCs, UH&FWCs, CCs, and USC/RD facilities provided services on approximately five days per week. These findings suggest that adolescent health services are routinely available throughout the week across most facility types, although service availability is slightly lower in primary-level facilities.

Table 2 presents the availability of adolescent health services by facility type. Overall, the availability of adolescent-friendly services varied substantially across facility types. MCWCs consistently demonstrated the highest availability of dedicated adolescent service corners and family planning services, including contraceptive commodities such as combined oral contraceptive pills, male condoms, emergency contraceptive pills, and IUCD.

In contrast, private hospitals consistently had the lowest availability of adolescent health services and contraceptive commodities, with very limited provision of dedicated adolescent service corners, family planning services, and male condoms. USCs/RDs and community clinics also demonstrated relatively lower availability for several contraceptive methods, particularly emergency contraceptive pills and intrauterine contraceptive devices. District hospitals and NGO clinics generally showed moderate levels of service availability, although their performance varied by service type.

Table 2
Availability of adolescent health services, by facility type

Indicators	DH	MCWC	UHC	UH&FWC	USC/RD	CC	NGO	Private	Total
	% (CI)	% (CI)	% (CI)	% (CI)	% (CI)	% (CI)	% (CI)	% (CI)	% (CI)
Dedicated room/area for adolescent health services	33.9 [23.2,46.4]	60.3 [50.4,69.4]	33.5 [26.4,41.5]	34.4 [29.1,40.2]	13.8 [8.8,21.1]	11.0 [8.5,14.1]	21.3 [14.6,30.2]	6.5 [3.4,12.1]	14.9 [12.9,17.2]
Family planning services to adolescents	72.6 [60.2,82.2]	91.9 [84.5,95.9]	85.9 [79.6,90.5]	91.4 [87.5,94.2]	46.0 [37.3,54.9]	77.0 [73.1,80.6]	77.6 [69.1,84.3]	14.3 [9.5,20.9]	70.3 [67.3,73.1]
Provision of combined oral contraceptive pills to adolescents	74.2 [61.9,83.6]	92.9 [85.8,96.6]	83.9 [77.3,88.9]	92.2 [88.4,94.8]	48.0 [39.3,56.9]	81.2 [77.5,84.5]	78.9 [70.7,85.3]	14.3 [9.5,20.9]	73.2 [70.3,75.8]
Provision of male condoms to adolescents	64.52 [51.9,75.4]	91.9 [84.5,95.9]	85.9 [79.6,90.5]	89.7 [85.4,92.7]	39.9 [31.5,48.9]	74.5 [70.4,78.2]	62.1 [52.8,70.7]	3.7 [1.7,8.2]	66.5 [63.5,69.4]
Provision of emergency contraceptive pills to adolescents	53.2 [40.8,65.2]	89.9 [82.2,94.5]	84.4 [77.9,89.2]	78.9 [73.7,83.4]	37.4 [29.2,46.4]	36.5 [32.3,40.9]	46.6 [37.4,56.1]	13.0 [8.5,19.5]	41.3 [38.3,44.4]
Provision of intrauterine contraceptive device (IUCD) to adolescents	71.0 [58.5,80.9]	90.9 [83.4,95.2]	84.7 [78.3,89.5]	84.5 [79.8,88.2]	41.4 [32.9,50.4]	30.3 [26.4,34.6]	66.5 [57.3,74.6]	12.0 [7.6,18.4]	38.7 [35.7,41.8]

Figure 2 illustrates the availability of readiness items of AFHS in public and private health facilities.

This figure shows how prepared health facilities were to provide adolescent-friendly services. Basic amenities, such as sitting arrangements, safe drinking water, and waste disposal facilities, were available in most facilities, although community clinics showed comparatively lower availability of safe drinking water. Privacy for adolescents during consultations was consistently poor across all facility types, with only MCWCs reporting that just over half of facilities had private consultation spaces.

The availability of service guidelines was low across all facility types, particularly in private hospitals (1%) and USCs/RDs (11%), despite relatively high proportions of trained staff in DHs, UHCs, MCWCs, and CCs. Essential medicines and commodities were generally well stocked in public facilities, especially MCWCs, UHCs, and UH&FWCs, while private hospitals and community clinics showed notable gaps for several key medicines. Condoms were widely available in public facilities but were scarce in private hospitals. Similarly, adolescent tetanus toxoid (TT) vaccine availability varied substantially, with the highest coverage in UHCs and very limited availability in UH&FWCs, CCs, and MCWCs.

Figure 3 provides information on the mean readiness score for health facilities offering adolescent health services by facility types, managing authority, and divisions. The score reflects the readiness of these facilities, with a higher value indicating better preparedness.

DHs, MCWCs, and UHCs had a high readiness score (70, 68, and 76 respectively) and a substantial proportion offered adolescent health services. Whereas, UH&FWCs and NGO clinics had a moderate readiness score (60 and 63 respectively). CCs (46), USCs/RDs (43), and private hospitals (44) showed lower readiness but still provided adolescent health services to a substantial portion.

The readiness score varied across managing authorities, with some of them showing higher readiness score, like NGO clinics (63) and lower score private hospitals (44).

The readiness score varied slightly between divisions, with the Sylhet division having a higher readiness score (52) than the other divisions. Overall the readiness score of facilities offering AHS is 49.

Discussion

This is the first study that we are aware of presenting the availability and readiness of health facilities for delivering adolescent-friendly health services (AFHS) in Bangladesh, using data from the 2022 Bangladesh Health Facility Survey (BHFS). Overall, 84% of health facilities reported offering adolescent health services, and the total readiness score was 49, reflecting nationally representative estimates derived using survey weights. As community clinics constitute the largest proportion of health facilities in Bangladesh, they contributed the greatest weight to the national readiness estimate. Nevertheless, substantial gaps in readiness were observed across different facility types, managing authorities, and administrative divisions. These findings provide important evidence for strengthening adolescent health service readiness in Bangladesh.

While service availability was high across public and NGO facilities, reaching over 79% for DHs, UHCs, UH&FWCs, community clinics, and NGO clinics, only 30% of private hospitals provided adolescent health services. This pronounced gap likely reflects weaker regulatory enforcement of AFHS standards in the private sector. Unlike public facilities, which are mandated and monitored under the national AFHS accreditation guidelines (Ministry of Health & Family Welfare, 2019), private hospitals operate with greater autonomy and are not consistently held to the same programmatic requirements. This finding is consistent with broader evidence from LMICs, where private health facilities often lag behind public counterparts in the uptake of nationally standardized

service protocols, particularly for marginalized populations such as adolescents (Andriantsimietry et al., 2016; Gegbe, Kandeh and Baimba, 2019; Amenah et al., 2025a). Strengthening regulatory oversight and incentivizing private sector participation in AFHS delivery are therefore critical policy priorities.

Similarly, readiness scores reflected this disparity: district hospitals, MCWCs, and upazila health complexes achieved readiness scores above 70, while community clinics scored 45 and private hospitals 52. These variations underscore the uneven preparedness of facilities capacity to deliver the adolescent health care beyond mere availability, a pattern also observed in comparable SARA-based assessments conducted in Ghana, Madagascar, and Sierra Leone (Andriantsimietry et al., 2016; Gegbe, Kandeh and Baimba, 2019; Amenah et al., 2025a). This may be because some readiness items are not equally applicable across all levels of health facilities, as service mandates and commodity distribution arrangements differ according to the national accreditation guidelines (Ministry of Health & Family Welfare, 2019).

A particularly striking finding is the low availability of dedicated rooms or areas for adolescent health services, reported in only 15% of facilities nationally, and as low as 7% in private hospitals. MCWCs had the highest coverage (60%), yet even this fell short of universal provision. The lack of strategic focus and programmatic investments in AHS can clarify the low availability of AHS dedicated corners in health facilities. Besides the AHS corners, several other corners have been suggested by other programs to be maintained, like IMCI, ANC, PNC, KMC, SCANU, NCD, Breast Feeding, VIA, etc, in DHs and UHCs (Ministry of Health and Family Welfare, 2017). The competing priorities of different departments, which are combined to offer multiple services, are another reason for the lack of adolescent-friendly health service (AHS) corners in facilities with limited resources. Similar findings have been reported from other LMIC contexts, where resource constraints and space competition limit prioritization of adolescent-specific infrastructure (Joshi et al., 2017; Amenah et al., 2025b). Ensuring privacy in adolescent-friendly health corners is crucial for adolescents to feel comfortable seeking health services (Agostino and Toulany, 2023). However, the current situation in health facilities is concerning. Only 29% of District Hospitals (DHs) ensure privacy in these corners, and the situation is even worse in Community Clinics (CCs), with only 6% providing adequate privacy.

Privacy is a fundamental component of adolescent-friendly care and a well-documented determinant of healthcare-seeking behaviour among young people, particularly for sexual and reproductive health (SRH) concerns (Agostino and Toulany, 2023). High patient volumes and facility overcrowding are structural contributors to this problem, reducing opportunities for private consultations. However, limited awareness among facility managers regarding the centrality of privacy for adolescent care may also play a role (Agostino and Toulany, 2023). Adolescents particularly girls are known to avoid health facilities when they anticipate exposure or judgment, especially for conditions related to menstruation, sexual activity, or contraception (Ayalew, Mengistie and Semahegn, 2014; Ainul, Bajracharya, et al., 2017). In the Bangladesh context, where sociocultural norms around adolescent sexuality are especially restrictive and the perception of public health facilities as "family planning clinics" creates additional stigma (Ainul, Bajracharya, et al., 2017; Ainul, Ehsan, et al., 2017), a lack of privacy is likely to serve as a significant structural deterrent. Without privacy assurance, adolescents are unlikely to disclose sensitive health concerns or return for follow-up, undermining the overall effectiveness of AFHS (Agostino and Toulany, 2023). Addressing this gap requires both infrastructure investment and targeted capacity-building for facility managers on adolescent-responsive service delivery.

Fewer than half of the surveyed facilities had guidelines for adolescent health service provision available on the day of assessment. Less than half of district hospitals (43%), MCWCs (43%), and UH&FWCs (39%) possessed these guidelines, dropping sharply to only 11% in union sub-centres/rural dispensaries and a negligible 1.3% in private hospitals. The low availability of guidelines is symptomatic of broader weaknesses in dissemination mechanisms, supervisory systems, and quality assurance processes (World Health Organization, 2015; Ministry of Health & Family Welfare, 2019). Guidelines serve as a foundational reference for consistent, evidence-based service delivery; their absence at the point of service is associated with variations in care quality and the risk of inadequate or inappropriate service provision, particularly in resource-constrained settings (World Health Organization, 2015; Amenah et al., 2025a).

The failure to ensure guideline availability across facility levels reflects gaps in both supply chain management and institutional accountability. Although the national AFHS accreditation guideline (2019) was distributed to all health facilities, it was not available in most facilities on the day of the survey, suggesting gaps in its implementation and the need for sustained investment in staff training, supportive supervision, and routine monitoring. (World Health Organization, 2015; Ministry of Health & Family Welfare, 2019)The current findings suggest that dissemination efforts have been insufficient, particularly at peripheral and community-level facilities consistent with observations from similar health facility assessments in sub-Saharan Africa, where guideline availability remained a persistent weakness even in higher-level facilities (Andriantsimietry et al., 2016; Gegbe, Kandeh and Baimba, 2019). Quality assurance mechanisms therefore need substantial strengthening, including regular supportive supervision and accountability tools linked to the national accreditation framework (Ministry of Health & Family Welfare, 2019).

Trained staff availability was comparatively stronger across public facilities, with upazila health complexes (91%), district hospitals (90%), and MCWCs (82%) demonstrating high coverage. This likely reflects the structured training investments made under successive national health sector programmes, including the 4th Health, Population and Nutrition Sector Programme operational plans for adolescent health (Ministry of Health and Family Welfare, 2017). However, lower proportion of private hospitals had trained staff (45%), further compounding their poor service availability and readiness profile. Community clinics and union sub-centres also showed moderate gaps. Medicines such as iron and folic acid, metronidazole, and albendazole were broadly available across public facilities, while private hospitals consistently showed lower availability of essential adolescent medicines reinforcing systemic differences in public versus private sector preparedness, as documented in comparable SARA assessments elsewhere (Andriantsimietry et al., 2016; Amenah et al., 2025a).

This result emphasizes the necessity of increasing efforts to enhance service readiness in these facilities, especially focusing to Adolescent health services (AHS). Health workers should receive regular training on AHS to refresh their skills and learn about new technologies. Our results suggest that improving service delivery requires investing more resources in two key areas: (i) making these services available and (ii) assuring they are ready to be used.

Strengths and limitations

It is crucial to emphasize the study's strengths and limitations. BHFS-2022 used a nationally representative sample, giving chance to estimate results by facility type, managing authority, and division. The tool used for data collection was carefully validated and adapted to fit the national context, with input from experts. The study provides insight into the availability and readiness of services in the facilities, but it reflects only the situation on the visit day. Service availability was depended on what the facility staff responded. For readiness, data collectors manually varified the availability of essential items and assessed if they were functional. Another limitation is that the readiness score was calculated only in the facilities offering the adolescent health services. While there are no universally accepted adolescent-specific standards or validated composite index for measuring the availability and readiness of AHS, we used the WHO's SARA framework and Bangladesh's national AFHS accreditation guidelines to develop our criteria. We created a list of essential items and a scoring system, though these were not externally validated. However, they do reflect national health priorities. We also recognize that service gaps related to service availability and readiness may be attributed to broader health system issues, such as funding and governance. Unfortunately, we were unable to investigate these underlying factors with the data at hand; these should be investigated in subsequent studies.

Conclusion

This study provides the first nationally representative evaluation of the availability and readiness of health facilities to deliver adolescent health services in Bangladesh. Although most facilities reported providing adolescent health services, substantial gaps were identified in service readiness, particularly in the availability of dedicated corner, privacy, guidelines, and essential medicines. Readiness also varied considerably across facility types and administrative divisions, with lower levels observed in several public and private facilities.

The study offers a foundation for further investigation and initiatives to improve adolescent health services, despite certain limitations. These findings indicate the need to strengthen the specific readiness components identified as deficient and to prioritize facility types and geographic areas with lower availability and readiness. Targeted investments in dedicated corner, privacy, staff training, dissemination of national adolescent health guidelines, and ensuring the availability of essential equipment, diagnostics, and medicines may improve the ability of health facilities to provide quality adolescent health services. Future research should examine the factors contributing to these readiness gaps and evaluate interventions designed to strengthen adolescent health service delivery in Bangladesh. By responding to the challenges identified and seizing opportunities for improvement, we can make significant progress toward universal health coverage and ensure adolescents can have the opportunity to access essential healthcare services.

Declarations

Acknowledgement

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Ethics statement:

We used publicly available data for this analysis; no additional ethical approval was required to conduct this study.

Data availability

National Institute of Population Research and Training (NIPORT), had full access to the Bangladesh Health Facility Survey 2022 dataset. As the data custodians, NIPORT may provide access to the dataset upon reasonable request and in accordance with the applicable data access policies.

https://drive.google.com/file/d/1nh8ixlLdP8g2yYcWXLuAZfj_S6lJUpje/view?usp=sharing

https://drive.google.com/file/d/1-oXhlxn7oAEvMMjHCjt4MsJl1M2EKvT2/view?usp=drive_link

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Author contribution

Rifath Binta Modasser, Anisuddin Ahmed, and Abu Bakkar Siddique contributed to conceptualization. Rifath Binta Modasser developed the original draft of the manuscript with the guidance of Anisuddin Ahmed and Abu Bakkar Siddique. Abu Bakkar Siddique and Anindita Saha conducted data analysis. Rifath Binta Modasser, Anindita Saha, and Ashiquzzaman wrote different sections of the manuscript. Rifath Binta Modasser and Asiquzzaman worked in illustration of the manuscript and prepared figures. Anisuddin Ahmed, and Abu Bakkar Siddique contributed to supervision, review feedback, and oversight. Anisuddin Ahmed, and Abu Bakkar Siddique supervised the study and provided strategic oversight. Abu Bakkar Siddique, Mohammad Imrul Hakim Kaowsar, Modabbir Mostofa, and Mahbuba Mehjabin reviewed the first draft and provided inputs. Rifath Binta Modasser, with the support from Anindita Saha incorporated the feedback from all the authors. All authors read and approved the manuscript.

Disclosure of interests

The authors completed the ICMJE Disclosure of Interest Form (available upon request from the corresponding author) and disclose no relevant interests.

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Figures

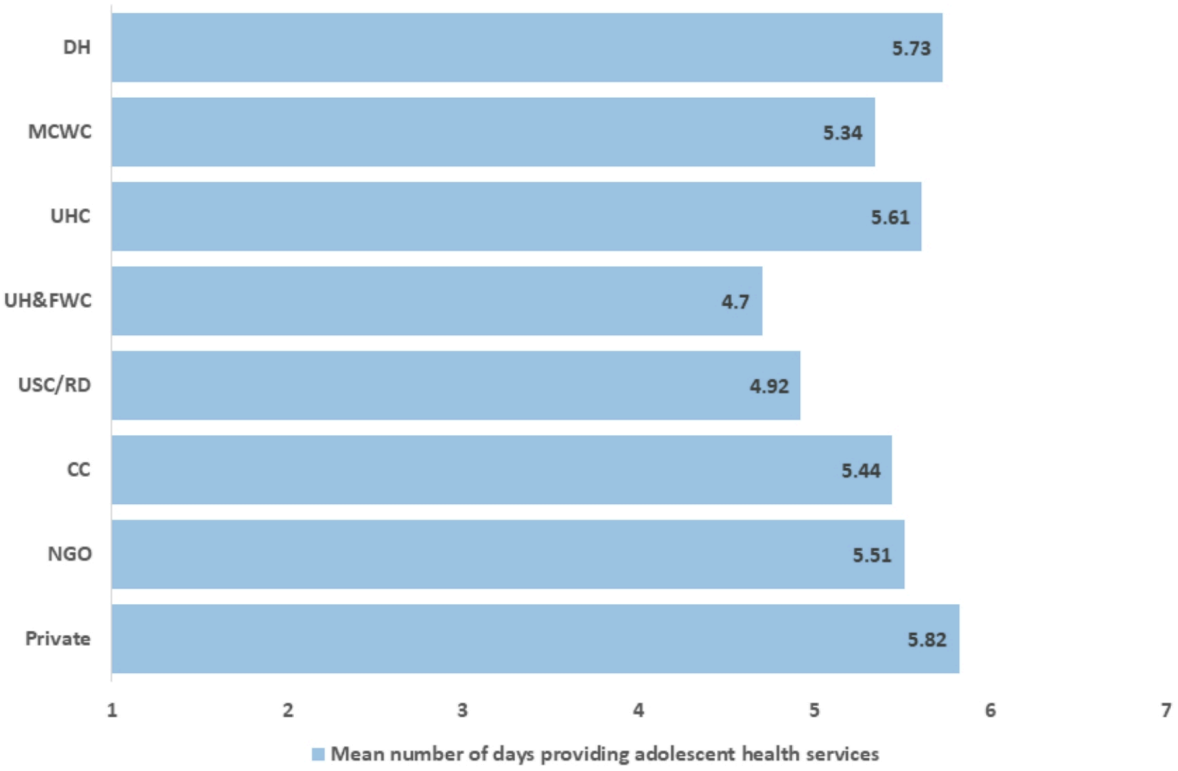


Figure 1

Mean number of days providing adolescent health services in a week, by types of facility offering adolescent health service

Domain	Readiness item	DH	MCWC	UHC	UH&FWC	USC/RD	CC	NGO	Private	Total
Basic amenities	Availability of sitting arrangements for adolescents	67	87	78	80	73	72	84	83	74
	Availability of safe drinking water for adolescents	67	80	66	70	60	48	89	79	55
	Availability of waste containers in the facility	88	67	78	60	48	53	79	69	56
	Adolescents' privacy is ensured in the consultation room	29	52	28	32	11	6	15	22	12
Staff and guidelines	Guidelines for service provision to adolescents	43	43	34	39	11	26	49	1	27
	Staff trained in the provision of adolescent health services	90	82	91	74	63	79	66	45	76
Medicines	Tab iron and Folic acid (Ferrous Fumarate 200mg+Folic acid 400mg)	76	92	82	93	85	92	84	53	90
	Cap. Doxycycline (100 mg)	80	94	83	91	71	5	66	51	28
	Tab. Metronidazole (400 mg)	98	96	100	97	94	97	91	74	96
	Tab. Ciprofloxacin (500 mg)	94	63	95	24	65	4	73	71	17
	Tab. Naproxen (250 mg)	61	45	55	13	14	1	38	54	8
	Tab. Pantoprazole (20 mg)	76	90	87	92	38	5	67	65	27
	Tab. Albendazole	49	97	86	98	59	95	71	60	91
Commodities and vaccines	Condoms	82	98	99	97	47	82	69	13	80
	Adolescent TT Vaccine	69	15	95	5	6	5	46	44	10

Availability of Readiness item (tertile groups)

>66%

33-66%

<33%

Figure 2

Availability of readiness items by facility type offering AHS in percentage

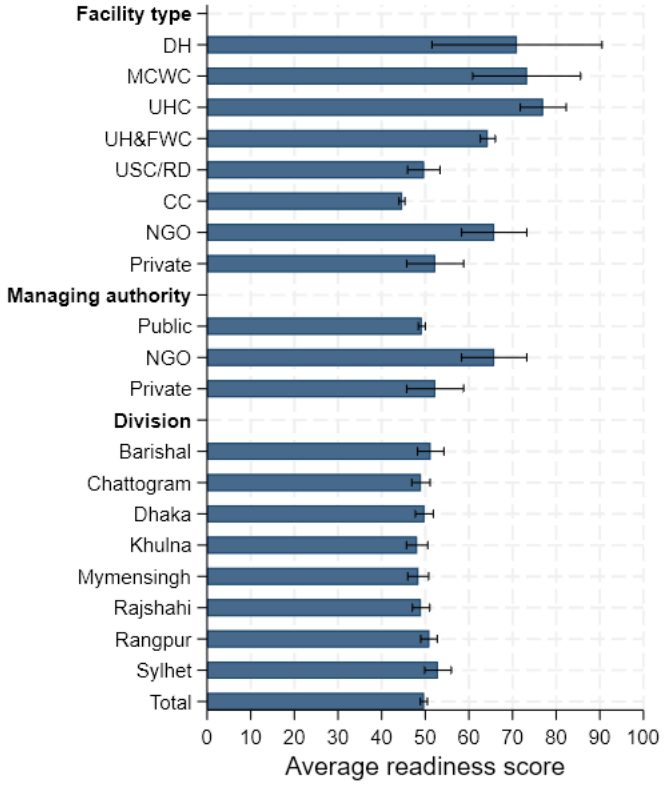


Figure 3

Average readiness score among facilities reporting AHS provision, by background characteristics

Supplementary Files

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- Supplementarytablesv1.docx