From Barriers to Engagement: A Qualitative Study of Adolescent and Reproductive Health Education in Rural Bangladeshi Schools

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ABSTRACT

Adolescent and reproductive health (ARH) education remains essential for equipping young people with accurate knowledge and life skills, yet in Bangladesh it continues to be constrained by cultural taboos, limited teacher preparedness, and curricular gaps, particularly in rural schools. The study followed the Health Belief Model (HBM) and Social Cognitive Theory (SCT) to examine teacher readiness, student comfort, and classroom strategies for addressing sensitive ARH topics. Data were collected through 18 in-depth interviews with the school teachers and nine focus group discussions with 54 students across three rural districts in Bangladesh. Thematic analysis was conducted, with coding guided by constructs from the Health Belief Model (HBM) and Social Cognitive Theory (SCT). The study found that teachers with structured training demonstrated higher self-efficacy, employed interactive methods, and encouraged greater student participation, while teachers without training often fell back on simply reading from the textbook, without providing additional context or explanation. Additionally, gender norms strongly shaped engagement, as female students preferred private discussions with female teachers in school, whereas male students were more vocal in class, sometimes reinforcing peer discomfort. Trust in teachers was a critical facilitator of dialogue, whereas stigma, incomplete curricular coverage, and inconsistent institutional support emerged as persistent barriers. The study highlights the need for scaling teacher training, strengthening curriculum design, and fostering community acceptance to create inclusive and stigma-free ARH learning environments in Bangladesh.

Keywords: adolescent reproductive health, teacher training, Bangladesh, Health Belief Model, Social Cognitive Theory, qualitative research, cultural taboos

INTRODUCTION

Adolescent and reproductive health (ARH) is a critical public health and human rights concern, influencing the physical, emotional, and social well-being of young people. Nowadays, accessing accurate information and supportive services related to ARH has become a major barrier due to the overwhelming presence of both information and misinformation, a challenge that is often more pronounced in low- and middle-income countries (LMICs), especially for adolescents. The UNFPA report indicates that adolescents constitute nearly one-third of the population in Bangladesh, representing a demographic with both tremendous potential and pressing health needs (UNFPA, 2014). But the country still experiences with high rates of child marriage, early pregnancy, and gender-based violence that highlight the urgent need for comprehensive, accessible, and culturally sensitive ARH education so that adolescent can grow properly with required knowledge. Over the past decade, Bangladesh's policy framework has made incremental progress toward integrating ARH into the national school curriculum. In 2014, the National Curriculum and Textbook Board (NCTB) incorporated ARH topics into secondary-level textbooks under the Physical Education and Health subject. However, this inclusion of ARH content marked a policy milestone; its translation into effective classroom practice remains inconsistent. Teachers frequently face personal discomfort, inadequate training, and community resistance, while students, particularly girls, must navigate restrictive social norms that discourage open discussion of reproductive health (Akhter et al., 2014; Aktar et al., 2014).

In the context of rural areas of Bangladesh, these challenges are more compounded, where resources for teacher training are limited, cultural conservatism is stronger, and community surveillance of schools is more intense (Haseen et al., 2004; Nahar et al., 1999). However, comprehensive ARH education among the adolescent

population can improve knowledge, shift attitudes, and foster healthier behaviors among the adolescents; its delivery in Bangladesh remains constrained by structural and cultural barriers. Teachers are often the critical link between policy and practice, yet their readiness and strategies for navigating sensitive topics have received limited empirical attention in the Bangladeshi context. This study applies the Health Belief Model (HBM) and Social Cognitive Theory (SCT) to explore how teachers and students in rural Bangladesh experience and engage with ARH education. The HBM offers a framework for understanding how perceived barriers, benefits, cues to action, and self-efficacy influence behavior, while SCT emphasizes the role of observational learning and reciprocal determinism in shaping classroom interactions. By following these theoretical perspectives, the study examines teacher preparedness, student comfort, and the strategies used to address social taboos around ARH. The aim is to generate nuanced insights that can inform policy, curriculum reform, and teacher training initiatives. Specifically, the research addresses three questions: (1) Are teachers equipped to confidently initiate discussions on ARH topics in the classroom? (2) Do students feel comfortable discussing ARH matters with teachers and peers? and (3) How do teachers address ARH taboos, and what obstacles do they and students face?

LITERATURE REVIEW

Context and Importance of ARH in Bangladesh

Adolescent and reproductive health (ARH) is widely recognized as a critical determinant of public health and human development, encompassing physical, mental, emotional, and social well-being related to sexuality and reproduction rather than merely the absence of disease (Guttmacher–Lancet Commission, 2018). In lower-middle-income countries (LMICs) such as Bangladesh, ARH concerns are particularly acute due to the intersection of structural inequalities, entrenched gender norms, and sociocultural taboos that restrict adolescents' access to accurate information and supportive health and education services. These challenges are especially pronounced for girls, whose health and educational trajectories are often shaped by early marriage, early childbearing, and limited opportunities for open communication about reproductive health. Recent national evidence indicates that ARH challenges in Bangladesh remain substantial and contemporary. According to the Bangladesh Demographic and Health Survey (BDHS) 2022–23, approximately half of women aged 20–24 years were married before the age of 18, and nearly one-quarter of adolescent girls aged 15–19 had begun childbearing or were pregnant at the time of the survey (National Institute of Population Research and Training [NIPORT] et al., 2023). These patterns are consistently highlighted in recent summaries by UNFPA (2023), which draw on BDHS data to document the persistence of adolescent pregnancy and early marriage in Bangladesh. Despite notable progress in girls' school enrollment over the past decade, Bangladesh continues to experience among the highest levels of child marriage in South Asia (UNICEF, 2023). Together, these indicators underscore the ongoing vulnerability of adolescents—particularly in rural areas—where early marriage and adolescent pregnancy frequently disrupt schooling and limit access to reliable sexual and reproductive health information.

These persistent challenges have long been addressed through initiatives led by both government and non-government organizations. Within the education sector, a key policy shift occurred in the early 2010s, when national education policy began to formally recognize the importance of school-based adolescent and reproductive health education. The National Curriculum and Textbook Board (NCTB) incorporated adolescence- and health-related themes into the secondary-level curriculum framework in 2012 (NCTB, 2012). Following this revision, content related to adolescent and reproductive health appeared more explicitly in Physical Education and Health textbooks for grades 6–10 during the mid-2010s (Akhter et al., 2014). This policy shift marked an important institutional recognition of the role schools can play in promoting adolescent well-being. However, empirical studies consistently demonstrate that the presence of ARH content in textbooks does not automatically translate into effective classroom instruction. Limited teacher preparation, discomfort with sensitive topics, community resistance, and inadequate pedagogical resources often constrain meaningful engagement with ARH material, particularly in rural school settings (Akhter et al., 2014; Mahfuz et al., 2021). Situating Bangladesh's experience within a broader international context, comprehensive sexuality education (CSE) frameworks emphasize the integration of rights-based content, gender equality, and participatory pedagogy alongside biological knowledge, highlighting the importance of teacher preparedness and supportive school environments for effective implementation (UNESCO, 2021). Comparative evidence from other South Asian contexts further highlights that curriculum inclusion alone is insufficient to ensure effective ARH education. Research from Sri Lanka indicates that teacher confidence, culturally sensitive pedagogy, and parental and institutional support are

central to successful implementation of school-based sexual and reproductive health education (Shahani et al., 2022; Sharma & Kanwal, 2018). Similarly, recent qualitative research from Nepal documents how sociocultural taboos and limited teacher training continue to shape students' experiences of sexuality education, even where formal policies exist (Acharya et al., 2024). Recent studies from Sri Lanka likewise emphasize the importance of strengthening youth-friendly educational environments and improving coordination between schools, families, and health systems to address persistent gaps in adolescents' sexual and reproductive health knowledge (Wijesundara et al., 2024). Taken together, this body of literature suggests that while Bangladesh has made important strides in formally integrating ARH topics into the national curriculum, substantial gaps remain between policy intent and classroom practice. These gaps are particularly evident in rural schools, where social conservatism, limited institutional support, and gendered norms restrict open discussion of reproductive health issues. Understanding how teachers and students navigate these constraints in everyday classroom interactions is therefore essential for informing more effective, culturally responsive ARH education strategies in Bangladesh.

Teacher Preparedness and Classroom Delivery

Teachers play a pivotal role in translating adolescent and reproductive health (ARH) curriculum content into meaningful classroom practice. Their knowledge, attitudes, pedagogical skills, and comfort levels strongly influence whether sensitive topics—such as puberty, menstruation, and contraception—are addressed openly, accurately, and interactively (Aktar et al., 2014). In contexts where sexuality and reproduction are socially sensitive, teachers often function as gatekeepers of information, determining both the depth and tone of classroom discussion. Research from Bangladesh consistently demonstrates that many teachers experience discomfort when teaching ARH topics, particularly in mixed-gender classrooms. Qualitative studies report that concerns about embarrassment, fear of student reactions, and anticipated parental or community backlash frequently lead teachers to avoid, rush through, or superficially cover key content areas (Akhter et al., 2014; Rob et al., 2006). Topics related to physical changes during puberty and menstruation are especially likely to be omitted or treated cautiously, reflecting broader sociocultural norms that discourage open discussion of sexuality. These patterns suggest that curriculum inclusion alone is insufficient; teacher readiness and confidence are critical determinants of effective delivery.

Comparative evidence from South Asia reinforces the centrality of teacher attitudes and social context. In a recent Sri Lankan study, Shahani et al. (2022) found that while a majority of secondary school teachers expressed support for sexual and reproductive health (SRH) education, a substantial proportion reported negative or ambivalent attitudes rooted in cultural norms and fear of parental disapproval. These findings parallel observations from Bangladesh, where even teachers who acknowledge the importance of ARH education may self-censor classroom instruction to avoid social criticism, particularly in close-knit rural communities (Akhter et al., 2014). Such dynamics highlight how teachers' instructional practices are shaped not only by individual beliefs but also by perceived social risks. Evidence increasingly points to teacher training as a key mechanism for improving classroom delivery of ARH content. Studies across South Asia demonstrate that structured training workshops can enhance teachers' factual knowledge, pedagogical competence, and self-efficacy, enabling them to address sensitive topics with greater confidence and clarity (Sadan & Sr. Jaicy, 2015; Sharma & Kanwal, 2018). In Bangladesh, evaluation research by Haseen et al. (2004) found that teachers who received targeted training as part of a school-based sexual and reproductive health intervention were more likely to teach ARH content comprehensively and to respond confidently to students' questions both inside and outside the classroom. More recent evidence similarly suggests that trained teachers are better equipped to use interactive teaching strategies—such as discussion, visual aids, and real-life examples—that foster student engagement and understanding (Mahfuz et al., 2021). However, the sustainability of training-related gains remains a persistent challenge. Without ongoing institutional support, refresher training, and clear administrative backing, improvements in teacher confidence and instructional quality often diminish over time (Haseen et al., 2004; Mahfuz et al., 2021). Teachers may revert to textbook-based instruction or avoid controversial topics altogether when they perceive limited protection from criticism by parents or community members. This issue is particularly salient in rural Bangladeshi schools, where teachers' professional roles are closely intertwined with their social identities within the community.

Overall, existing literature indicates that effective ARH classroom delivery depends on more than curriculum content or one-time training initiatives. Teacher preparedness is shaped by a combination of individual-level

factors (knowledge, attitudes, and self-efficacy), social influences (cultural norms and anticipated reactions), and institutional conditions (training opportunities, leadership support, and policy clarity). Despite growing recognition of these factors, relatively few studies have examined how teachers' preparedness and classroom practices are experienced in everyday school interactions alongside students' perspectives, particularly within rural Bangladeshi contexts. Addressing this gap is essential for understanding how ARH education policies are enacted in practice and how teacher readiness can be strengthened to support inclusive, effective learning environments.

Parental Attitudes and Community Norms

Parental attitudes and broader community norms play a decisive role in shaping the effectiveness of school-based ARH education, particularly in socially conservative contexts such as rural Bangladesh. While schools are often positioned as legitimate spaces for delivering ARH information, adolescents' learning experiences are deeply influenced by what are reinforced or constrained within families and local communities. Existing research suggests that parental support for ARH education is often conditional and marked by ambivalence, reflecting a complex interplay between perceived educational benefits and enduring cultural taboos.

Foundational research in Bangladesh indicates that many parents express general approval of including reproductive health education in school curricula, recognizing its potential to protect adolescents from misinformation and health risks (Rob et al., 2006). However, this apparent support coexists with significant limitations in parents' own sexual and reproductive health knowledge, which restricts their ability to engage in meaningful discussions with their children at home. This disconnect creates a paradoxical situation in which parents endorse school-based instruction while remaining unable or unwilling to reinforce or extend these lessons within the family context. More recent studies from South Asia suggest that this pattern persists over time, with parental endorsement often framed in abstract terms but constrained in practice by discomfort and uncertainty around sexuality-related communication (Sharma & Kanwal, 2018; Le Mat et al., 2019).

Community norms further shape how both parents and teachers engage with ARH education. Research conducted by icddr,b highlights that stigma surrounding discussions of sexuality and reproduction in Bangladesh remains deeply entrenched, limiting open communication between adults and adolescents (Nahar et al., 1999; Haseen et al., 2004). Although these studies are foundational, recent qualitative evidence continues to document similar dynamics, particularly in rural settings where religious values, concerns about social reputation, and gendered expectations exert strong regulatory pressure on family behavior (Mahfuz et al., 2021). In such contexts, silence around reproductive health is often interpreted as a marker of moral propriety, especially for girls, reinforcing norms that discourage questioning and dialogue. As a result of constrained family communication, adolescents frequently turn to alternative information sources including peers, cousins, and digital media to learn about reproductive health. While these sources may offer accessibility, they are often inconsistent, incomplete, or inaccurate, increasing the risk of misinformation and anxiety (Rahman & Abusaleh, 2024). Recent studies emphasize that adolescents' reliance on informal networks is not a preference but a response to the absence of trusted, adult-guided spaces for discussion (Nurunnahar et al., 2025). This evidence underscores the importance of schools as critical sites for delivering accurate, age-appropriate ARH information, particularly where family-based communication is limited.

Importantly, community resistance to ARH education is not always overt. Rather than direct opposition, teachers often encounter subtle but persistent forms of pressure from parents and community members to avoid open discussions of sensitive topics. Studies from Bangladesh document how such pressures encourage self-censorship among teachers, who may restrict classroom discussions to "safe" textbook content in order to avoid controversy (Akhter et al., 2014; Mahfuz et al., 2021). These dynamics are especially pronounced in rural areas, where close-knit social networks mean that teachers' professional actions are closely monitored and easily politicized. In this way, community norms operate as an informal regulatory force, shaping what is taught, how it is taught, and what remains unsaid in ARH classrooms. Taken together, the literature suggests that parental attitudes and community norms constitute a critical structural context within which school-based ARH education is delivered. While many parents conceptually support ARH instruction, limited knowledge, cultural taboos, and fear of social judgment constrain meaningful engagement at the household level. At the same time, subtle community pressures influence teachers' instructional choices, often narrowing the scope of classroom discussion. Understanding how these social dynamics interact with institutional and pedagogical factors is

therefore essential for explaining variations in ARH education delivery and for designing interventions that extend beyond curriculum reform to include community sensitization and parental engagement.

Curriculum Gaps and Policy Barriers

The inclusion of ARH content in NCTB materials represents an important step toward institutionalizing school-based ARH education in Bangladesh. However, existing evidence indicates that curriculum content and implementation supports remain uneven, limiting the depth and consistency of classroom delivery. Curriculum and textbook analyses suggest that while some age-appropriate material related to puberty, hygiene, and bodily changes is included, coverage is often selective and may not fully address the broader range of SRHR competencies needed for adolescent well-being (Akhter et al., 2014). In global SRHR frameworks, comprehensive coverage extends beyond biological topics to include domains such as gender-based violence, bodily autonomy, and rights-based considerations (Guttmacher–Lancet Commission, 2018; Williams et al., 2022). At the policy level, Bangladesh has developed national strategies addressing adolescent health and ARH, including the National ARH Strategy (2006) and the National Strategy for Adolescent Health (2017–2030). Nevertheless, available evidence suggests that education-sector implementation guidance and monitoring for school-based sexuality and ARH education remain limited, contributing to variation across schools and regions. Policy profiles indicate that while Bangladesh has a formal policy basis for adolescent and reproductive health education, comparatively little publicly available information exists regarding systematic implementation and oversight within the education sector. Program and implementation research further indicates that curriculum reform alone is unlikely to produce sustained improvements without parallel investments in teacher training, instructional resources, and community sensitization. Evaluation research in Bangladesh highlights that adolescents value access to accurate reproductive health information and appropriate learning materials, and that teacher training and supportive resources can strengthen classroom delivery; however, these gains are difficult to sustain in the absence of ongoing institutional support (Haseen et al., 2004). More recent Bangladesh-based evidence similarly emphasizes that teacher professional development and practical teaching supports—such as participatory strategies and context-sensitive materials—are essential for improving the quality and consistency of ARH instruction, particularly in rural settings (Mahfuz et al., 2021). So, the literature suggests that persistent curriculum gaps and implementation barriers interact to produce uneven classroom practice, underscoring the need for an integrated approach linking curriculum content, teacher training, administrative support, and community engagement.

Theoretical Framework: HBM and SCT

To examine how ARH education is experienced and enacted in rural Bangladeshi schools, this study is guided by the Health Belief Model (HBM) and Social Cognitive Theory (SCT). Together, these frameworks provide a complementary lens for understanding how individual perceptions, social interactions, and institutional contexts shape the delivery and reception of ARH education in culturally sensitive environments. The Health Belief Model posits that health-related behaviors are influenced by individuals' perceptions of susceptibility to a health issue, perceived severity of its consequences, perceived benefits of taking action, perceived barriers to action, cues to action, and self-efficacy (Rosenstock, 1974; Glanz et al., 2015). Within the context of ARH education, the HBM is particularly useful for understanding teachers' willingness to address sensitive topics in the classroom. Teachers' decisions to engage with or avoid ARH content may reflect their perceptions of potential social risk (e.g., community criticism), perceived benefits for students' well-being, and confidence in their own ability to manage discussions appropriately. Recent empirical work in Bangladesh demonstrates the contemporary relevance of the HBM in socially sensitive health contexts. For example, Hawlader et al. (2024) applied the HBM to examine parental acceptance of the human papillomavirus (HPV) vaccine and found that perceived benefits and cues to action were strong predictors of acceptance, underscoring how individual beliefs and social prompts interact to shape health-related decision-making.

Social Cognitive Theory complements the HBM by emphasizing the social and environmental processes through which learning and behavior occur. SCT highlights mechanisms such as observational learning, social reinforcement, self-efficacy, and reciprocal determinism, whereby individuals' behaviors both shape and are shaped by their social environment (Bandura, 2004). In classroom-based ARH education, SCT draws attention to how teachers function as role models whose comfort, language, and pedagogical choices signal what forms of participation are acceptable. When teachers demonstrate openness and confidence in discussing ARH topics,

they may normalize dialogue and encourage student engagement. Conversely, hesitation or avoidance can reinforce silence, particularly in mixed-gender classrooms and conservative settings. Using HBM and SCT in combination allows this study to move beyond purely individual or purely structural explanations of ARH education practices. The HBM provides a framework for analyzing individual-level perceptions among teachers—such as perceived barriers, benefits, and self-efficacy—while SCT captures the interpersonal and contextual dynamics that unfold within classrooms, including peer interactions, teacher–student relationships, and normative expectations. This integrated approach is particularly well suited to ARH education in rural Bangladesh, where personal beliefs, professional roles, and community norms are deeply intertwined.

Although other theoretical frameworks, such as the Theory of Planned Behavior, have been widely applied in health communication research, the integration of HBM and SCT offers a more comprehensive analytic lens for the present study. Together, these frameworks enable examination of both why teachers may choose to engage with or avoid ARH topics (HBM) and how classroom interactions and social modeling shape students' comfort and participation (SCT). Accordingly, the constructs derived from HBM and SCT informed the development of the research questions and guided the thematic coding of interview and focus group data, ensuring a clear link between theory, analysis, and the lived realities of ARH education in rural school settings. In this study, Health Belief Model constructs such as perceived barriers (e.g., fear of community backlash), perceived benefits (e.g., protecting students' well-being), and self-efficacy (teachers' confidence in managing sensitive discussions) are used to interpret teachers' instructional decisions, while Social Cognitive Theory constructs—including observational learning, social reinforcement, and reciprocal determinism—guide analysis of how teacher modeling, peer interactions, and classroom norms shape students' comfort and engagement with ARH topics.

Research Gap

Existing scholarship has made important contributions to understanding adolescent and reproductive health (ARH) education in Bangladesh by examining curriculum content (Akhter et al., 2014), teacher attitudes and preparedness (Akhter et al., 2014; Aktar et al., 2014), parental perspectives (Rob et al., 2006), and broader sociocultural constraints (Nahar et al., 1999; Haseen et al., 2004). More recent studies have extended this work by highlighting the persistence of implementation challenges, teacher discomfort, and community pressure in school-based ARH education, particularly in rural settings (Mahfuz et al., 2021; Rahman & Abusaleh, 2024; Nurunnahar et al., 2025). However, despite this growing body of literature, several critical gaps remain.

First, much of the existing research examines teachers, parents, curriculum, or policy structures in isolation, rather than analyzing how these elements interact within everyday classroom practices. While studies document teacher discomfort, parental ambivalence, or curriculum omissions, fewer investigations explore how teacher readiness, student comfort, and community norms intersect simultaneously to shape what is actually taught and discussed in classrooms—particularly during sensitive ARH lessons. As a result, the lived, interactional dynamics of ARH education remain insufficiently understood. Second, research on ARH education in Bangladesh has been disproportionately concentrated in urban settings or NGO-driven pilot interventions, where resources, training opportunities, and institutional support may differ substantially from those available in government-run rural schools (Haseen et al., 2004; Mahfuz et al., 2021). Given that rural adolescents face heightened vulnerabilities related to early marriage, limited access to health services, and stronger sociocultural taboos, the relative absence of in-depth, qualitative research focused on rural school contexts represents a significant empirical gap. Third, although theoretical frameworks such as the Health Belief Model (HBM) and Social Cognitive Theory (SCT) are widely used in public health research in Bangladesh, their application to qualitative, classroom-based analyses of ARH education remains limited**.** Prior studies frequently adopt descriptive approaches that document barriers and challenges without explicitly linking these experiences to theoretically grounded explanations of individual perceptions, social modeling, and environmental constraints (Rosenstock, 1974; Bandura, 2004). Consequently, the mechanisms through which beliefs, norms, and interactions shape ARH education practices are often under-theorized.

Addressing these gaps, the present study examines how teacher preparedness, student comfort, and parental and community norms intersect to shape the delivery and reception of ARH education in rural Bangladeshi secondary schools. By integrating the Health Belief Model and Social Cognitive Theory into a qualitative analysis of teachers' and students' lived experiences, this study moves beyond isolated or descriptive accounts to provide a theoretically informed understanding of classroom communication processes. In doing so, it contributes both

empirically—by centering rural school contexts—and theoretically—by demonstrating the value of combining HBM and SCT to explain ARH education practices in culturally sensitive educational environments.

METHODS

As the aim of this study is to capture the lived experiences of teachers and students who are engaged with ARH education in rural Bangladesh, the study is focused on a qualitative method and interpretive design. Considering the research questions and purpose of this study, qualitative methods are well-suited for exploring complex, context-dependent phenomena (Strauss & Corbin, 1998; Billah, 2025). The study was guided by the HBM and SCT theories, which informed both the development of data collection instruments and the coding framework for analysis to find the answers to the respective research questions of this research. In this study, a purposive sampling strategy was used to select participants who could provide diverse perspectives on ARH education in the context of rural areas. The sample comprised 18 teachers (10 female, eight male) and 54 students (29 female, 25 male) from grades 6–10 across six secondary schools in three rural districts in Bangladesh. Schools were selected to represent variation in type (public and private) and gender composition (coeducational and single-gender). The primary language of instruction in the selected schools was Bangla (the native language). Teacher participants taught *the Physical Education and Health* textbook and had at least one year of experience delivering the NCTB curriculum. Student participants were chosen to reflect a mix of academic performance levels and socioeconomic backgrounds. The recruitment process was carried out in collaboration with the school headmaster (head of a school) and the relevant school authorities. Teachers were invited directly, while students were recruited through classroom announcements, followed by consent from the participants and permission from relevant authorities and stakeholders. Participation in this study was voluntary, and no incentives were provided.

Data Collection

Data collection comprised a total of 18 in-depth interviews (IDIs) with teachers and nine focus group discussions (FGDs) with students. Four FGDs were gender-segregated to promote openness. For the interview, each IDI was around 45-60 minutes. And each FGD session lasted 60–90 minutes, was conducted in Bangla, and took place in a school classroom. All sessions were audio-recorded with participant consent. Field notes captured nonverbal cues, contextual factors, and researcher reflections. Interview guides covered topics such as teacher preparedness, perceived barriers, strategies for addressing sensitive topics, and experiences with the ARH curriculum. FGD guides explored student comfort levels, perceptions of classroom discussions, and suggestions for improvement.

Data Analysis

In the data analysis stage of this research study, which focused on adolescent and reproductive health, all audio recordings were first transcribed verbatim in Bangla to preserve the authenticity of participants' expressions once data collection of both interviews and focus group discussions was completed. These transcripts were then carefully translated into English to facilitate thematic interpretation while maintaining the original context and meaning. The data were analyzed using the six-phase thematic analysis framework outlined by Braun and Clarke (2006). The process began with repeated reading of the transcripts to achieve deep familiarity with the content. In this study, initial coding was conducted using a combination of deductive codes, drawn from the Health Belief Model (HBM) and Social Cognitive Theory (SCT), such as "perceived barriers," "cues to action," and "observational learning", and inductive codes that emerged directly from the participants' narratives. After initial coding, the next step involved developing preliminary themes by grouping related codes, after which each theme was reviewed for internal coherence and relevance to the research questions. Themes were then clearly defined and named to capture their essence, and representative quotes were selected to illustrate each finding in the final reporting.

To enhance the credibility of the findings, this study employed several strategies commonly recommended in qualitative research (Lincoln & Guba, 1985). Data triangulation was achieved by drawing on multiple sources, interviews with teachers and focus group discussions with students, which allowed the researcher to compare and cross-check perspectives across participant groups. Member checking was conducted with a subset of participants, who reviewed and confirmed that the interpretations aligned with their intended meanings; in a few cases, their clarifications helped refine the wording of particular themes. The author also remained reflexive

throughout the process by critically examining how their own background, assumptions, and academic training might influence data collection and interpretation. To mitigate this, an audit trail of coding decisions and thematic revisions was maintained, ensuring transparency in the analytical process. Together, these strategies strengthened the trustworthiness of the study by enhancing credibility, reflexivity, and confidence in the interpretations presented. Ethical guidelines on privacy, confidentiality, and voluntary participation were carefully followed, and pseudonyms are used throughout this paper to protect participant anonymity.

FINDINGS

The analysis of the interviews with 18 teachers (N=18) and focus group discussions with 54 students (N=54) reveals nuanced insights into the state of adolescent and reproductive health (ARH) education in rural Bangladeshi secondary schools. The results are organized by the study's three guiding research questions (RQs). Across all themes, both teachers and students shared candid accounts of their experiences, which are presented here alongside interpretive analysis.

RQ1: Are teachers equipped with the skills to confidently initiate discussions on ARH topics in the classroom?

Theme 1: Gradual but Uneven Growth in Teacher Comfort

The study found that for many teachers, addressing ARH topics represented a personal and professional challenge, particularly at the outset of their careers. Several participants openly admitted that they avoided certain lessons entirely in the past, especially those dealing with puberty, menstruation, and contraception, because of their own discomfort and the anticipated reactions from students or parents. Over time, however, exposure to the material and, in some cases, targeted training appeared to enhance their ability to engage with the subject matter.

"When I first started, I avoided the puberty chapter. It was too awkward in front of boys and girls together. But now, after some workshops, I can talk about it more openly — still, there are topics I handle very carefully." (Amena, Female teacher, rural coeducational school)

This trajectory reflects that the Health Belief Model's (HBM) *self-efficacy* constructs: teachers who believed they could successfully deliver the material were more likely to do so. Yet, the progress was inconsistent. Teachers without training or prior exposure to ARH content often remained hesitant, sticking closely to the textbook without elaboration or interactive discussion. This approach reduced their risk of personal embarrassment but also diminished students' opportunities for deeper understanding.

Theme 2: Influence of Training and Institutional Support

Training and institutional support play a very critical role in terms of properly delivering ARH content in the classroom. The most confident and dynamic classroom approaches were observed among teachers who had participated in structured training programs, particularly those run by non-governmental organizations (NGOs) or supported by the Ministry of Education. Such training equipped them not only with factual knowledge but also with pedagogical strategies for sensitive topics.

"Before training, I just read from the book. Afterward, I started using diagrams and examples from daily life. Students respond much better now." (Malik, teacher, single-gender school)

In these cases, *observational learning* from trainers (SCT) and practical demonstrations of classroom strategies seemed to empower teachers to experiment with interactive methods. Conversely, those without training often defaulted to rote recitation of textbook passages, which limited classroom engagement.

Theme 3: Disparities between Urban and Rural Teacher Preparedness

The study found that teachers themselves often compared their experiences with those of their urban colleagues, though this study focused on rural schools. Many believed that urban teachers had greater access to professional development opportunities, more frequent training sessions, and a wider variety of teaching resources. Rural teachers, by contrast, felt disadvantaged sometimes, which is not because of a lack of interest but because training workshops and institutional support were concentrated in city centers in the country. In the interview, one rural participant stated that *"urban teachers get more chances for workshops, while we are left behind,"* capturing a frustration that was echoed across interviews. The disparity is not only about access to workshops but also about

the institutional ecosystem that exists in Bangladesh, which creates inequality among the rural vs. urban schools' facilities.

RQ2: Do students feel comfortable discussing ARH matters with both teachers and peers?

Theme 4: Gendered Comfort Zones

Gender norms strongly shaped how and when students were willing to engage with ARH topics in the classroom and outside of the classroom in Bangladesh. Female students overwhelmingly preferred to approach female teachers, often in private settings, to discuss issues such as menstruation or hygiene. The presence of male peers in the classroom was perceived as a deterrent to open discussion. One of the female students stated that:

"In class, I stay quiet because the boys will laugh. After class, I talk to Madam — she understands." (Female student, Grade 9)

By contrast, male students were more likely to raise questions in class, though sometimes in a humorous or teasing manner that inadvertently reinforced the silence of female students.

"When we ask Sir Questions from the book, but sometimes we joke in the class, maybe that's why the girls don't join in for open discussion about the adolescent and reproductive health content in the class." (Male student, Grade 10)

These dynamics reflect SCT's principle of *social reinforcement*, whereby peer reactions shape individual behavior. In the context of the HBM, the anticipated embarrassment acts as a *perceived barrier* to participation, particularly for female students.

Theme 5: Trust and Accessibility of Teachers

The findings underscore that teacher approachability is a key determinant of student engagement. Students reported being more willing to ask questions when teachers maintained a non-judgmental attitude, respected privacy, and took their queries seriously. One of the female students articulated that: "She never laughs at our questions, even if they are silly. That's why I can talk to her." (Female student, Grade 8)

Such teacher behaviors function as *cues to action* (HBM), prompting students to seek accurate information. Conversely, teachers who appeared uncomfortable or dismissive created an environment where students avoided bringing up sensitive topics, instead turning to peers or unreliable sources.

Theme 6: Peer Networks as Alternate Information Sources

When students felt that teachers were not approachable or safe to confide in because of hesitation or feeling uncomfortable in a situation, many turned to their peers or the internet to learn about reproductive health. These peer networks inside and outside of school offered a sense of accessibility and familiarity, but the information shared was often incomplete or misleading, which is a risk for them.

RQ3: How do teachers address ARH taboos, and what obstacles do they and students face?

Theme 7: Strategies for Breaking Taboos

In this study, several teachers described how they tried to make ARH lessons feel less intimidating for students during the classroom discussion. They often used simple but creative approaches, such as holding separate sessions for boys and girls, drawing on examples from daily life, or introducing role-play and group work to spark discussion. These methods helped shift the atmosphere of the classroom. By framing sensitive issues in familiar and non-threatening ways, teachers created openings for students who might otherwise have stayed silent.

Such efforts can be understood through the lens of both SCT and HBM. Teachers' modeling of open discussion gave students permission to join in, while the reduced sense of risk lowered perceived barriers. When students saw their peers asking questions or participating without embarrassment, they became more willing to do the

same. In this way, small adjustments in teaching strategies had a ripple effect, gradually normalizing conversations around topics that were once considered off-limits.

Some teachers took deliberate steps to normalize ARH discussions, employing creative and contextually sensitive teaching strategies. These included gender-segregated sessions, the use of analogies drawn from nature or everyday life, and participatory activities such as group work or role-play. By framing ARH topics in familiar and non-threatening terms, teachers reduced discomfort and encouraged participation. These approaches reflect both *observational learning* (SCT) and the HBM's focus on reducing *perceived barriers*. When students saw their peers engaging without negative consequences, they became more willing to participate in the discussion related to ARH content in the classroom.

Theme 8: Structural and Cultural Obstacles

Despite the creativity and commitment of individual teachers, they continued to face significant barriers rooted in both the education system and the wider culture. The national curriculum itself contributes to these challenges because of the existing socio-cultural environment. Islam (2018) reports that while sexuality education programs in Bangladesh nominally mention violence, discrimination, gender equality, and relationships, key topics such as *consent, coercion*, and *intimate partner violence* are often not thoroughly integrated into curricula. This lack of comprehensive content means that even motivated teachers do not have the material they need to guide students through critical issues of adolescent health. The absence of structured guidance leaves educators vulnerable to criticism if they raise sensitive topics, which further discourages them from going beyond the textbook, leading to a critical situation. Cultural resistance at the community level deepens these limitations, even if some teachers are willing to provide comprehensive lessons to their students. Parents often expressed concerns or hesitancy that ARH lessons might lead to behavior they consider inappropriate, or believe that discussing sexual topics could encourage premarital sexual activity, a perception that places teachers in a difficult position. These suspicions created pressure to avoid frank discussions, particularly in rural schools where communities are tightly knit and teachers' actions are closely observed, and they live together in the same society and know each other. As a result, many educators felt constrained between their professional responsibility to inform students and the social expectation to remain silent on issues considered taboo.

Theme 9: The Role of School Leadership

The role of school leadership emerged as a crucial factor in shaping how openly ARH content in the classroom could be addressed. Teachers consistently explained that when head teachers or administrators were supportive, they felt empowered to teach the curriculum more fully, even on sensitive issues, without hesitation or the way it should be. In such schools, leaders not only encouraged comprehensive instruction but also reassured staff that they would be defended if parents or community members raised objections. This visible backing created a protective environment that allowed teachers to experiment with interactive methods and answer student questions more freely. By contrast, in schools where leadership was unsupportive, silent, or risk-averse, teachers described a climate of caution in which they deliberately avoided controversial content to prevent criticism. Several admitted that they "taught only what was safe," prioritizing community acceptance over educational depth. This variation highlights the institutional layer of perceived barriers identified in the Health Belief Model (HBM): teachers' decisions were not only a matter of personal comfort but also deeply influenced by the signals they received from school leadership, which could either reduce or reinforce the risks of addressing taboo topics.

DISCUSSION

The findings of this study reveal that while teacher readiness to deliver adolescent and reproductive health (ARH) content in rural Bangladesh is gradually improving day by day, significant gaps remain in both pedagogical confidence and systemic support because of the environment in which they exist. These patterns underscore the dynamic interplay between individual-level factors, such as personal comfort and training, and broader social forces, including community norms and institutional culture. In many respects, the experiences of teachers and students documented here reflect what the Health Belief Model (HBM) and Social Cognitive Theory (SCT) would predict in a socially sensitive domain: perceived barriers and low self-efficacy limit engagement, while targeted cues to action and positive modeling can catalyze more open and effective discourse. One of the most significant findings is the uneven distribution of teacher confidence. Several teachers described a trajectory from avoidance to cautious engagement gradually, often triggered by participation in targeted training sessions, which

is very optimistic. This growth in confidence aligns directly with the HBM concept of self-efficacy, which posits that individuals are more likely to take action when they feel capable of performing the behavior successfully (Rosenstock, 1974), which happens in the context of teaching ARH content in rural schools. However, this transformation was far from universal; teachers without training tended to remain within the safety of the textbook because of the socio-cultural environment, delivering content in a way that minimized their own discomfort but also limited student engagement. This finding supports Shahani et al.'s (2022) observation from Sri Lanka that positive attitudes toward reproductive health instruction, while necessary, are insufficient in the absence of practical skills and strategies, considering the ARH context.

The findings of this study also indicate that female students, in particular, negotiated a complex landscape of gendered expectations and peer surveillance. There is a reluctance to speak in mixed-gender classrooms and a preference for private conversations with female teachers, which demonstrates how SCT's concept of social reinforcement operates in restrictive ways: the anticipated negative reaction from peers serves as a deterrent to open participation, and this culture is deeply rooted in society. Male students, by contrast, often engaged more visibly in classroom discussion regarding ARH content, sometimes using humor in ways that reinforced gendered silences. Within the HBM framework, these gendered comfort zones can be understood as differential "perceived barriers," shaped not only by internal beliefs but also by external social cues.

The role of teacher approachability emerged as a critical mediator of student engagement. Where teachers demonstrated non-judgmental listening, maintained confidentiality, and validated questions, students felt empowered to participate. In HBM terms, such behaviors act as powerful cues to action, triggering information-seeking behaviors among students. SCT adds another dimension: when teachers model openness and empathy, they create an environment in which these traits are reciprocated by students. This dynamic is consistent with findings from Akhter et al. (2014), who showed in a study of BRAC-supported rural schools that teachers' attitudes and behaviors significantly influenced students' willingness to engage with sensitive reproductive health topics. This study's contributions lie in its holistic integration of teacher and student perspectives within a shared rural context, something rarely done in the Bangladeshi literature. By situating these perspectives within the combined theoretical lenses of HBM and SCT, it advances understanding of the mechanisms through which cultural norms, institutional structures, and individual agency interact to shape ARH education. Unlike prior studies that examined either curriculum (Akhter et al., 2014) or parental attitudes (Rob et al., 2006) in isolation, this research shows how these elements converge in the lived experience of classroom interactions. It also extends the work of icddr,b by linking the documented structural barriers in rural areas to specific classroom-level consequences.

Limitations

Despite having some significant findings, this study has some limitations as well. Considering the sampling of this research, the study's geographic focus on three rural districts limits the generalizability of the findings; urban schools may present different challenges and opportunities. The qualitative design, while rich in detail, cannot quantify the prevalence of the observed patterns across the wider school system because of this limitation. Furthermore, the presence of the researcher during focus groups and interviews may have introduced social desirability bias, particularly in teacher accounts of their own practices. Future research could address these limitations through mixed-methods designs that combine qualitative depth with quantitative breadth, as well as comparative studies across rural and urban settings.

CONCLUSION

This study set out to examine how adolescent and reproductive health (ARH) education is experienced and implemented in rural Bangladeshi secondary schools, focusing on the perspectives of both teachers and students. Grounded in the Health Belief Model (HBM) and Social Cognitive Theory (SCT), the research sought to understand teacher preparedness, student comfort levels, and the strategies used to navigate cultural taboos surrounding sensitive topics. The qualitative data collected through interviews and focus groups revealed a nuanced picture of gradual progress in ARH education, tempered by persistent structural, cultural, and pedagogical challenges. One of the strongest findings is that teacher confidence in delivering ARH content is not uniform but evolves over time, often as a direct result of targeted training. School teachers who participated in structured workshops either through NGOs or government initiatives demonstrated higher levels of self-efficacy, a willingness to adopt interactive teaching methods, and openness to student engagement. In contrast, those without such training tended to rely heavily on textbook recitation, minimizing opportunities for deeper

discussion. These patterns underscore the importance of professional development as a critical cue to action under the HBM framework and as a vehicle for modeling desired behaviors in line with SCT principles.

The study also highlights how gendered dynamics profoundly influence classroom participation. Additionally, trust in teachers emerged as a decisive factor in student willingness to seek information about adolescent and reproductive health, with approachable and empathetic educators creating safe spaces that encouraged questions and reduced perceived barriers to learning. These dynamics confirm that the success of ARH education depends as much on relational trust as on curricular content. Overall, the findings of this study carry important implications for policy and practice. Expanding and institutionalizing participatory teacher training is essential, ensuring that educators are not only informed but also confident in delivering sensitive material.

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