

Knowledge of Reproductive Biology, Conception and Family Planning Methods Among Unmarried Adolescents in Rural Bangladesh: Prevalence and Impact

Based on A cohort study to estimate certain SRH-related disease burdens, and knowledge, attitude, and practices regarding selected SRHR issues of unmarried adolescents in a rural area of Bangladesh

Sumaiya Nusrat¹, Md. Shohel Rana¹, Md. Tazvir Amin¹, Sifat Parveen Sheikh¹, Quamrun Nahar¹, M Moinuddin Haider¹, Md Mahabubur Rahman¹

¹icddr,b

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Background

Sexual and Reproductive Health (SRH) knowledge among adolescents in Bangladesh remains inadequate, particularly in rural areas^[1,2]. As previous studies on adolescent SRH in Bangladesh have mainly focused on pubertal changes, menstrual hygiene, and awareness of sexually transmitted infections^[3,4], key domains such as reproductive biology, conception, and family planning are often overlooked, despite their importance for informed reproductive decision-making and the prevention of unintended pregnancy^[5]. Thus, adolescents' reproductive knowledge remained incomplete without cross-gender reproductive knowledge, as both boys and girls need to understand their own and the opposite sex's reproductive biology and reproductive processes^[6].

Objectives

- Assess unmarried adolescents' knowledge of reproductive biology, conception, and modern Family Planning methods, including gender differences.
- Identify factors associated with correct knowledge about reproductive biology, conception, and Family Planning methods among girls and boys
- Examine the association of premarital Family Planning knowledge with unintended pregnancy among ever-married adolescent girls.

Methods

Study setting

Baliakandi Health and Demographic Surveillance System, Rajbari district, Bangladesh

Design and data source

AdSEARCH Adolescent Cohort:
7 rounds over **24** months, conducted at four-month intervals during 2023–2025.

Analytical sample

1,077 unmarried adolescents aged 16 years

Round 1:
540 boys and **537** girls

Round 2:
1,010 adolescents

Key findings

Boys were 2 times more likely to know that semen contains sperm: (66% among boys vs. 37% among girls).

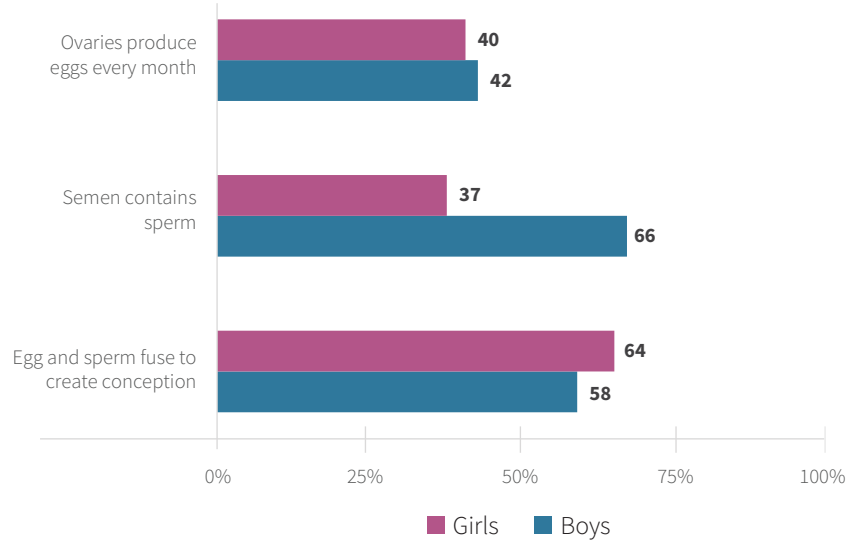


Figure 1a: Knowledge of reproductive biology

- Knowledge of conception showed clear gender-specific patterns. Adolescents understood their own reproductive processes better than their counterparts.

- Misconceptions about conception remained common, and knowledge of pregnancy risk during first sex was particularly low.

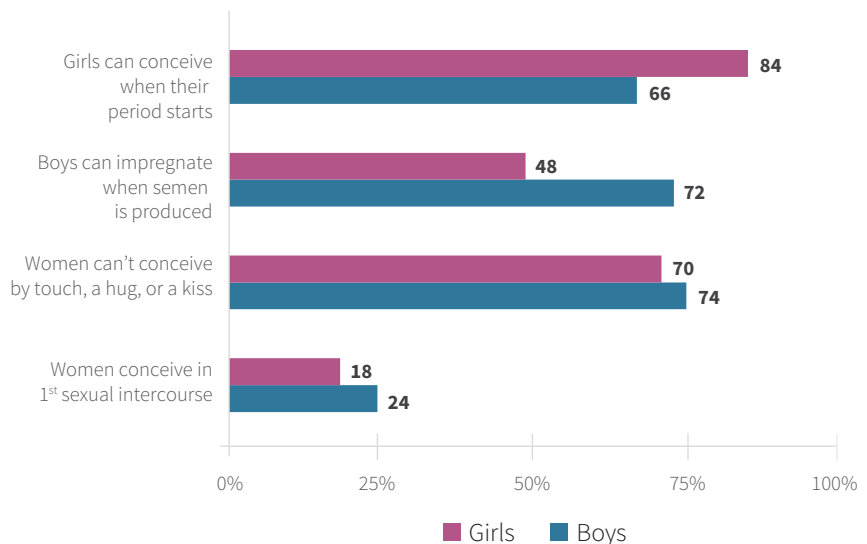


Figure 1b: Knowledge of conception

Knowledge of family planning methods showed a marked gender gap, with boys reporting substantially higher awareness than girls, particularly for condoms (84% vs. 45%) and emergency contraceptive pills (38% vs. 4%)

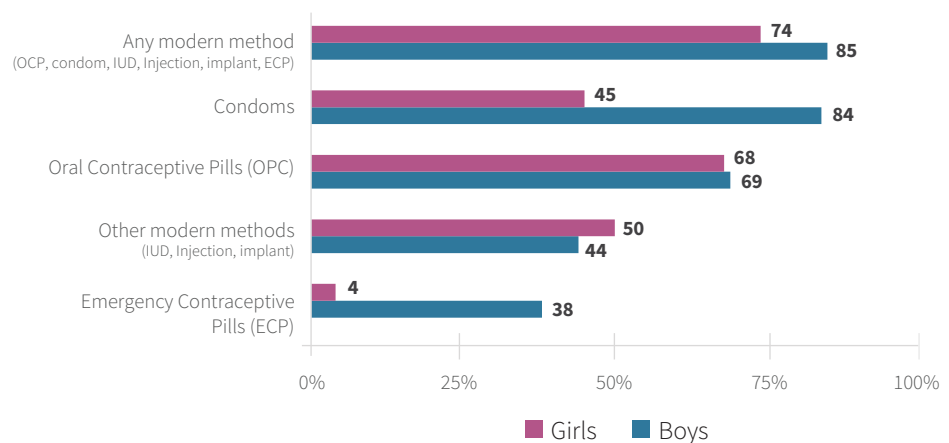


Figure 1c: Knowledge of family planning methods

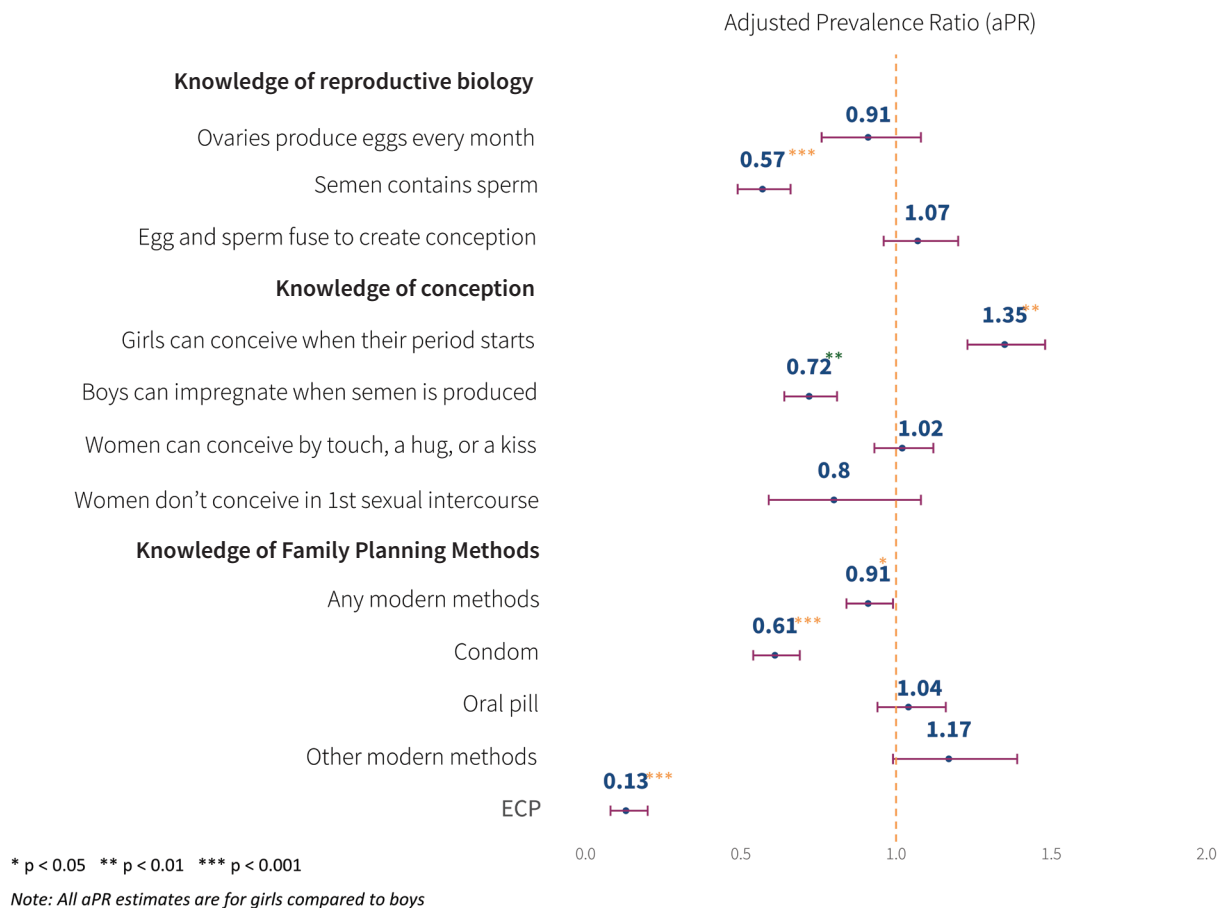


Figure 2: Gender differences in correct SRH knowledge after adjustment

After adjusting for socio-demographic factors, clear gender differences remained in several SRH knowledge indicators:

- Girls had lower knowledge of male reproductive biology. They were 43% less likely to know that semen contains sperm and 28% less likely to know that boys can impregnate when semen is produced.
- In contrast, girls were 35% more likely to know that girls can conceive once menstruation starts.
- For Family Planning knowledge, girls were significantly less likely than boys to have heard about any modern method, particularly condoms and emergency contraceptive pills (ECPs)

- During the 24-month follow-up, 200 of 537 girls married, and 72 became pregnant.
- Unintended pregnancy was lower among girls who had family planning knowledge before marriage than among those without such knowledge (5.3% vs. 10.2%)

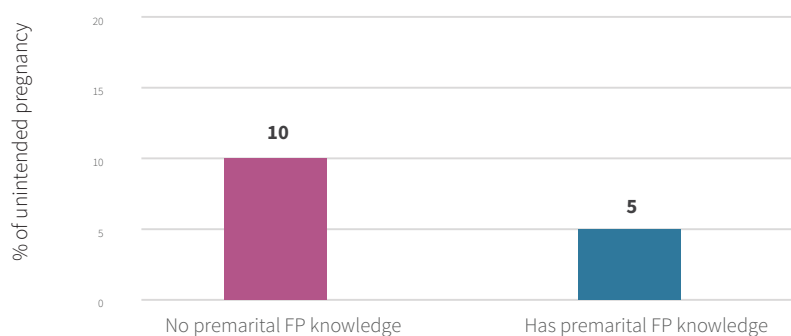


Figure 3: Link between premarital FP knowledge and unintended pregnancy

Implications

- SRH education should provide both boys and girls with a comprehensive understanding of male and female reproductive biology to strengthen cross-gender knowledge, reduce misconceptions, and support informed reproductive decision-making.
- Method-specific Family Planning education should be strengthened, particularly for girls, as awareness of condoms and emergency contraceptive pills remains limited.
- Access to reliable SRH information sources should be improved to address persistent knowledge gaps and support informed reproductive choices.

How the study adds value

- This is among the first studies in Bangladesh to assess adolescents' knowledge of reproductive biology, conception, and Family Planning, as earlier research focused mainly on puberty, menstrual hygiene, and sexually transmitted infections.
- Bangladesh has one of the highest child marriage rates in the world, exposing many adolescents to early marriage and pregnancy. Until this burden is reduced, reproductive health knowledge is essential to protect them from the health risks of early and unintended pregnancy. This study contributes to this knowledge base.
- The knowledge questions are based on content already in the national curriculum (NCTB textbooks, classes 6 to 8). Adolescents are expected to know this by age 16, but many do not, indicating that curricular inclusion alone does not ensure learning.
- By linking premarital family planning knowledge to lower unintended pregnancy, the study provides direct evidence that strengthening adolescent SRH education can improve reproductive outcomes and inform national adolescent health and family planning policy.

Implications

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Advancing Sexual and Reproductive Health and Rights (AdSEARCH) by icddr,b
68, Shaheed Tajuddin Ahmed Sarani, Mohakhali, Dhaka 1212

Email: adsearch_official@icddr.org | **Website:** adsearch.icddr.org

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