

REVIEW ARTICLE

Reproductive health of female students in Islamic boarding school culture: A literature review

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Abstract

Reproductive health in Islamic boarding schools is still a special concern, because female students in Islamic boarding schools are teenagers, namely 12-19 years old. This article aims to discuss adolescent reproductive health in relation to the culture in Islamic boarding schools. One model of education in Indonesia is Islamic boarding schools which prioritises religious education and are supported by dormitories as a place to live, where they interact with their peers 24 hours a day. Islamic boarding schools prioritize a simple way of life, independence, discipline and cooperation. ,using the literature review method, This methodology involves a comprehensive database search in Scopus, PubMed, ScienceDirect, and ResearchGate. The main search terms used were 'adolescent reproductive health' and 'Islamic boarding school culture'. Eight articles were obtained for analysis of topic relevance, objectives, methods used, sample size, and results in each article. We evaluated the relevance of the selected articles to the topic.. However, health problems in Islamic boarding schools still require attention, such as access to health services, healthy behavior and environmental health which can affect reproductive health. Students gain knowledge about reproductive health from classical books. Reproductive health education in Islamic boarding schools tends to be normative with culture obtained from classical books. (*Afr J Reprod Health* 2024; 28 [10s]: 259-272).

Keywords: Adolescent reproductive health, Islamic boarding school, classical Islamic books

Résumé

La santé reproductive dans les internats islamiques demeure une préoccupation particulière, car les étudiantes dans ces établissements sont des adolescentes, âgées de 12 à 19 ans. Cet article vise à discuter de la santé reproductive des adolescentes en lien avec la culture des internats islamiques. Un modèle d'éducation en Indonésie est celui des internats islamiques, qui mettent l'accent sur l'éducation religieuse et sont soutenus par des dortoirs comme lieu de vie, où les étudiantes interagissent avec leurs pairs 24 heures sur 24. Les internats islamiques privilégient un mode de vie simple, l'indépendance, la discipline et la coopération. En utilisant la méthode de revue de la littérature, cette méthodologie implique une recherche approfondie dans des bases de données telles que Scopus, PubMed, ScienceDirect, et ResearchGate. Les principaux termes de recherche utilisés étaient "rôle de la communauté" et "prévention de la grossesse chez les adolescentes". Huit articles ont été obtenus pour l'analyse de la pertinence du sujet, des objectifs, des méthodes utilisées, de la taille de l'échantillon et des résultats de chaque article. Nous avons évalué la pertinence des articles sélectionnés par rapport au sujet. Cependant, les problèmes de santé dans les internats islamiques nécessitent encore de l'attention, tels que l'accès aux services de santé, les comportements sains et la santé environnementale, qui peuvent affecter la santé reproductive. Les étudiantes acquièrent des connaissances sur la santé reproductive à partir de livres classiques. L'éducation à la santé reproductive dans les internats islamiques tend à être normative, avec une culture tirée des livres classiques. (*Afr J Reprod Health* 2024; 28 [10s]: 259-272).

Mots-clés: Santé reproductive des adolescents, internat islamique, livres islamiques classiques

Introduction

Adolescence (ages 11-20) is a special and crucial period as it marks the maturation of human reproductive organs. Also known as puberty, it is a unique transitional phase characterized by various physical, emotional, and psychological changes.

Adolescents are highly sensitive to new values and influences during this period.¹ They play a vital role in a nation's development, serving as assets and potential contributors to a nation's future progress. The adolescent phase involves physical, intellectual, emotional, and social development.¹ Adolescents need education and reproductive health services

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aimed at preventing and protecting them from risky sexual behaviours that can impact reproductive health. This preparation is crucial for adolescents to lead healthy and responsible reproductive lives. A trial study conducted in 87 countries revealed that reproductive health education can reduce adolescents' risks of unwanted pregnancies and sexually transmitted infections, including HIV. The programs were curriculum-based, with 70% implemented in schools and the rest in communities or clinics.²

Adolescents reproductive health significantly influences their overall well-being, including their ability to succeed in education and prepare for healthy pregnancies.³ Reproductive health is a primary concern in adolescent education, as good reproductive health contributes to the development of a quality and responsible next generation.⁴

Given that most adolescents are in school, educational institutions, including health education on reproduction, sexuality, and health behaviour, play a crucial role. In Indonesia, one such educational model is the Islamic boarding school or "pondok pesantren," emphasizing Islamic teachings and providing boarding facilities.⁵ Adolescents living in these schools, called santri, interact 24 hours a day with their peers in the boarding school community.⁶

Boarding School has unique characteristics not found in other educational institutions, making it distinct. Adolescent girls in pondok pesantren acquire knowledge about reproductive health from classical texts that cover various aspects of reproductive health.⁷ This study aims to explore various dimensions of adolescent involvement, the environment, and all aspects within Islamic boarding schools in preventing reproductive health issues. It also seeks to ensure that female students maintain healthy reproductive health.

Methods

The method used in writing this scientific is an article literature. This literature review employs a thorough and comprehensive research strategy, including the exploration of articles in various research journal databases, internet sources, and a detailed article review process. The first step in this literature review was to establish inclusion and

exclusion criteria using the keywords 'adolescent reproductive health' and 'Islamic boarding school culture,' specifically targeting quantitative, qualitative, and mixed-method studies. A comprehensive search was conducted in Scopus, PubMed, ScienceDirect, and ResearchGate, yielding a total of 859 articles: 559 from Scopus, 25 from PubMed, 263 from ScienceDirect, and 12 from ResearchGate. These articles were then imported into Mendeley for organization and management. The initial screening involved evaluating titles, abstracts, and ensuring that the articles were published between 2015 and 2022. This process narrowed the results down to 13 articles. A subsequent detailed review, focusing on relevance to the research objectives, further refined this list to 8 key articles selected for in-depth analysis. This method resulted in the selection of seven articles for detailed examination. The researchers carefully assessed the suitability of these articles in terms of topic, research objectives, research methods, sample size, and the results they presented.

Results

In Table 1, from the eight articles related to the culture of Islamic boarding schools in adolescent reproductive health, several objectives were identified: 1. Factors related to reproductive health issues among adolescents in Islamic boarding schools, including knowledge, peer influence, and exposure to information, 2. Reproductive health behaviors in Islamic boarding schools, 3. Adolescent reproductive health models in Islamic boarding schools. The analysis of the methods used can be described as follows: of the eight articles, three employed qualitative research, four used quantitative methods, and only one article utilized mixed methods research. The sample sizes in the eight articles varied, including 98 samples, 68 samples, 150 samples, 100 samples, and 50 samples. There were also studies that used 6 informants, 8 informants, and 25 informants.

Discussion

Reproductive health is a crucial component for both men and women. The World Health Organization (WHO) defines reproductive health broadly as the overall well-being, encompassing physical, mental, and social aspects related to the reproductive system,

Table 1: Literature review article

No	Title Researcher, , Year	Research purposes	Method	Sample	Result
1	Strategies To Improve The Adolescent's Reproductive Health Knowledge In The Traditional Islamic Boarding School In Sidoarjo, Indonesia (Amalia, Wittiarika and Jayanti, 2021)	To assess the effectiveness of trained peer educators compared to experts in delivering reproductive health knowledge.	Research using a quantitative method with a cross-sectional study approach	98 female students aged 12 to 15 years at a traditional Islamic boarding school in Sidoarjo, East Java.	The information provided by trained peer educators is as effective as that provided by experts and significantly enhances adolescents' reproductive health knowledge. Therefore, designing a trained peer approach to improve adolescent reproductive health is effective and should be structured. ⁸
2	Analysis of the Implementation of Reproductive Health Prevention in the Islamic Boarding School (Study at Al Ma'ruf Islamic Boarding School – Kediri) (Lutfiasari et al., 2022)	This study aims to explore the implementation of preventive measures for reproductive health issues in Islamic boarding schools.	Qualitative research with a phenomenological approach	6 female student informants and 2 triangulation informants.	There are three implementations of reproductive health problem prevention among adolescents: providing healthy food, offering health education, and ensuring a clean and healthy environment. ⁹
3	Exposure to Reproductive Health Information and Behavior in Islamic Boarding School, Sinjai District. (Luqman, Sitti, and Dian, 2023)	This study aims to investigate the influence of information exposure on the reproductive health behavior of adolescent girls at Darul Ihsan Islamic Boarding School, Sinjai Timur District.	Research using a quantitative method with a cross-sectional study approach	Darul Ihsan Islamic Boarding School, Sinjai Timur District, Sinjai Regency, with 68 participants.	This study shows that personal hygiene knowledge does not influence information exposure. This may be due to the lack of indirectly obtained information. It is also because most of the information sources for respondents come from their peers. However, the exposure to information provided by peers heavily depends on experience. ¹⁰
4	Reproductive Health Literacy of Adolescents at Public Islamic School: A Cross-Sectional Study in Indonesia (Wardiati et al., 2023)	This study aims to determine the level of adolescent reproductive health literacy and the associated factors.	Research using a quantitative method with a cross-sectional study approach	The number of respondents was 150 female students.	Based on the research findings, it is concluded that the level of adolescent reproductive health literacy is still lacking, and the factors related to this issue include family roles, age, and peer support. ¹¹
5	Reproductive Health Behaviors Among Female Students at As-Sakienah Islamic Boarding School in Tugu Village, Sliyeg District, Indramayu Regency (Riyanto, Sugiarto, and Nurfitriyani, 2017)	The objective of this research is to understand reproductive health behavior among adolescent female students in Islamic boarding schools.	Qualitative research design with a phenomenological approach	There were 6 participants selected using purposive sampling technique.	Maintaining reproductive health among adolescents at As-Sakienah Islamic Boarding School is expressed as an experience of daily habits practiced by female students related to the cleanliness of reproductive organs and some issues they face regarding reproductive health, along with how they address them. Some Sub-themes. ¹²
6	Adolescent Girls' Reproductive Health at	This study aims to analyze the factors	Research using a quantitative	The number of	Reproductive health issues in Islamic boarding schools are

	Islamic Boarding Schools in Sidoarjo, East Java (Nisa Mairo, Rahayuningsih, and Purwara, 2015)	associated with adolescent girls' reproductive health in Islamic boarding schools.	method with a cross-sectional study approach	respondents was 100 female students, aged 14–18 years, residing in the Islamic boarding school.	still prevalent. High knowledge positively impacts the reproductive health of female students in Islamic boarding schools. A positive attitude towards reproduction also positively affects the reproductive health of female students in Islamic boarding schools. Parent communication, teacher communication, and information sources are not related to the reproductive health of female students in Islamic boarding schools. Peer communication is the most related factor to the reproductive health of female students in Islamic boarding schools. ⁷
7	Reproductive Health Learning Model Through Adollescent Peer (Awatiful Azza and Susilo, 2016)	To develop a healthy reproductive education model through peer groups in traditional Islamic boarding schools and analyze the application of peer group education on female students' knowledge of healthy reproduction.	Research using a mixed-methods approach	The research sample consisted of 50 female students at Gunung Sepikul Islamic Boarding School.	There is an influence of healthy reproductive education through peer groups on the understanding of female students. Islamic boarding schools need to provide a curriculum on reproductive health to enhance female students' understanding of healthy behaviors related to their reproductive organs. ¹³
8	<i>Community empowerment in leading pesantren: A research of Nyai's leadership</i> (Arifin, 2021)	This paper aims to describe the potential, awareness of healthy lifestyles, and the network of Pesantren mothers (Ibu Nyai) that can be utilized for community health education. To describe the patterns, typologies, and categories of the culture within the Pesantren community	Research method using a hermeneutic-ethnographic qualitative approach	There were 25 informants in this study.	The results of this study show that, first, Ibu Nyai (female religious leaders in Islamic boarding schools) have great potential and play an important role in decision-making for female students. Second, Ibu Nyai are concerned with a healthy and clean lifestyle, supported by strong religious rationalization. Ibu Nyai act as role models for female students in fostering health awareness. Third, Ibu Nyai have a very close social network, including both physical and spiritual connections with their followers. It is expected that the health department will establish better cooperation with Islamic boarding schools to provide community health education. ¹⁴



Figure 1: Adolescent reproductive health problem

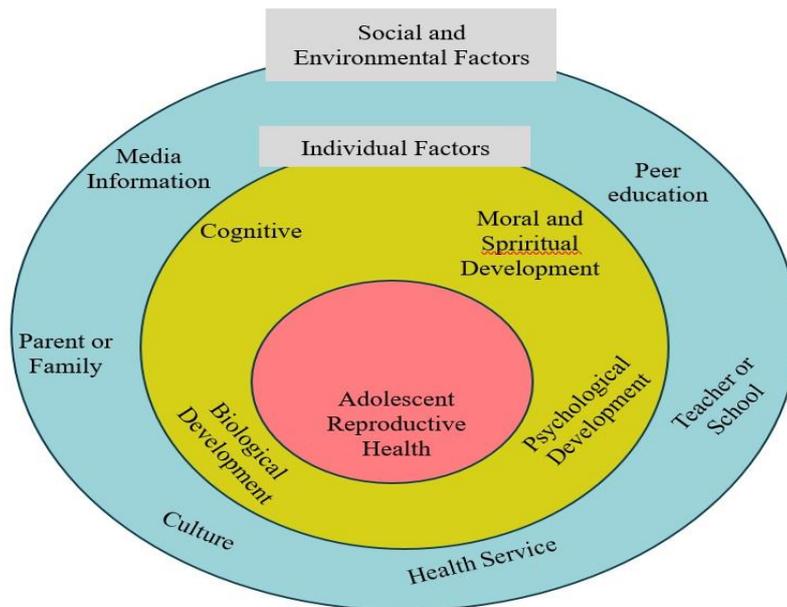


Figure 2: Factors influencing adolescent reproductive health

functions, and processes. This includes the right and freedom to reproduce safely, effectively, appropriately, affordably, and without violating the law.^{15,16} According to the International Conference on Population and Development (ICPD), reproductive health is the complete physical, mental, and social well-being concerning the reproductive

system, functions, and processes, not merely the absence of disease or disability.¹⁷ Adolescent reproductive health significantly affects their overall well-being, including their ability to succeed in education and prepare for healthy pregnancies³

Reproductive health services for adolescents aim to¹ prevent and protect them from

Table 2: The yellow book or classic books and its discussion materials

No	Book Name	Material Discussed
1	Uqud al-Lujain Fi Bayan Huquq al-Zaujain	Message about rights and obligations husband and wife (pattern relation between man with female) in draft wedding.
2	Qurrat al- 'Uyun	Manners are related husband and wife, like times that are allowed and not allowed, variety positions that are allowed and not yes, too stages in relate sex.
3	Fath al-Qorib	Discuss about purify from hadats and marriage
4	Fath al- Mu'in Fath al-Wahab Nihayat al-Zain	Discuss about marriage, how? relation husband and wife, their respective rights and obligations, as well as other related matters with problem That
5	Al- Mahidh treatise	Containing about chapter menstruation, Istihadhah, pregnancy, childbirth, and things that are forbidden for Woman menstruation and postpartum , methods purify and pray for them .
6	Ihya ' Ulum al-Din	In the marriage chapter it discusses about etiquette relate husband and wife, rights and obligations husband to wife
7	Riyadl al- Salihin and Bulugh al-Marom	Both of them is a hadith book that discusses including regarding procedures _ _ purify, etiquette defecation, bathing janabat problems _ menstruation, marriage problems, divorce problems, reconciliation, living, and parenting child
8	Ash-Shilah Fi Bayan- Marriage	Discuss problem around marriage
9	Adab al- Mar'ah	Discuss around problem position, attitude, as well rights and obligations Woman to man
10	Jalalain's interpretation	Discuss relevant verses of the Qur'an disconnected with problem marriage, rights and obligations husband and wife

risky sexual behaviours and other risky behaviours that can impact reproductive health. Risky behaviours include premarital sex leading to unwanted pregnancies, promiscuity, unsafe abortions, and behaviours that risk sexually transmitted infections (STIs), including HIV. Other behaviours affecting adolescent reproductive health include substance abuse, especially narcotics, psychotropics, and addictive substances (NAPZA), as well as poor nutritional behavior leading to adolescent nutritional problems, particularly anemia.² prepare adolescents for a healthy and responsible reproductive life, including physical, psychological, and social preparation for marriage and parenthood at a mature age.¹

Reproductive health has long-term consequences. Decisions related to reproductive health have long-term consequences in the development and social life of adolescents.¹² Adolescent reproductive health behaviour is influenced by various issues related to cultural, economic, and demographic dimensions. These factors determine the extent to which the transitioning younger generation alters their reproductive health choices.¹⁸

Adolescents face numerous reproductive health-related challenges. Some of these challenges include:

Free sex and abortion

Free sex refers to sexual behaviour with changing partners. Medically, adolescents engaging in free sex are more likely to be exposed to STIs and HIV. Free sex can also stimulate the growth of cervical cancer cells in adolescent girls, as the adolescent phase involves active changes in the cells of the cervix. Free sex is often accompanied by the use of illicit drugs among adolescents, exacerbating their reproductive health issues.¹⁹ Globally, 66.55% of adolescents aged 15-24 engage in sexual relationships, with rates of 2.2% in Malaysia, 45% in Riau Province, and 44.23% in Pekanbaru.²⁰

In some Asian countries, premarital sex is on the rise. For example, in Korea, 11% of female high school students reported engaging in premarital sexual relationships. Adolescent girls often face negative consequences of premarital sexual relationships, such as young single women becoming pregnant without protection. These

women may engage in sexual relationships with men who promise to marry them in exchange for the sexual relationship. However, after learning about their partner's pregnancy, the man disappears or moves on to another woman. As a result, these abandoned young women face the consequences of unwanted pregnancies, unsafe abortions, and the stigma of being single mothers.¹⁸

Early marriage and pregnancy

Early marriage in adolescence is still prevalent, especially in rural areas. In some regions, parental dominance strongly influences the marriage of adolescents, particularly adolescent girls. Reasons for early marriage include premarital pregnancy or economic reasons. Adolescents who marry early, both physically and psychologically, are not mature enough to handle pregnancy, making them vulnerable to maternal and infant deaths.¹⁹ The marital status of adolescents is significantly related to early adolescent pregnancy.²¹ According to a survey by the Department of Health & Human Services (2018) in the United States, 41% of high school students engage in sexual relationships, resulting in almost 230,000 babies born to teenage girls aged 15-19.

Unwanted pregnancy

Premarital sex among adolescents is often based on myths about sexuality issues, such as the myth that having sex with a partner is proof of love or that having sex only once will not lead to pregnancy, among others. The result of premarital sex is the occurrence of unwanted pregnancies, where couples do not desire the pregnancy process.¹⁹ Unwanted pregnancies are likely to lead to unsafe abortions, with accompanying severe consequences.²² Adolescent pregnancy is a global problem in both developed and developing countries. Although global teenage birth rates have decreased, there are regional variations in the rate of change. Teenage pregnancy has decreased globally, from 64.5 per 1000 women in 2000 to 42.5 per 1000 women in 2021.⁸ Adolescent girls often drop out of school due to pregnancy or childbirth. Premature births are more common in pregnant adolescent mothers.²³

STIs and HIV/AIDS

STIs are diseases transmitted through sexual intercourse. The risk of STIs increases with multiple sexual partners. The impact of STIs is significant, ranging from reproductive organ disorders, miscarriages, infertility, cervical cancer, to infant disabilities and death.⁴ HIV/AIDS is a disease that requires careful attention due to the phenomenon of the tip of the iceberg, where reported cases are few, but the actual number of affected individuals is much higher.²⁴ The incidence of HIV/AIDS in Indonesia is significantly increasing, with data from the Directorate General of Disease Prevention and Control reporting 64,043 new cases of HIV positive in 2018.¹

Substance abuse

Substance abuse, known as NAPZA (narkotika, psikotropika, dan zat adiktif), is a term used today for what was previously known as narcotics. Substance abuse involves using narcotics or psychotropics without the knowledge and supervision of a doctor. NAPZA abuse can lead to emotional disturbances, decreased academic performance, frequent fights with friends or family, including parents, criminal behaviour, changes in sleep patterns, physical deterioration, weight loss and weakness, decreased appetite, neglected appearance, and neglecting routine responsibilities.⁴ According to the National Narcotics Agency in 2017, there were 3,376,115 people in Indonesia aged 10-59, with 3.21% of teenagers using drugs per 100,000 population.²⁵

Adolescent nutrition and anaemia

Nutrition is a factor that determines the timing of puberty. The high energy and nutrient needs of adolescents are due to changes and growth in various dimensions of the body. About 15-20% of adult height is reached during adolescence, and approximately 25-50% of ideal adult weight is achieved during adolescence. Deficiencies in energy and nutrients during this period can have negative effects that can persist into adulthood, and the most common nutritional problem in adolescents is anaemia. Anaemia is defined as a condition where

the number of red blood cells or the concentration of oxygen carriers in the blood (haemoglobin) does not meet the body's physiological needs.²⁶

Based on Riskesdas 2018 data, the prevalence of anaemia in adolescents is 32%, meaning that 3-4 out of 10 adolescents suffer from anaemia. The incidence of anaemia in Indonesia is still relatively high, influenced by suboptimal nutritional intake habits and a lack of physical activity. About 65% of adolescents skip breakfast, 97% consume insufficient vegetables and fruits, engage in insufficient physical activity, and consume excess sugar, salt, and fat (GGL).²⁷ Adolescent girls who suffer from anaemia when they become pregnant are at risk of giving birth to Low Birth Weight (LBW) and stunted babies. Healthy and non-anaemic adolescent girls will grow and develop, ready to reproduce and become healthy mothers.²⁸

Factors Influencing Adolescent Reproductive Health include factors from the adolescents themselves and factors from the surrounding environment. If depicted, these factors can be represented as follows:

Knowledge is a significant factor influencing adolescent sexual behaviour. Adolescents with a good understanding of reproductive health tend to have better perceived behaviour control²⁹ Accurate knowledge about the reproductive process and its surrounding factors, coupled with responsible attitudes and behaviours towards reproductive health maintenance, is crucial.³⁰ Lack of knowledge makes them vulnerable to unsafe reproductive health behaviours and inappropriate choices, some of which may adversely affect their reproductive health and future.³¹ Attitude also serves as a shield for adolescents in maintaining their reproductive health. Positive attitudes contribute to positive behaviours.³²

Social development is a learned process through social interaction. Moral development, according to Bandura, occurs through interaction with an environment that provides moral content. Interacting with morally behaving adults helps shape one's moral values. Adolescents develop morally by imitating and observing moral behaviour in their surroundings.³⁹

Biological development occurs during adolescence, involving specific changes such as height increase, development of secondary sexual characteristics,

reproductive organ development, changes in body composition, and circulatory and respiratory system changes related to body strength and stamina.⁴⁰

Adolescence is a period of self-identity exploration and development. Self-perception, developed during childhood, strengthens in adolescence with age and life experiences.⁴⁰ According to Harighurst, each developmental period has tasks that need to be successfully completed, influenced by social expectations. Adolescent developmental tasks include accepting their physical condition, understanding and embracing adult sexual roles, fostering good relationships with opposite-sex group members, achieving emotional independence, economic independence, intellectual development, understanding and integrating adult and parental values, developing social responsibility, preparing for marriage, and understanding family life responsibilities.³⁹

- 1) Able to accept his physical condition.
- 2) Able to accept and understand adult sexual roles.
- 3) Able to build good relationships with members of groups of different types.
- 4) Achieve emotional independence.
- 5) Achieve economic independence.
- 6) Develop concepts and intellectual skills that are very necessary to carry out their role as members of society.
- 7) Understand and integrate the values of adults and parents.
- 8) Develop the socially responsible behaviour necessary to enter the adult world.
- 9) Prepare yourself to enter marriage
- 10) Understand and prepare for the various responsibilities of family life.

Parents contribute to adolescent development by providing early reproductive knowledge and sex education, complemented by religious knowledge. Parents need to be attentive to reproductive health knowledge for themselves and their teenage children. Understanding the changes adolescents undergo in relation to the reproductive process is crucial. Parents must be able to provide accurate reproductive health knowledge to their adolescent children. Research indicates that adolescents prefer communicating with relatives (such as grandparents, uncles, and aunts) rather than their parents, seeking comfort and protection from parental judgment.²⁷

The need for individual empowerment strategies through education in knowledge, skills and ethics, development of family processes (to empower adolescents through the family), strengthening family and school educational institutions, and providing health services.³⁴

Teenagers spend a lot of time at school, so the school environment and teachers have a role in providing information related to reproductive health and being a reference for teenagers in making decisions.³³ Schools and teachers play a role in providing reproductive health information to adolescents, influencing their decisions. Adolescents value friendships, with peer communication being more open than with parents. Effective gathering times with friends include school breaks, after school, studying together, participating in extracurricular activities, and joining student organizations. Most adolescents discuss reproductive health-related issues with their peers rather than parents and health professionals.³⁵

Effective times to gather with friends are during school breaks, coming home from school, studying together, taking part in extra-curricular activities, and when gathering in student organizations. Most teenagers talk about matters related to reproductive health to their friends rather than their parents and health workers.² Peer tutoring is a cooperative learning strategy that helps fulfill adolescent needs. Respect and understanding are fostered among cooperating students.¹³ Adolescents identify peer pressure as a significant factor influencing sexual behaviour and reproductive health, with 42.5% acknowledging its importance.¹⁸

Mass media, comprising electronic and print media, has the potential to change societal attitudes and behaviours, especially in easily influenced children. Lack of reproductive health information may lead to adolescents' inability to maintain their reproductive health. Media can be used to enhance knowledge and attitudes. Educational content through engaging media is crucial in influencing adolescent understanding and attitudes towards reproductive health. TikTok and leaflets can improve knowledge and attitudes about reproductive health.³⁰

Community-based adolescent reproductive health service programs, targeting health professionals to provide youth-friendly services with community approval, prove more effective. Poor

knowledge of services and reproductive health is a major obstacle, consistent with various studies.³¹

Sociocultural norms significantly influence adolescents, such as cultural prohibitions on premarital sex. Contraceptive use among unmarried adolescents may be culturally unacceptable and influenced by religious teachings.³³

Adolescents in Islamic boarding schools

Islamic boarding schools, or pondok pesantren, are a form of religious educational institution that has grown and developed within communities, playing a crucial role in human resource development. Initially, these schools had a simple purpose: to provide education for students (santri) to learn Islamic knowledge under the guidance of a kyai/ustadz/guru. The goal was to prepare the santri as Islamic missionaries who master the knowledge of Islam and are ready to spread it across various layers of society.³⁶

Islamic boarding schools are also defined as places of education and instruction that emphasize Islamic teachings, supported by dormitories as permanent residence for santri.⁴⁰ Muzayin Arifin defines pesantren as a religious educational institution recognized by the surrounding community, utilizing a boarding system where students receive religious education through a study system or madrasa fully under the leadership of one or more Kyai, with charismatic and independent characteristics.⁴²

All elements of the Islamic boarding school interact as an extended family 24 hours a day. With this 24-hour pattern, Islamic boarding schools function as religious, social, and developmental institutions, allowing the potential of individuals to be applied comprehensively, optimally, and integratively.⁴³ Essentially, pondok pesantren is not just an educational institution but also a community organization aligned with the values and culture of society.⁴⁴ Broadly, Islamic boarding schools fall into three categories:³⁶

Salafi/ salafiah Islamic boarding schools (traditional)

These schools focus solely on classical Islamic education and teachings. They prioritize and maintain traditional aspects in both the educational system and daily life, being highly selective about

any form of innovation, including curriculum changes.

Khalafi/ khalafiah Islamic boarding schools (modern)

In addition to classical Islamic education, these schools offer formal school education, including general schools (elementary, junior high, high school, and vocational school) and schools with Islamic characteristics. The teaching process is accommodating to modern developments, involving modern tools and teaching a variety of general knowledge skills.

Salafi-khalafi Islamic boarding schools (traditional and modern mix)

These schools combine Salafi and Khalafi methods, preserving good traditional values while adapting to modern developments.

Islamic boarding schools have distinct elements:

Pondok

The living quarters for kyai and santri. The size of the pondok depends on the number of santri, ranging from small ones with fewer than a hundred to large ones with over three thousand. Regardless of the number, dormitories for male and female santri are always separated.⁴⁵ Apart from being a residence, the pondok serves as a practice ground, allowing santri to develop independence to prepare them for life in society after completing their studies.⁴¹ The dormitory system is a characteristic of traditional pesantren, distinguishing it from the traditional education system in other countries. This system also sets pesantren apart from the surau education system in the Minangkabau region.⁴⁶

Mosque

The mosque serves dual purposes as a place of worship and a venue for religious teachings, making it an integral element of the Islamic boarding school.³⁸

Kyai

The leader of the Islamic boarding school, functioning as an educator. Kyai manages the

institutional aspects of the pesantren and is regarded as a parental figure by the santri.⁴¹

Santri

Students or pupils studying at the Islamic boarding school, divided into two categories:^{41,46}

Santri mukim

Those who reside in the pesantren dormitories. Santri Mukim, who typically stay the longest in the pesantren, often form a separate group responsible for daily pesantren affairs. They also teach younger santri basic and intermediate classical texts.

Santri kalong

Those who come from the surrounding areas but do not reside in the pesantren, attending lessons or Quranic studies at the pesantren.

Teaching of classical islamic texts

Classical Islamic texts, known as Kitab Kuning, hold a special position as the curriculum in pesantren. These texts are a primary and distinguishing feature between pesantren and other Islamic educational institutions.

Islamic boarding schools exhibit specific characteristics:⁴⁷

Simplicity

Islamic boarding schools embody a simple and frugal lifestyle. Luxurious living is rare, and some santri may live too simply, overlooking proper nutrition.

Independence

Independence is strongly felt in pesantren life, with santri washing their own clothes, cleaning their rooms and the surroundings, and some even cooking for themselves.

Concern for others

Acts of kindness are aimed at achieving noble goals, such as voluntary fasting, dhikr (remembrance of

God) and i'tikaf (spiritual retreat), night prayers, and other forms of devotion.

Emotional connection between santri and kyai

A close relationship exists between santri and kyai due to cohabitation and frequent interactions in both academic and daily life. Kyai serves as a teacher, role model, and parent to the santri.

Discipline

Islamic boarding schools usually implement educative sanctions to shape discipline and focus on character building.

Mutual assistance

The spirit of mutual assistance and brotherhood permeates social interactions in the pesantren. Santri lead a shared life, collectively managing various tasks in the pesantren.

Islamic boarding schools play a crucial role in the cultural, educational, and religious development of individuals within a community, embodying a unique and holistic approach to learning and character development. Based on the assessment of adolescent health screening in the Adolescent Health Care Program (PKPR), it was found that 68% of adolescent girls in Islamic boarding schools fall into the category of having reproductive health problems. They experience reproductive health issues such as menstrual cycle irregularities, vaginal discharge, itching in the genital area, and also nutritional problems, including a low Body Mass Index (BMI).⁷ In an Islamic boarding school in Indramayu Regency, it was shown that the reproductive health behaviors of adolescent female students revealed that out of 6 participants, 1 person did not have reproductive organ issues, while 5 had problems such as vaginal discharge and itching. The reproductive health behaviors of some adolescent female students still indicate improper practices in cleaning their reproductive organs.¹² Adolescent issues often stem from a lack of information, understanding, and awareness about the importance of maintaining reproductive health. On the other hand, adolescents undergo rapid physical changes. There needs to be a shared belief that building a quality future generation must begin in childhood, or

even from the womb. The concept of fiqh-based reproductive health education is a proposed development of the fiqh curriculum in madrasah aliyah, related to specific themes associated with reproductive health, such as topics on fornication, 'iddah, and others.³⁸

Islamic boarding schools have unique characteristics that distinguish them from other educational institutions, and these characteristics are exclusive to pesantren. Various teaching methods are employed in different pesantren, including Sorogan, Weton/Bandungan, Halaqoh, Hafalan, Hiwar, Bahtsul Masa'il, Fathul Kutub, and Muqorolah.¹³

Concerning reproductive health education, several materials related to it are found in classical Islamic texts or Kitab Kuning. The content of these classic texts is still taught and serves as a reference in most pesantren in Indonesia. The Kitab Kuning and the topics covered within it are integral to pesantren education.⁵ Reproductive health in Islam is also related to the mechanisms of the reproductive system itself, such as pregnancy and menstruation. Menstruation is a sign of a healthy woman, indicating that her reproductive organs are functioning properly and marking the onset of fertility. Islam imposes clear restrictions on sexual activities during menstruation for both men and women due to potential negative consequences.³⁷

The concept of fiqh (Islamic jurisprudence) education on reproductive organs emphasizes the importance of safeguarding these organs from various diseases—both physical, biological, and mental. Fiqh also provides guidance, instructions, knowledge, and values on how a Muslim should behave and make decisions regarding the health of their reproductive organs. The goal is to enable healthy reproductive processes and give birth to healthy generations.³⁸

Female adolescents in Islamic boarding schools gain knowledge about reproductive health from classical texts such as Adabul Mar'ah, Risalatul Mahid, Kitabun Nikah, Qurratul Uyun, Uqud al Lujjayn, and others. These texts cover topics such as menstruation, Sharia regulations related to it, interactions with the opposite sex, marriage preparation, and the etiquette of women towards their families, especially their husbands, and moral education. Reproductive health education exists in pesantren but tends to be normative, focusing on

worship and moral conduct within families and social circles. However, a rational understanding of topics such as menstruation and how to maintain reproductive organ hygiene is often lacking. This contributes to the low level of reproductive health knowledge among adolescents in pesantren.⁷

In the environment of Pondok Pesantren "DN" Sampang Madura, the main reference for providing reproductive knowledge to its students is the book *Bulughul Marom*. The method used is "bandongan," where Kyai/Nyai or their representatives convey material on wet dreams, menstruation, puberty, and marriage. Additionally, literature on sexual behavior, the risks of free sex, contraception, and Family Planning is provided. A similar approach is found in Pondok Pesantren "SC" in Balikpapan. The caretakers of the pesantren mention that the book *Mabadi Fiqih* is widely used as a foundation for knowledge about menstruation, postpartum bleeding, adolescent development, and the consequences of free association. Fiqih is used to teach manners and the proper conduct between husband and wife. The materials are derived from books such as *Fathul Mu'in*, *Fathul Qorib*, *Buluqul Maram*, *Quratul Uyyun*, and other general knowledge sources.⁵

Considering the content and methods of reproductive health education in pesantren, as well as the strong support from the pesantren itself, it is evident that reproductive health education in the pesantren environment is no longer considered "mubah" (permissible) or, let alone, "haram" (forbidden). Within pesantren, the adopted value system is "al-Muhafadhah 'ala al-Qodimi as-Shalihwa al-Akhdu bi al-Jadid al-Ashlah," which translates to preserving/maintaining good traditions and adopting new things that are better. This value system clearly indicates that, for the sake of improvement, it is entrusted to make enhancements.⁵

Conclusion

Islamic boarding schools are educational institutions that have unique characteristics from other educational institutions. Reproductive health issues are still frequently encountered in Islamic boarding schools, primarily due to the limited reproductive health education available. Female students at Islamic boarding schools receive education related to reproductive health, sourced from several

materials regarding this matter contained in the yellow book. The material contained in the classic book is given in several teaching methods, namely: Sorogan, Weton/ Bandongan, Halaqoh, Hafalan, Hiwar, Bahtsul Masa'il, Fathul Kutub, dan Muqorinah. So that reproductive health education for female students in Islamic boarding schools has been provided, although it is only limited to normative studies.

Contribution of authors

Mairo: conceptualized and designed the articles, journal collected and analysed, wrote and edited the paper,

Nadhiroh: journal collected and analysed and wrote the introduction

Salim: journal collected and analysed, designed the articles and wrote Factors Influencing Adolescent Reproductive Health

Isfandiari: journal collected and analysed and wrote Adolescents in Islamic Boarding Schools

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References

1. Pusdatin The Republic of Indonesia's Ministry of Health. Infodatin Reproduksi Remaja Kementerian Kesehatan RI (Situasi Kesehatan Reproduksi Remaja). The Republic of Indonesia's Ministry of Health . Jakarta; 2017.
2. Hapsari MM, Ranitadewi and Tariani NM. Pedoman Program Kesehatan Reproduksi Jenjang SMP. Vol. 1. Ministry of Education, Culture, Research and Technology Jakarta: 2021. Available from: 978-623-97764-3-5
3. Rankin K, Heard A and Diaz N. Adolescent Sexual and Reproductive Health: Scoping the impact of programming in Low- and Middle-Income Countries. Vol. 5, International Initiative for Impact Evaluation. 2016. 1–108 p. Available from: http://www.3ieimpact.org/media/filer_public/2016/12/29/sp5-asrh.pdf
4. The Republic of Indonesia's Ministry of Health . Pedoman Standar Nasional Pelayanan Kesehatan Peduli Remaja (PKPR). The Republic of Indonesia's Ministry of Health. Jakarta: 2018.
5. Pranata S, Budisuari MA, Hamdi Z and Faizin K. Pesantren dan Upaya Pendidikan Kesehatan Reproduksi Remaja. *J Bul Penelit Sist Kesehat*. 2013;16(3):313–20.

6. Setiawati I, Zainiyah Z and Zainiyah H. Optimalisasi Edukasi Kesehatan Reproduksi Remaja (PHBS). *Gemassika*. 2023;7(3):41–7.
7. Nisa Mairo QK, Rahayuningsih SE and Purwara BH. Kesehatan Reproduksi Remaja Putri di Pondok Pesantren Sidoarjo Jawa Timur. *Maj Kedokt Bandung*. 2015;47(2):77–83.
8. Amalia RB, Wittiarika ID and Jayanti RD. 'Strategies to improve the adolescent's reproductive health knowledge in the traditional Islamic Boarding School in Sidoarjo, Indonesia', *Journal of Midwifery*. (2021) 5(1), p. 14. doi: 10.25077/jom.5.2.14-21.2020
9. Lutfiasari D. 'Analysis of the Implementation of Reproductive Health Prevention in the Islamic Boarding School (Study at Al Ma ' ruf Islamic Boarding School – Kediri) Website : <https://jqph.org/> | Email : jqph@strada.ac.id Journal for Quality in Public Health', *Journal for Quality in Public Health*. (2022) 6(1), pp. 287–291
10. Luqman NK, Sitti R and Dian RW. Exposure to Reproductive Health Information and Behavior in Islamic Boarding School , Sinjai District Diversity : Disease Preventive of Research Integrity. *Divers Dis Prev Res Integr*. 2023;4(1):146–54.
11. Wardiati W, Septiani R, Agustina A, Ariscasari P, Arlianti N and Mairani T. Reproductive Health Literacy of Adolescents at Public Islamic School: A Cross-Sectional Study in Indonesia. *Al-Sihah Public Heal Sci J*. 2023;(June):12–22.
12. Riyanto, Sugiarto H and Nurfitriyani. Perilaku Kesehatan Reproduksi Pada Remaja Santriwati Di Pondok Pesantren As-Sakienah Desa Tugu Kecamatan Sliyeg Kabupaten Indramayu. *J Kesehat Inra Husada*. 2017;5(1):7–13.
13. Azza A and Susilo C. Reproductive Health Learning Model Through Adolleccent Peer. *J Ners*. 2016;11(1):142–6.
14. Arifin S. *Community empowerment in leading pesantren: A research of Nyai's leadership*. *Bul Penelit Sist Kesehat*. 2021;24(2):107–18.
15. WHO. *Social determinants of sexual and reproductive health*. Geneva: WHO Press; 2010.
16. The Republic of Indonesia's Ministry of Health . *Peraturan Pemerintah RI Nomor 61 tentang Kesehatan Reproduksi*. The Republic of Indonesia's Ministry of Health. Jakarta:2014.
17. United Nations. *Report of the International Conference on Populaiton and Development, Cairo, 5-13 September*. United Nation Publication. New York: United Nation Publication; 1995. p. 193.
18. Kumi-Takyyiwa A. Adolescent Reproductive Health Issues and Sexual Behaviors in Coastal Communities: A Case of Biriwa, Ghana. *J Soc Dev Stud*. 2022;3(2):106–15.
19. Pertiwi KR and Salirawati D. Pengetahuan Dan Persepsi Mahasiswa Tentang Kesehatan Reproduksi Dan Permasalahannya. *J Penelit Hum*. 2016;19(2).
20. Fitriani, Husnah R and Salsabila I. Adolescent Knowledge About the Dangers of Free Sex. *Indones Nurs Sci J*. 2021;11(2):100–5.
21. Ochen AM, Chi PC and Lawoko S. Predictors of teenage pregnancy among girls aged 13–19 years in Uganda: a community based case-control study. *BMC Pregnancy Childbirth*. 2019;19(2):231–231.
22. Olaleye AO, Obiyan MO and Folayan MO. Factors associated with sexual and reproductive health behaviour of street-involved young people: Findings from a baseline survey in Southwest Nigeria. *Reprod Health*. 2020;17(1):1–11.
23. Diabelková J, Rimárová K, Dorko E, Urdzík P, Houžvičková A and Argalášová L. Adolescent Pregnancy Outcomes and Risk Factors. *Int J Environ Res Public Health*. 2023;20(5):0–9.
24. Kurniawati H, Kurniawati and Kurniawati H. Layanan PKPR dalam Akses Informasi HIV dan AIDS Adolescent Reproductive Health Service in Accessing HIV and AIDS Information. *Midwiferia J Kebidanan [Internet]*. 2022;8(1). Available from: <https://midwiferia.umsida.ac.id/index.php/midwiferia/article/view/1318>
25. Puslitdantin B. *Indonesia Drugs Report 2019. Correspondencias & Análisis*. Jakarta: Pusat Penelitian Data dan Informasi Badan Narkotika Nasional; 2000. 1–23 p.
26. Februhartanty J, Ermayani E, Rachman PH, Dianawati H and Harsian H. *Gizi dan Kesehatan Remaja*. Kementerian Pendidikan dan Kebudayaan RI; 2016. 1 p.
27. The Republic of Indonesia's Ministry of Health . *Laporan Rischesdas 2018 Kementrian Kesehatan Republik Indonesia [Internet]*. Badan Penelitian dan Pengembangan Kesehatan. 2019. Available from: <http://www.yankes.kemkes.go.id/assets/downloads/P MK No. 57 Tahun 2013 tentang PTRM.pdf>
28. The Republic of Indonesia's Ministry of Health. *Pedoman Pencegahan dan Penanggulangan Anemia Pada Remaja Putri dan Wanita Usia Subur (WUS)*. *Nucl Phys*. 2018;(1).
29. Kumalasari N, Kuswardinah A and Maryati Deliana S. The Influence of Reproductive Health Education to Knowledge and Percieved Behavior Sexual Adolescent Control. *Public Heal Perspect J [Internet]*. 2020;5(4):16–24. Available from: <http://journal.unnes.ac.id/sju/index.php/phpj>
30. Yesaya Haninuna G, Rony Nayoan C and Bunga H. Effect of Tik-Tok and Leaflet Media in Increasing Adolescents' Knowledge and Attitude About Reproductive Health. *J PUBLIC Heal Trop Coast Reg*. 2023;6(1):30–7.
31. Kyilleh JM, Tabong PTN and Konlaan BB. Adolescents' reproductive health knowledge, choices and factors affecting reproductive health choices: A qualitative study in the West Gonja District in Northern region, Ghana. *BMC Int Health Hum Rights*. 2018;18(1):1–12.
32. Triyanto E, Prabandari YS, Yuniarti KW and Werdati S. Identification factors affecting adolescent's reproductive health behavior: a qualitative study. *Bali Med J*. 2019;8(3):852–8.
33. Usonwu I, Ahmad R and Curtis-Tyler K. Parent–adolescent communication on adolescent sexual and reproductive health in sub-Saharan Africa: a qualitative review and thematic synthesis. *Reprod Health [Internet]*. 2021;18(1):1–15. Available from: <https://doi.org/10.1186/s12978-021-01246-0>

- 34 . Alimoradi Z, Kariman N, Simbar M and Ahmadi F. Empowerment of adolescent girls for sexual and reproductive health care: A qualitative study. *Afr J Reprod Health*. 2017;21(4):80–92.
- 35 . Utari AP, Kostania G, Suroso S. Pengaruh Pendidikan Sebaya (Peer Education) Terhadap Sikap Dalam Pencegahan Anemia Pada Remaja Putri Di Posyandu Remaja Desa Pandes Klaten. *J Kebidanan dan Kesehat Tradis*. 2019;4(1):51–6.
- 36 . The Republic of Indonesia's Ministry of Health . Pedoman Penyelenggaraan dan Pembinaan Pos Kesehatan Pesantren [Internet]. Departemen Kementerian Kesehatan Republik Indonesia. Jakarta; 2013. Available from: http://promkes.kemkes.go.id/download/jsc/files51071Pedoman_Penyelenggaraan_dan_Pembinaan_Pos_Kesehatan_Pesantren.pdf
- 37 . Nurlaeli H. Pentingnya Pendidikan Kesehatan Reproduksi dan Seksualitas pada Remaja Santri Putri Pondok Pesantren Watu Ringkel Darussalam-Karangpucung. *Pros Semin Nas WIJAYAKUSUMA* [Internet]. 2020;204–15. Available from: <https://ejournal.unugha.ac.id/index.php/jarlit/article/download/289/235>
- 38 . Edwar A. Pengaruh Pembelajaran Ilmu Fiqh Dalam Perspektif Kesehatan Reproduksi. *Geneologi PAI J Pendidik Agama Islam*. 2019;6(2):100–22.
39. Kusmiran E. *Kesehatan Reproduksi Remaja dan Wanita*. Jakarta: Salemba Medika; 2011
40. Ali M and Asrori M. *Psikologi Remaja Perkembangan Peserta Didik*. Jakarta: PT Bumi Aksara; 2011.
41. Qomar M. *Pesantren dari Transformasi Metodologi Menuju Demokratisasi Institusi*. Surabaya: PT Gelora Aksara Pratama; 2009.
42. Zazin N, Umiarso. *Pesantren di Tengah Arus Mutu Pendidikan Menjawab Problematika Kontemporer Manajemen Mutu Pesantren*. Semarang: Rasail Medika Group; 2011.
43. Mastuhu. *Dinamika Sistem Pendidikan Pesantren, Suatu Kajian Tentang Unsur dan Nilai Sistem Pendidikan Pesantren*. Jakarta: INIS; 1994
44. Banawi. *Pesantren Buruh Pabrik Pemberdayaan Buruh Pabrik Berbasis Pendidikan Pesantren*. Yogyakarta: PT Lkis Printing Cemerlang; 2010
45. Walsh, Mayra. *Pondok Pesantren dan Ajaran Golongan Islam Ekstrim (studi kasus di pondok pesantren modern putri 'Darur Ridwan' Parangharjo, Banyuwangi)*. Malang: Fak. Sospol Universitas Muhamadiyah; 2002.
46. Haedari A. *Masa Depan Pesantren dalam Tantangan Modernitas dan Tantangan Komplexitas Global*. Jakarta: IRD Press; 2004
47. RMI Jatim. *Pengembangan Poskestren As-Syifa' Jawa Timur*; 2007.