Devosia: Community Outreach Journal of Indonesian Movement
Vol 1 No 4 October 2026, Hal 28-44
ISSN: 3163-8430 (Electronic)
Open Access: https://researchfrontiers.id/devosia/index

Educational Seminar on Pre-Puberty for Students of the Abu Bakar Ash-Shiddiq Quran Memorization Boarding School (Pondok Pesantren Tahfizhul Qur'an), Tlajung Udik, Gunung Putri, Bogor

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Article Info :
Received:
27-09-2026
Revised:
28-10-2026
Accepted:
02-11-2026

Abstract

Pre-puberty education is essential for preparing adolescents to understand biological maturation, psychological development, reproductive health, and emerging religious responsibilities. Limited understanding of these changes may contribute to uncertainty and difficulties in adjusting to puberty, particularly within religious educational institutions. This community service program aimed to improve students' understanding of pre-puberty and document the implementation of integrated developmental and Islamic education at the Abu Bakar Ash-Shiddiq Tahfizhul Qur'an Islamic Boarding School in Tlajung Udik, Gunung Putri, Bogor Regency. A descriptive educational intervention was implemented using preliminary institutional observation, structured lectures, interactive discussions, question-and-answer sessions, and single-group pre-test and post-test assessments. Educational materials addressed physical and psychological changes, reproductive hygiene, personal cleanliness, bodily boundaries, and Islamic responsibilities associated with baligh. Initial assessments indicated that most participants experienced difficulties explaining pre-puberty concepts. Following the seminar, approximately 80% of participants were reported to understand the educational material. Interactive activities provided opportunities to clarify developmental concerns, while institutional collaboration supported program implementation and a proposed continuation through facilitated learning groups. The findings indicate positive immediate educational understanding, although limited assessment documentation prevents conclusions about causal effectiveness or sustained behavioral changes. The program provides a practical foundation for culturally appropriate, religiously integrated pre-puberty education in Islamic boarding schools.

Keywords: *Adolescent Reproductive Health, Community Service, Islamic Boarding School, Pre-Puberty Education, Puberty.*

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INTRODUCTION

Adolescent reproductive health education has become an increasingly significant component of contemporary educational and public health strategies, particularly as young people encounter biological maturation alongside psychological, emotional, and social adjustments that influence their understanding of personal identity and bodily autonomy. Puberty represents a developmental transition involving reproductive maturation, hormonal changes, physical transformation, and emerging social responsibilities, requiring educational support that extends beyond conventional biological explanations (Hurlock, 2003; Santrock, 2012). Recent research has demonstrated that variations in pubertal development are associated with emotional adjustment, body image, psychological well-being, and adolescents' responses to their social environments, indicating that puberty education should address developmental experiences through an integrated rather than exclusively physiological approach (Vijayakumar & Whittle, 2023; Mahama et al., 2024; Xiang et al., 2024). Educational concerns become particularly relevant when limited access to reliable information contributes to uncertainty about bodily changes, menstruation, reproductive hygiene, and appropriate health practices (Betsu et al., 2023; Trant et al., 2022). The development of age-appropriate educational interventions has consequently received increasing attention, particularly through school-based programs designed to improve adolescent reproductive health literacy and strengthen preparedness for pubertal changes (Evans et al., 2022; Putri et al., 2025). Indonesian educational institutions face the additional responsibility of ensuring that reproductive health information remains

accessible and culturally appropriate for students whose developmental needs intersect with established religious and social expectations. Islamic boarding schools represent a particularly relevant institutional setting because students experience biological maturation while participating in structured religious education, communal living, and character development. Preliminary observations at the Abu Bakar Ash-Shiddiq Tahfizhul Qur'an Islamic Boarding School in Tlajung Udik, Gunung Putri, Bogor Regency, identified limitations in students' understanding of physical, psychological, and social changes associated with puberty. These circumstances establish a practical justification for developing an educational seminar that integrates reproductive health knowledge, personal hygiene, psychological awareness, and Islamic responsibilities during the transition toward religious maturity.

Contemporary scholarship on puberty and adolescent reproductive health education has developed across several interconnected research areas, including educational intervention effectiveness, menstrual hygiene management, psychological adaptation, and context-sensitive reproductive health communication. Research synthesizing educational interventions indicates that structured learning activities can support improvements in menstrual health knowledge and related practices, although educational content, implementation strategies, and evaluation approaches differ across institutional settings (Evans et al., 2022; Tomlinson et al., 2024; Pratama et al., 2026). School-based interventions have increasingly incorporated interactive instruction, practical learning activities, and structured educational modules to promote students' understanding of reproductive health, while comparative research has examined differences between lecture-based and skills-oriented educational approaches (Madhu et al., 2024; Yogesh et al., 2024; Rashmi & Ummer, 2025). Digital educational innovations represent another developing area, including Android-based puberty education, social media-supported reproductive health communication, audiovisual learning materials, and digitally mediated menstrual hygiene education (Anggita et al., 2023; Kosasih et al., 2024; Fuadah et al., 2025; Patriakumala et al., 2026). Research conducted in Indonesian educational settings has also examined comprehensive sexuality education among younger adolescents, demonstrating the relevance of structured educational interventions for developmental populations approaching or experiencing puberty (Pinandari et al., 2023). Studies of menstrual health communication have emphasized the educational significance of reducing embarrassment and improving opportunities for discussing bodily experiences, while research on school-based menstrual education has explored the development of appropriate instructional responses to students' informational needs (LeBlanc, 2024; Bhoda et al., 2024; Wahl et al., 2024). Evidence from Islamic educational settings further extends this discussion by examining reproductive health education, pubertal knowledge, institutional support, and the characteristics of learning environments within boarding schools (Masdah, 2024; Assidiqi & Mujtahid, 2024; NisaMairo et al., 2024). This body of scholarship establishes a foundation for understanding puberty education as a multidimensional educational intervention involving knowledge acquisition, health-related practices, interpersonal communication, and institutional support.

Despite these developments, the available literature reveals several limitations concerning the integration of adolescent developmental education with religious responsibilities and the institutional characteristics of Islamic boarding schools. A substantial proportion of the reviewed studies concentrate on menstrual hygiene, reproductive health knowledge, or specific educational interventions, providing valuable evidence for individual learning domains without necessarily addressing the broader relationship between physical maturation, psychological adjustment, personal hygiene, and religious obligations within a single educational program (Parasuraman et al., 2022; Nastiti et al., 2023; Ahmed et al., 2025). Studies examining puberty-related body image and emotional well-being contribute important developmental insights, yet their principal analytical emphasis differs from the practical delivery of integrated pre-puberty education in religious residential institutions (Roberts et al., 2024; Bollinger et al., 2026). Research focusing on reproductive health in Islamic boarding schools has identified institutional and cultural dimensions relevant to adolescent education, including the relationship between knowledge and institutional support, but the cited literature does not fully establish how a short educational seminar combining biological, psychological, hygienic, and Islamic normative content functions within the specific institutional conditions examined in the present community service program (Assidiqi & Mujtahid, 2024; NisaMairo et al., 2024). Indonesian studies addressing reproductive health education in pesantren and other religious educational settings contribute contextual evidence, although their locations, target populations, educational materials, and intervention designs cannot automatically be generalized to every boarding school (Utami et al., 2024;

Yenti et al., 2024; Masdah, 2024). The methodological distinction between comprehensive educational programs, digital interventions, and conventional seminar-based instruction also complicates direct comparisons of educational outcomes across studies. The resulting contextual and implementation gap concerns the limited evidence available within the cited literature regarding the organization, immediate educational outcomes, and potential continuity of an integrated pre-baligh seminar designed specifically for students at the Abu Bakar Ash-Shiddiq Islamic Boarding School. Addressing this gap requires an institutionally grounded examination rather than an assumption that intervention effectiveness established elsewhere will necessarily produce equivalent outcomes in this setting.

The identified gap carries educational and practical implications because inadequate preparation for puberty may restrict students' ability to interpret developmental changes, manage reproductive hygiene, communicate personal concerns, and approach emerging responsibilities with appropriate knowledge. Research examining adolescents' menstrual experiences indicates that access to information and opportunities for discussing reproductive health remain important dimensions of educational support, particularly when embarrassment or uncertainty influences students' responses to physiological changes (Betsu et al., 2023; LeBlanc, 2024). Findings concerning pubertal timing, body image, and psychological well-being further support the need to consider emotional and social adjustment when developing puberty-related instruction rather than treating reproductive health education as an isolated transfer of biomedical information (Vijayakumar & Whittle, 2023; Xiang et al., 2024). Educational institutions serving students during early adolescence therefore require learning activities that combine factual explanations with opportunities for discussion, clarification, and the development of responsible personal health practices. The relevance of such instruction is strengthened by research examining educational modules, participatory learning approaches, and interventions intended to improve adolescent reproductive health knowledge and attitudes (Bhoda et al., 2024; Putri et al., 2025; Rashmi & Ummer, 2025). For Islamic boarding schools, educational responsibilities also involve preparing students to recognize the relationship between biological signs of maturity and the religious obligations associated with baligh, including personal purification, observance of aurat boundaries, appropriate interpersonal conduct, and the development of moral responsibility. Islamic teachings recognize religious accountability as a significant dimension of maturity, as reflected in the prophetic tradition concerning the commencement of individual accountability upon reaching puberty (Abu Dawud, n.d., Hadith 4403). The practical urgency of integrated pre-baligh education consequently extends to pesantren administrators, educators, and caregivers who must communicate sensitive developmental information while maintaining religious appropriateness, student dignity, and a supportive learning environment. Institutional cooperation is particularly necessary to prevent puberty education from remaining a fragmented activity disconnected from students' everyday experiences and continuing educational needs.

The present community service initiative is positioned within the emerging literature on context-sensitive adolescent reproductive health education while offering a specifically integrated educational approach adapted to the institutional characteristics of an Islamic boarding school. Existing research has demonstrated the relevance of comprehensive sexuality education, digital instructional media, practical menstrual health interventions, and educational approaches tailored to adolescent learning needs (Pinandari et al., 2023; Anggita et al., 2023; Yogesh et al., 2024). Studies situated within pesantren environments have also established the importance of reproductive health education and institutional support, providing a foundation for adapting educational content to religious residential settings (Masdah, 2024; Assidiqi & Mujtahid, 2024; NisaMairo et al., 2024). The distinguishing contribution of the present program lies in its combination of explanations concerning pre-puberty and puberty, physical and psychological developmental changes, reproductive hygiene, bodily boundaries, Islamic concepts of aurat and mahram, and appropriate social conduct within a single seminar-based educational activity. The program employs preliminary institutional observation, lectures, interactive discussions, question-and-answer sessions, and pre-test and post-test assessments to document participants' immediate understanding of the educational material. This design differs from interventions primarily centered on digital learning platforms, menstrual hygiene alone, or broader sexuality education because its instructional organization explicitly connects developmental health information with religiously grounded responsibilities and the immediate needs identified by the partner institution. Its proposed contribution should be understood as contextual and educational

rather than as the development of an entirely new theory, the validation of a standardized instructional model, or the demonstration of long-term behavioral effectiveness. The emphasis on immediate educational understanding and opportunities for continued discussion provides a practical basis for examining how integrated pre-baligh instruction may be implemented within a pesantren while acknowledging the evidentiary limitations of a single community service activity.

This community service study aims to describe the implementation of an integrated pre-baligh educational seminar and assess the immediate understanding of puberty-related material among students at the Abu Bakar Ash-Shiddiq Tahfizhul Qur'an Islamic Boarding School in Tlajung Udik, Gunung Putri, Bogor Regency. The program specifically addresses students' knowledge of physical and psychological changes during puberty, personal and reproductive hygiene, bodily boundaries, Islamic responsibilities associated with religious maturity, and appropriate interpersonal conduct. The educational process is organized through preliminary observation, structured presentations, interactive discussions, question-and-answer activities, and assessments administered before and after the seminar. The study also seeks to identify practical considerations for sustaining pre-baligh education through institutional support and continued learning activities within the boarding school. Its principal contribution is the documentation of an institutionally adapted educational intervention that connects adolescent developmental knowledge with Islamic character formation and religious responsibilities. The methodological contribution is limited to the descriptive evaluation of educational implementation and participants' immediate understanding, without assuming causal effects or long-term behavioral changes that cannot be established through the available evidence. The practical contribution consists of providing a basis for pesantren administrators, educators, and community service practitioners to develop more structured, accessible, and developmentally appropriate puberty education. The program is intended to support the establishment of a learning environment in which students can acquire accurate information, discuss sensitive developmental experiences appropriately, and prepare for the transition toward baligh with greater awareness of personal health and religious responsibilities.

METHODS

This community service program employed a descriptive, practice-oriented educational intervention with a single-group pre-test and post-test assessment to document the implementation of pre-puberty education and evaluate participants' immediate understanding of puberty-related material. The program was conducted at the Abu Bakar Ash-Shiddiq Tahfizhul Qur'an Islamic Boarding School in Tlajung Udik, Gunung Putri, Bogor Regency, Indonesia, through collaboration between the community service team from Universitas Indraprasta PGRI and the partner institution. The target participants were students enrolled at the boarding school, with the educational content directed toward adolescents approaching or experiencing puberty, particularly those within the approximately 10–14-year age range described in the preliminary institutional assessment. The intervention focused on developing students' understanding of biological maturation, physical and psychological changes, reproductive health, personal hygiene, bodily boundaries, and religious responsibilities associated with baligh. Program implementation was organized into preparation, educational delivery, and evaluation stages. During preparation, the community service team conducted preliminary observations and communicated with representatives of the boarding school to identify students' educational needs, existing knowledge limitations, and institutional considerations related to puberty education. The team and institutional representatives coordinated the activity schedule, implementation venue, educational materials, and participant arrangements. The partner institution supported implementation by providing the venue, facilitating student participation, and assisting with the organization of learning activities. Educational materials were developed around the concepts of pre-puberty and puberty, physiological and emotional development, reproductive organ hygiene, menstrual hygiene, personal purification, the Islamic principles of aurat and mahram, and appropriate interpersonal behavior. Instruction was delivered through lectures, interactive discussions, and question-and-answer sessions designed to communicate developmentally appropriate information while respecting the religious values and social characteristics of the boarding school. The educational activities provided opportunities for participants to clarify unfamiliar concepts and discuss puberty-related concerns within a structured learning environment.

Data collection was conducted through preliminary institutional observation, participant engagement during educational activities, and assessments administered before and after the seminar. The pre-test was used to identify participants' initial understanding of pre-puberty and puberty-related concepts, whereas the post-test was administered following the educational sessions to assess their understanding of the material presented. Both assessments concerned the educational topics addressed during the seminar, including developmental changes, personal hygiene, reproductive health, and religious responsibilities associated with puberty. Interactive discussions and question-and-answer activities also provided descriptive information concerning students' questions, informational needs, and participation in the learning process. The evaluation was descriptive, focusing on participants' understanding before and after the educational intervention and the reported proportion demonstrating comprehension following the seminar. Observations of the learning process were considered alongside the assessment findings to describe the implementation of the program and identify considerations for continued educational support. The available methodological documentation did not specify the number of participants, sampling procedure, assessment items, scoring criteria, or individual pre-test and post-test scores; consequently, these characteristics were not reconstructed, and no inferential statistical testing or standardized measurement properties were claimed. The assessment results were interpreted as indicators of immediate educational understanding rather than evidence of causal effectiveness, sustained knowledge retention, or long-term behavioral change. Descriptive documentation of participant involvement and institutional collaboration was used to examine the practical implementation of the seminar and the potential for continued learning activities supported by the boarding school. This evaluation framework maintained consistency between the program's educational objectives, the available assessment procedures, and the scope of conclusions that could reasonably be supported by the documented community service activities.

RESULTS AND DISCUSSION

Implementation of Pre-Puberty Education and Changes in Students' Understanding

The pre-puberty educational seminar conducted at the Abu Bakar Ash-Shiddiq Tahfizhul Qur'an Islamic Boarding School in Tlajung Udik, Gunung Putri, Bogor Regency, represented a community-based educational intervention addressing developmental knowledge and religious preparedness among students approaching adolescence. Preliminary observations and communication with the boarding school identified limitations in students' understanding of physical maturation, psychological changes, and the responsibilities associated with puberty. These conditions provided an institutional basis for implementing educational activities that combined biological explanations, reproductive health information, and Islamic teachings within a structured learning environment. The relevance of this approach is supported by research demonstrating that adolescent reproductive health education requires instructional strategies responsive to learners' developmental characteristics and institutional circumstances (Pinandari et al., 2023; Masdah, 2024).

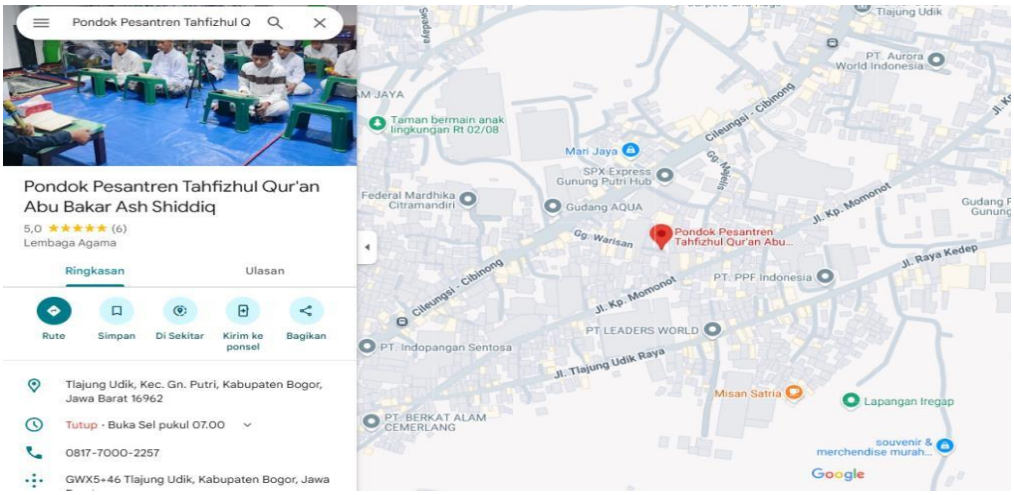

Figure 1. Location of Community Service

The preliminary assessment indicated that most participants experienced difficulties explaining the pre-puberty stage and identifying developmental changes associated with puberty before receiving educational instruction. This finding suggested that students' familiarity with puberty-related terminology did not necessarily correspond to an adequate understanding of biological maturation and its practical implications. Similar educational concerns have been examined in Indonesian boarding school environments, where students' knowledge of pubertal development and reproductive health remains an important consideration for institutional educational programs (Utami et al., 2024; NisaMairo et al., 2024). The initial knowledge limitations documented during the activity established a relevant starting point for evaluating students' immediate understanding following the educational seminar.

The educational intervention was delivered through lectures, interactive discussions, and question-and-answer sessions addressing the definition of pre-puberty, physical and psychological maturation, reproductive hygiene, bodily boundaries, and religious responsibilities associated with baligh. The integration of instructional explanation and participant interaction provided opportunities for students to receive organized information while clarifying concepts that might otherwise remain poorly understood. Previous educational research has examined the contribution of structured learning activities and participatory instructional approaches to adolescent reproductive health knowledge, supporting the relevance of combining information delivery with opportunities for learner engagement (Yogesh et al., 2024; Putri et al., 2025). The seminar adopted these general educational principles without introducing additional instructional procedures beyond those documented in the implementation report.

The educational content and documented evaluation outcomes are organized in Table 1 to clarify the relationship between the intervention objectives, the assessment procedures, and the evidence available for interpretation. The table distinguishes topics included in the instructional material from findings directly reported through the pre-test and post-test evaluations. This distinction is necessary because the original documentation provides an aggregate indicator of participants' understanding but does not present separate achievement scores for individual learning domains. Educational evaluation literature emphasizes the relevance of clearly defined learning objectives and assessment procedures when interpreting the immediate outcomes of health education interventions (Rashmi & Ummer, 2025; Evans et al., 2022).

Table 1. Educational Components and Documented Outcomes of the Pre-Puberty Seminar

Educational component	Instructional focus	Documented implementation or outcome
Preliminary assessment	Initial understanding of pre-puberty and puberty	Most participants experienced difficulties explaining pre-puberty concepts
Physical development	Pubertal maturation and bodily changes	Material delivered through educational presentations
Psychological development	Emotional changes and developmental adjustment	Material delivered and discussed with participants
Reproductive health and hygiene	Personal cleanliness and reproductive organ care	Educational instruction provided
Islamic responsibilities	Baligh, aurat, mahram, personal purification, and social conduct	Religious principles integrated into seminar materials
Interactive participation	Clarification of developmental concerns	Discussion and question-and-answer sessions conducted
Post-intervention assessment	Understanding of educational material	Approximately 80% of participants were reported to understand the material
Educational continuity	Follow-up learning activities	Initiative for boarding school-facilitated learning groups reported

Source: Community service implementation and evaluation documentation.

The post-intervention evaluation indicated that approximately 80% of participants demonstrated an understanding of the pre-puberty educational material following the seminar. This reported outcome provides an indication of immediate knowledge acquisition, particularly when considered alongside the initial observation that most participants experienced difficulties explaining puberty-related concepts before instruction. The interpretation remains descriptive because the available documentation does not include participant-level scores, explicit scoring thresholds, or a numerical comparison of mean pre-test and post-test performance. Research evaluating adolescent reproductive health educational interventions similarly distinguishes immediate improvements in knowledge from broader behavioral outcomes, which require additional measurement procedures and follow-up assessments (Parasuraman et al., 2022; Madhu et al., 2024).

The educational findings also suggest that the relevance of pre-puberty instruction extends beyond the transmission of physiological information to the development of a more coherent understanding of bodily changes and personal responsibility. Students approaching puberty encounter developmental experiences that may involve concerns about appearance, emotional adjustment, and social acceptance, making age-appropriate explanations an important element of educational preparation. Research examining pubertal status, body image, and psychological well-being demonstrates that physical maturation interacts with adolescents' self-perceptions and social experiences, although these relationships cannot be directly inferred from the seminar's knowledge assessment (Mahama et al., 2024; Vijayakumar & Whittle, 2023). The program's integration of physical and psychological content consequently represents a relevant instructional characteristic, while its influence on participants' emotional adjustment remains outside the outcomes directly measured.

The question-and-answer sessions constituted an additional component of the educational process by providing students with opportunities to seek clarification concerning puberty-related changes and responsibilities. Such opportunities are particularly relevant when reproductive health topics are associated with embarrassment, uncertainty, or reluctance to communicate personal concerns within formal educational environments. Qualitative research on adolescent menstrual experiences has documented the importance of accessible information sources, while studies of menstrual health communication have emphasized the role of educational environments in reducing communication barriers surrounding sensitive developmental topics (Betsu et al., 2023; LeBlanc, 2024). The seminar documentation confirms the provision of an interactive discussion forum,

although it does not establish measurable changes in students' willingness to communicate or the frequency of subsequent reproductive health discussions.

The educational setting also influenced how the intervention was organized and communicated to participants. Religious boarding schools combine academic or religious instruction with institutional supervision and communal living arrangements, making cooperation between external educators and institutional representatives relevant to the delivery of sensitive educational material. Previous research examining puberty knowledge and institutional support among female boarding school students has highlighted the relationship between educational understanding and the institutional conditions surrounding adolescent learning (Assidiqi & Mujtahid, 2024). The cooperation between Universitas Indraprasta PGRI and the partner boarding school enabled the seminar to address identified educational needs while maintaining alignment with the institution's religious values and established learning environment.

The reported educational outcomes provide a preliminary basis for considering structured pre-puberty seminars as a feasible component of adolescent development education within Islamic boarding schools. The principal finding concerns the documented level of immediate understanding following the intervention, rather than demonstrated long-term changes in reproductive health behavior, psychological readiness, or religious practice. Studies evaluating school-based reproductive health education and menstrual hygiene interventions indicate that educational outcomes depend on instructional content, implementation characteristics, and the indicators used to assess learning, limiting direct comparisons across different programs (Bhoda et al., 2024; Pratama et al., 2026). Further educational evaluation at the partner institution would benefit from documented assessment instruments, comparable pre-test and post-test scores, and follow-up observations that distinguish knowledge retention from behavioral application. The present findings nevertheless establish a descriptive account of the seminar's implementation and immediate educational outcomes, providing a foundation for examining the integration of developmental knowledge, reproductive hygiene, and Islamic responsibilities in subsequent analytical sections.

Integration of Physical, Psychological, and Reproductive Health Education with Islamic Values

The integration of developmental health education and Islamic religious instruction represented a central characteristic of the pre-puberty seminar implemented at the Abu Bakar Ash-Shiddiq Tahfizhul Qur'an Islamic Boarding School. The educational material addressed physiological maturation, emotional development, reproductive hygiene, and religious responsibilities associated with baligh as interconnected dimensions of adolescent preparation. This instructional organization reflected the institutional need to communicate scientific information without separating students' biological experiences from the ethical and religious expectations embedded in boarding school education. Research concerning reproductive health education in Islamic boarding schools has emphasized the relevance of institutional culture and educational support in shaping opportunities for adolescents to acquire developmentally appropriate health knowledge (NisaMairo et al., 2024; Masdah, 2024).

The biological component introduced students to physiological changes associated with puberty, including accelerated physical growth, changes in body composition, secondary sexual characteristics, menstruation, and nocturnal emissions. These topics were included to provide students with explanations of developmental processes that may otherwise generate uncertainty when experienced without prior educational preparation. Research examining pubertal development and adolescent body image indicates that the experience of physical maturation is associated with individual interpretations of bodily changes and socially influenced perceptions of appearance (Mahama et al., 2024; Roberts et al., 2024). The inclusion of these topics created an educational basis for recognizing puberty as a variable developmental process, although the available documentation did not separately measure participants' understanding of each physiological characteristic.

The psychological component addressed emotional sensitivity, increasing autonomy, self-acceptance, and interpersonal adjustment during adolescence, extending the instructional focus beyond reproductive anatomy and physical maturation. Students received explanations intended to support recognition of emotional experiences associated with developmental change while discouraging negative comparisons of physical development among peers. Evidence from developmental psychology indicates that pubertal timing and social environmental conditions are

relevant to adolescent mental health, while sociocultural pressures surrounding body image may influence emotional well-being and self-concept (Vijayakumar & Whittle, 2023; Xiang et al., 2024). These findings provide a conceptual justification for including psychological awareness within pre-puberty education, without establishing that the seminar independently improved psychological adjustment or self-confidence.

Reproductive hygiene education constituted another instructional component, particularly through explanations concerning personal cleanliness, appropriate care of reproductive organs, menstrual hygiene, and cleanliness following nocturnal emissions. The educational content emphasized the relationship between bodily development and daily hygiene responsibilities, allowing health-related instruction to be connected with religious practices concerning personal purification. Previous educational interventions have examined the role of structured information and practical instruction in improving adolescent understanding of menstrual hygiene, including educational activities implemented in Indonesian and international school settings (Nastiti et al., 2023; Trant et al., 2022; Ahmed et al., 2025). The components documented in the seminar are presented in Table 2 to distinguish the instructional material from the anticipated developmental and religious relevance of each topic.

Table 2. Integration of Developmental Health Education and Islamic Responsibilities in the Pre-Puberty Seminar

Educational dimension	Seminar material	Developmental and religious relevance
Physical maturation	Bodily growth, secondary sexual characteristics, menstruation, and nocturnal emissions	Recognition of physiological development and signs associated with puberty
Psychological development	Emotional changes, self-acceptance, and social adjustment	Understanding developmental experiences and encouraging respectful interpersonal behavior
Personal hygiene	Body cleanliness, clothing hygiene, and reproductive organ care	Development of personal health awareness and cleanliness practices
Menstrual and post-emission hygiene	Hygiene during menstruation and after nocturnal emissions	Connection between reproductive maturation and Islamic purification requirements
Religious maturity	Pre-baligh, baligh, and associated religious obligations	Recognition of responsibilities arising from religious maturity
Bodily boundaries	Aurat, mahram, and personal boundaries	Awareness of bodily privacy, dignity, and religiously appropriate conduct
Social behavior	Islamic manners, respect for others, and appropriate interactions	Integration of developmental awareness with ethical and social responsibilities

Source: Educational materials and implementation documentation from the community service program.

The organization presented in Table 2 illustrates the program's attempt to connect developmental knowledge with religious responsibilities through topics relevant to students approaching baligh. The instructional components were not treated as independent educational subjects but were organized around practical situations involving bodily changes, personal cleanliness, religious observance, and interpersonal conduct. Research examining reproductive health education in religious educational environments suggests that institutional support and culturally appropriate instructional organization are relevant considerations when addressing sensitive developmental topics (Assidiqi & Mujtahid, 2024; Utami et al., 2024). The table represents the documented educational scope rather than evidence of separate learning achievements, since domain-specific assessment outcomes were not available in the original implementation report.

The religious dimension of the seminar emphasized the distinction between biological maturation and the responsibilities associated with reaching baligh under Islamic teachings. Students

received explanations concerning personal purification, observance of aurat boundaries, the concept of mahram, and appropriate social behavior as practical expressions of religious responsibility. The integration of religious and reproductive health education was intended to connect physiological knowledge with students' existing religious learning, rather than presenting bodily development as a subject detached from institutional values. Research on reproductive health education in Islamic boarding schools provides a relevant basis for examining this integration, particularly concerning the relationship between health literacy, institutional educational practices, and students' access to reproductive health information (NisaMairo et al., 2024; Yenti et al., 2024). The seminar documentation establishes that these religious topics were included in the instructional content, although it does not provide separate evidence of changes in religious knowledge or observance following participation.

The delivery of integrated educational material relied on lectures and interactive discussions that enabled participants to receive explanations and ask questions about developmental changes and religious responsibilities. This approach was particularly relevant to topics involving menstruation, nocturnal emissions, bodily privacy, and personal hygiene, which may require sensitive communication adapted to participants' developmental characteristics. Research comparing educational approaches has examined the contribution of participatory learning and structured instructional methods to reproductive health knowledge, while school-based educational studies have considered how different forms of instruction support students' engagement with sensitive health information (Yogesh et al., 2024; Kosasih et al., 2024). The seminar incorporated opportunities for clarification through direct interaction, but the available documentation does not contain observational measures sufficient to determine whether participation differed by topic or whether particular instructional activities produced stronger learning outcomes.



Figure 2. Team of Lecturers and Seminar Participants
Source: Community service documentation.



Figure 3. Educational Material Presentation
Source: Community service documentation.

The photographic documentation identified as Figures 1 and 3 provides a visual record of the seminar participants and educational presentation activities, complementing the descriptive account of program implementation. These materials are relevant for documenting the educational setting and the delivery of instructional content, although photographs cannot independently demonstrate improvements in knowledge or behavioral outcomes. Previous studies on adolescent reproductive health education have examined the value of structured educational materials and accessible learning environments, reinforcing the need to distinguish implementation evidence from evidence of educational effectiveness (Bhoda et al., 2024; Pinandari et al., 2023). The documented instructional activities consequently support an interpretation of the program as an institutional educational initiative whose immediate knowledge outcomes were assessed separately through the reported pre-test and post-test procedures.

The integration of health education and Islamic responsibilities also has implications for the continuity of educational support beyond a single seminar session. Students' understanding of puberty-related responsibilities may require repeated opportunities for clarification as developmental changes occur at different stages and generate new practical questions concerning personal hygiene, emotional adjustment, and religious observance. Research examining menstrual health educational interventions and reproductive health communication indicates that educational needs are not necessarily resolved through initial information delivery, supporting the relevance of continuing access to reliable guidance and developmentally appropriate learning resources (LeBlanc, 2024; Pratama et al., 2026). The reported initiative to establish boarding school-facilitated learning groups offers a potential mechanism for maintaining educational engagement, although the implementation and effectiveness of these groups were not established through the available evaluation data. Sustained institutional involvement would permit future educational activities to address emerging questions while maintaining consistency between scientific explanations and the religious responsibilities emphasized during the seminar.

The findings indicate that the principal contribution of integrated pre-puberty instruction lies in its capacity to organize biological, psychological, hygienic, and religious content within a coherent educational program adapted to an Islamic boarding school. The documented seminar established that such content could be delivered through lectures and interactive discussions, while its aggregate post-intervention assessment provided an indication of participants' immediate understanding rather than a domain-specific evaluation of learning. Evidence concerning adolescent health education and psychological development supports the conceptual relevance of combining reproductive health knowledge with emotional awareness and institutional educational support, but it does not establish that the integrated format is superior to alternative approaches in the absence of comparative evaluation (Putri et al., 2025; Fuadah et al., 2025; Mahama et al., 2024). Future implementation would benefit from separate assessment indicators for physiological knowledge, personal hygiene,

psychological understanding, and religious responsibilities to determine which educational dimensions require additional instructional attention. The present intervention provides an institutionally grounded example of integrated pre-baligh education while preserving the distinction between documented educational delivery, reported immediate comprehension, and longer-term outcomes that remain unmeasured.

Participant Engagement, Educational Effectiveness, and Sustainability of Pre-Puberty Education

The implementation of the pre-puberty educational seminar demonstrated the relevance of participant engagement as an instructional component within the religious and residential educational environment of the Abu Bakar Ash-Shiddiq Tahfizhul Qur'an Islamic Boarding School. The program combined structured educational presentations with interactive discussions and question-and-answer sessions, allowing students to obtain explanations concerning physical maturation, emotional development, reproductive hygiene, and Islamic responsibilities associated with baligh. Participant involvement was documented through opportunities to ask questions and discuss developmental concerns, although the original implementation report did not provide quantitative measures of participation intensity or individual communication behavior. Research examining adolescent reproductive health education suggests that instructional accessibility and opportunities for meaningful engagement are relevant to educational participation, particularly when learning materials address sensitive developmental experiences (Pinandari et al., 2023; Putri et al., 2025). The documented learning activities consequently provide a basis for evaluating the organizational characteristics of the seminar without assuming that participation itself demonstrates measurable improvements in communication skills or psychological confidence.

The interaction between participants and educators represented an important element of the learning process because puberty-related topics may generate uncertainty or embarrassment among adolescents experiencing unfamiliar bodily changes. The seminar provided a structured forum in which students could request clarification regarding menstruation, nocturnal emissions, personal hygiene, emotional adjustment, and religious obligations. Previous qualitative research has identified limitations in access to reproductive health information and difficulties communicating menstrual experiences as factors influencing adolescents' understanding of bodily development (Betsu et al., 2023; LeBlanc, 2024). Such findings suggest that educational interventions should consider both the accuracy of information and the conditions under which young people feel able to seek clarification. The present program addressed these considerations through interactive educational activities, although participants' perceptions of psychological safety and satisfaction were not assessed using separately documented measurement instruments.

The immediate educational outcome was represented by the reported post-test finding that approximately 80% of participants understood the material following the seminar. This finding is consistent with the program's primary objective of improving students' knowledge of pre-puberty and associated developmental responsibilities, but its interpretation must remain proportional to the available evidence. The original documentation described difficulties in participants' initial understanding without reporting individual baseline scores, numerical distributions, or assessment thresholds, preventing calculation of knowledge gains or statistical effect estimates. Previous research evaluating reproductive health educational interventions has distinguished improvements in immediate knowledge from changes in attitudes and practices, emphasizing the importance of selecting outcome indicators consistent with the educational objectives and assessment procedures (Parasuraman et al., 2022; Madhu et al., 2024). The reported percentage is consequently interpreted as a descriptive indicator of post-intervention comprehension rather than a statistically established measure of intervention effectiveness.

The relationship between instructional delivery, participant involvement, immediate assessment, and educational continuity is presented in Table 3. The table distinguishes activities explicitly documented in the community service report from outcomes that were reported and aspects requiring further evaluation. This distinction is methodologically necessary because educational implementation, knowledge acquisition, and behavioral transformation represent different dimensions of intervention assessment that cannot be treated as equivalent findings. Research examining health education programs and school-based menstrual hygiene interventions similarly supports attention to

the relationship between instructional procedures and the specific outcomes measured (Evans et al., 2022; Pratama et al., 2026).

Table 3. Evaluation of Participant Engagement, Educational Outcomes, and Program Sustainability

Evaluation dimension	Documented evidence	Interpretation	Limitation or follow-up need
Initial understanding	Most participants experienced difficulties explaining pre-puberty concepts	Initial educational needs were identified	Individual baseline scores were not reported
Educational participation	Students attended lectures and interactive discussions	Participants were exposed to structured educational content	Attendance totals and participation frequency were not specified
Question-and-answer activities	Opportunities to ask questions were provided	A forum for clarification was established	Individual engagement and perceived psychological safety were not measured
Immediate learning outcome	Approximately 80% of participants were reported to understand the material after the seminar	Descriptive evidence of post-intervention comprehension	Scoring criteria and individual post-test results were unavailable
Knowledge improvement	Initial difficulties and subsequent comprehension were reported	Findings indicate a positive direction in educational understanding	Numerical pre-test and post-test differences could not be calculated
Educational continuity	An initiative to establish facilitated learning groups was reported	Potential institutional support for continued education	Implementation and effectiveness of learning groups were not evaluated
Long-term educational impact	No follow-up outcome measurements were reported	Long-term outcomes remain undetermined	Repeated assessments and behavioral observations are needed

Source: Community service implementation documentation and reported evaluation outcomes.

The evaluation framework presented in Table 3 indicates that the strongest documented educational outcome concerns participants' immediate understanding following exposure to the seminar material. The reported observation that approximately 80% of participants understood the instructional content provides an indication of educational attainment, while the absence of numerical baseline measurements limits the precision of comparisons between conditions before and after the seminar. Research on adolescent reproductive health education has increasingly incorporated structured assessments to distinguish knowledge acquisition from changes in attitudes, behavioral intentions, and everyday health practices (Kosasih et al., 2024; Rashmi & Ummer, 2025). The descriptive evidence obtained through the present program cannot establish whether knowledge improvements were distributed equally across physical development, psychological adaptation, reproductive hygiene, and Islamic responsibilities. More detailed educational assessment would permit the identification of specific content areas requiring additional instruction without changing the underlying community service orientation of the program.

The effectiveness of the instructional approach must also be considered in relation to the characteristics of seminar-based education, which can facilitate the delivery of organized information to groups of participants but may provide limited opportunities for individualized learning assessments. The documented program relied on lectures, discussions, and question-and-answer activities, allowing educators to communicate important concepts while providing opportunities for participants to seek clarification. Comparative research on reproductive health education has

examined differences between lecture-based and skills-oriented educational strategies, while investigations of digital learning interventions have considered alternative mechanisms for reinforcing knowledge and supporting educational engagement (Yogesh et al., 2024; Anggita et al., 2023; Fuadah et al., 2025). These studies offer relevant comparisons for future instructional development, but they do not justify attributing the observed post-test outcome to any particular component of the seminar. The available evidence supports the feasibility of the implemented instructional arrangement rather than a comparative conclusion concerning its superiority over other educational methods.

Institutional collaboration constituted another characteristic of the program, particularly through coordination between the Universitas Indraprasta PGRI community service team and the boarding school representatives responsible for facilitating the educational activities. The partner institution participated in organizing the schedule, preparing the venue, coordinating student participation, and supporting the presentation and discussion sessions. Institutional involvement is relevant to adolescent reproductive health education because the continuity of learning opportunities may depend on the availability of supportive educators, accessible instructional resources, and educational practices compatible with students' social environments. Research concerning reproductive health education within Islamic boarding schools has examined the relationship between institutional support and students' understanding of puberty, highlighting the significance of the educational environment in facilitating access to sensitive health information (Assidiqi & Mujtahid, 2024; NisaMairo et al., 2024). The cooperation documented in the present program established an organizational basis for seminar implementation, although the extent of subsequent institutional integration was not independently evaluated.

The initiative to establish learning groups facilitated by the boarding school represents a potentially relevant continuation mechanism following the educational seminar. Such groups could provide opportunities for reviewing instructional material, discussing emerging developmental concerns, and reinforcing information concerning reproductive hygiene, emotional adjustment, and religious responsibilities as students progress through puberty. Research on adolescent reproductive health communication and school-based educational programs suggests that sustained access to information and repeated opportunities for clarification can support educational continuity beyond initial instructional encounters (LeBlanc, 2024; Bhoda et al., 2024; Tomlinson et al., 2024). The original implementation report identified the initiative as a proposed continuation of the educational activities but did not document its organizational structure, frequency of meetings, participant attendance, or subsequent learning outcomes. Its significance should consequently be interpreted as an indication of potential institutional engagement rather than verified evidence of successful long-term program implementation.

The sustainability of pre-puberty education also depends on the capacity of educational institutions to respond to changing informational needs as students experience different stages of adolescent development. Initial instruction may address basic physiological changes and hygiene responsibilities, whereas subsequent educational activities may require greater attention to emotional regulation, personal boundaries, communication skills, and age-appropriate religious guidance. Studies addressing pubertal development and adolescent psychological well-being indicate that developmental experiences are influenced by social relationships and individual differences, reinforcing the need for educational support that remains responsive to students' changing circumstances (Vijayakumar & Whittle, 2023; Xiang et al., 2024). Continued cooperation between external educators and boarding school personnel could support the preparation of structured educational materials and the periodic assessment of students' knowledge. These possibilities constitute implications derived from the seminar's implementation characteristics rather than educational outcomes already demonstrated by the available evidence.

The documented community service activities provide a foundation for understanding pre-puberty education as an institutional learning process involving immediate instruction, opportunities for student engagement, and the potential development of continuing educational support. The reported post-test comprehension of approximately 80% indicates a positive immediate educational outcome, although the absence of detailed assessment data, a comparison group, and follow-up observations prevents conclusions concerning causal effectiveness, sustained learning, or behavioral change. Research evaluating educational interventions among adolescents emphasizes the importance of distinguishing measured knowledge outcomes from broader developmental and health-related

effects that require additional evidence (Wahl et al., 2024; Bollinger et al., 2026; Patriakumala et al., 2026). Future implementation at the boarding school would benefit from clearly documented assessment instruments, comparable pre-test and post-test measurements, periodic instructional reinforcement, and systematic monitoring of learning group activities. The principal contribution of the program lies in documenting an applicable educational approach that combines developmental information, reproductive health literacy, and Islamic responsibilities while identifying practical requirements for strengthening the continuity and evaluation of pre-baligh education.

CONCLUSION

The pre-puberty educational seminar conducted at the Abu Bakar Ash-Shiddiq Tahfizhul Qur'an Islamic Boarding School in Tlajung Udik, Gunung Putri, Bogor Regency, provided a structured educational intervention addressing students' understanding of physical maturation, psychological development, reproductive health, personal hygiene, and Islamic responsibilities associated with baligh. The program integrated lectures, interactive discussions, question-and-answer sessions, and pre-test and post-test assessments to address the educational needs identified through preliminary institutional observations. The initial assessment indicated that most participants experienced difficulties explaining pre-puberty concepts, whereas the post-intervention evaluation reported that approximately 80% of participants understood the material presented. These findings indicate a positive immediate educational outcome and demonstrate the practical feasibility of delivering integrated puberty education within an Islamic boarding school. The educational approach also provided opportunities for students to clarify sensitive developmental concerns through instructional activities adapted to their religious and institutional environment.

The principal contribution of this community service program lies in integrating biological, psychological, hygienic, and religious dimensions of puberty into a coherent educational activity responsive to the characteristics of Islamic boarding school students. The incorporation of Islamic principles concerning personal purification, aurat, mahram, and appropriate interpersonal conduct strengthened the contextual relevance of the instructional material without separating reproductive health education from existing religious learning. Collaboration between the university community service team and the boarding school facilitated program implementation and established an organizational basis for potential educational continuity. The reported initiative to develop boarding school-facilitated learning groups represents a prospective mechanism for reinforcing students' understanding beyond the initial seminar. These characteristics demonstrate the practical relevance of institutionally adapted pre-puberty education, although the available evidence does not establish the comparative superiority of the integrated approach or demonstrate changes in students' long-term health behaviors.

The interpretation of program outcomes remains limited by the absence of detailed participant-level assessment scores, documented scoring criteria, and follow-up measurements that would permit a more precise evaluation of educational effectiveness and knowledge retention. The reported post-intervention comprehension rate should consequently be interpreted as descriptive evidence of immediate understanding rather than proof of causal improvement or sustained behavioral transformation. Future implementation should prioritize standardized documentation of pre-test and post-test procedures, periodic reinforcement of educational material, and systematic assessment of students' developing knowledge and personal hygiene practices. Continued collaboration between educational institutions, university educators, and boarding school administrators may support the integration of pre-baligh education into routine student development activities. The program provides a practical foundation for developing accessible, culturally appropriate, and religiously integrated puberty education that supports students' preparation for biological maturation and the responsibilities associated with baligh.

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