Public Health of Indonesia
E-ISSN: 2477-1570 | P-ISSN: 2528-1542

Original Research

Parental Perceptions of The Need for Sexual and Reproductive Health Education for Early Adolescents

Rery Kurniawati Danu Iswanto[1]*, Zahroh Shaluhiyah[2], Bagoes Widjanarko[1], Cahya Tri Purnami[3]

[1]Program Doctoral of Public Health, Faculty of Public Health, Diponegoro University, Indonesia
[2]Department of Health and Promotion, Faculty of Public Health, Diponegoro University, Indonesia
[3]Department of Health Policy and Administration Program, Faculty of Public Health, Diponegoro University, Indonesia

*Corresponding author
Rery Kurniawati Danu Iswanto
Public Health, Faculty of Public Health, Diponegoro University, Indonesia.
Kavling Griya Kaduagung Indah RT 01, RW 02, Cibadak,
Lebak, Banten, Indonesia, 42317. 085780421860, email: rerykurniawatidi@gmail.com

DOI: https://doi.org/10.36685/phi.v12i1.1089

Abstract

Background: The urgency of reproductive health education for adolescents has been intensified by challenges such as early puberty and exposure to digital media in an era characterized by unrestricted access to information and shifting societal norms. The role of parents as primary educators is critical to ensuring a healthy transition from adolescence to adulthood. However, significant barriers are encountered by parents, particularly those with limited education and digital literacy, in fulfilling this role.

Objective: The objective of this study is to analyze parental perspectives regarding reproductive health needs as a foundation for developing a model to enhance their capacity in educating early adolescents.

Methods: This study used a sequential explanatory mixed-methods design in rural Indonesia. A survey of 106 parents of early adolescents (aged 10–12) was followed by in-depth interviews with 9 purposively selected participants. Quantitative data were analyzed descriptively using SPSS, while qualitative data underwent thematic analysis using ATLAS.ti to explore communication patterns and parental needs related to adolescent reproductive health.

Results: Thematic analysis revealed seven key themes: (1) basic understanding of adolescent reproductive health, (2) education on values and norms, (3) parental concerns regarding external challenges, (4) dynamics of parent-child communication, (5) communication barriers, (6) the role of parents as shaped by gender, and (7) needs for specific materials, methods, and media. A strong emphasis was placed by parents on the need for information regarding puberty, strategies for effective communication, and approaches to engaging with adolescents. School-based counseling and face-to-face sessions were identified as effective delivery methods, with preferences expressed for media such as books and WhatsApp groups.

Conclusion: Efforts to provide reproductive health education by parents have been shaped by limited knowledge, perceptions of taboo, and external influences. Programs designed to address these challenges must be tailored to meet the specific needs of parents. The activation of parent associations in schools has been identified as a promising approach to disseminate information and strengthen reproductive health education.

Article History:
Received 9 January 2025
Revised 6 May 2025
Accepted 6 January 2026

Keywords: parents' perspectives; reproductive health education; early adolescents

Background

Global data highlight high rates of adolescent pregnancy, unsafe abortion, and sexually transmitted infections (Azimi, 2020; Cortez et al., 2016; Suhariyati et al., 2020; WHO, 2018). In Indonesia, the consequences of limited RH education are particularly concerning. Findings from the 2017 Indonesian Demographic and

Health Survey (SDKI) revealed that 12% of women aged 15–24 years had experienced unintended pregnancies (BKKBN, 2017). Furthermore, abortion rates were estimated at 3.4 per 1,000 women nationwide, rising sharply to 42.5 per 1,000 among women aged 15–49 in Java (Giorgio et al., 2020; Stillman et al., 2020). These figures highlight the urgency of investing in more effective and contextually relevant adolescent health strategies.

The need for adolescent RH initiatives has become increasingly critical in the current era, characterized by rapid advancements in information technology and evolving social norms. In such an environment, adolescents face both opportunities and risks when seeking health information online. Therefore, there is a pressing need to examine how RH-related knowledge can be effectively delivered in ways that resonate with adolescents' lived experiences and media environments.

In this landscape, parents are widely acknowledged as primary socialization agents in matters related to reproductive development. However, various barriers limit their capacity to act as effective health educators. In Indonesia, cultural taboos around discussing sexuality remain prevalent (UNFPA Indonesia, 2016). Parents often express discomfort due to limited knowledge, fear of encouraging sexual activity, or the belief that their children are too young for such conversations (Putri et al., 2023; BKKBN, 2021).

These challenges do not occur in isolation; rather, they are compounded by other structural and psychosocial constraints. For example, low digital literacy among parents in suburban areas restricts their access to accurate, age-appropriate information. Additionally, strong social stigma around reproductive issues often discourages open family communication. Further constraints include limited communication skills, lack of time due to socioeconomic demands, and anxiety about the unfiltered sexual content adolescents may encounter online (Elnimeiri et al., 2020; Malango et al., 2022; Mpondo et al., 2018; Somers et al., 2019).

Consequently, a modern and culturally adaptive parenting approach is urgently needed. While programs such as parenting education and community dialogue have been proposed as solutions (Baku et al., 2017; WHO, 2018), these interventions must be tailored to the lived realities and needs of parents themselves. Without such grounding, their effectiveness may be limited. Despite recognition of the vital role parents play, few studies have investigated the specific support needs of Indonesian parents in educating adolescents about RH. Prior research has pointed to a disconnect between perceived parental responsibilities and their actual ability to fulfill them, particularly in urban and semi-urban areas where access to information is rapidly expanding but often unreliable or culturally misaligned.

Understanding these contextual dynamics is essential for developing responsive community strategies. Such insights can meaningfully inform both national policy and local programming aimed at improving adolescent RH outcomes. Therefore, this study aims to explore parental perspectives on RH education and identify their support needs as a foundation for intervention design. By focusing on suburban areas in Indonesia, where sociocultural values intersect with increasing digital exposure, this research seeks to provide evidence that is both timely and actionable.

Method

Study Design

This study employed a sequential explanatory mixed-methods design, which involved conducting a quantitative survey followed by qualitative in-depth interviews (Creswell, 2009). The quantitative phase aimed to identify key issues, parental knowledge gaps, and communication patterns regarding adolescent reproductive health (ARH). Findings from this phase were used to inform the design of the qualitative interviews, allowing for deeper exploration of the identified problems and parental needs. **T**his approach was chosen to gain both a broad understanding through survey data and an in-depth insight through follow-up interviews**,** making it especially useful for needs assessment purposes.

Setting

The research was conducted in Lebak Regency, Banten Province, Indonesia, a rural region with limited access to reproductive health education and services**.** Lebak was selected due to its high reported rates of sexual violence involving minors**,** as reported in local health department data (District Health Office, 2023). Moreover, the region reflects strong socio-cultural norms that influence parental attitudes toward reproductive health discussions, making it a relevant setting for this study.

Sample/Participants

Participants were parents of early adolescent children aged 10–12 years (grades 5–6 of elementary school)**.** This age group was selected to capture a critical transitional stage of early adolescence, during which children begin to encounter pubertal changes and are in need of parental guidance. The term 'early adolescents' in this study specifically refers to children aged 10–12 years**,** aligning with the operational definition used throughout the research.

For the quantitative survey, 106 parents were selected using multistage random sampling from four elementary schools located in four subdistricts in Lebak Regency. Parents were recruited based on school student records and involvement in parent associations, ensuring appropriate inclusion criteria.

From the quantitative pool, nine participants were purposively selected for the qualitative phase based on specific demographic characteristics: female, aged 26–60 years, education up to high school, homemakers, and household income below the regional minimum wage (RMW). Selection was also informed by their survey responses that indicated communication challenges, informational gaps, or expressed interest in ARH topics. This sampling aimed to capture perspectives from a segment of the population most likely to benefit from interventions. While this purposive sampling may limit diversity and transferability, it was deemed appropriate for this study's exploratory objectives.

Data Collection

Quantitative data were collected using a structured questionnaire, developed based on a literature review and validated through a pilot test involving 40 respondents matching the target demographic. Validity was tested using Pearson Product-Moment correlation coefficients, and reliability was assessed using Cronbach's Alpha (r = 0.666). The questionnaire covered parental knowledge, perceptions of risky sexual behavior, and communication practices on ARH. For the qualitative phase, data were collected through structured in-depth interviews using a guide developed from the quantitative findings. Interview questions were designed to explore specific needs, clarify survey responses, and inform model development. Interviews were conducted face-to-face in a quiet, private setting either in community centers or designated school spaces. Each interview lasted between 25–40 minutes, was audio-recorded with consent, and transcribed verbatim.

Data Analysis

Quantitative data were analyzed using SPSS Version 25, with univariate analysis employed to delineate the demographic profile of the participants and the characteristics of the study variables. For the qualitative data, thematic analysis was conducted using ATLAS.ti Version 9.0. The process involved initial multiple readings of the transcripts, followed by independent open coding by two researchers. A codebook was collaboratively developed and iteratively refined through ongoing consensus meetings. Themes were then generated through discussion and agreement within the research team. To ensure the trustworthiness of the coding, any disagreements were resolved by a third senior researcher, thus establishing inter-coder reliability. Subsequently, the generated codes were organized into meaningful categories and further abstracted to identify overarching themes that captured the essence of the data. This analytical process was inherently reflexive, enabling the identification of emergent insights as the researchers immersed themselves in the data.

Trustworthiness

To ensure credibility, triangulation was employed through the use of multiple data sources (quantitative and qualitative). Member checking was conducted by summarizing key findings and confirming their accuracy with participants during follow-up calls. An audit trail was maintained through detailed documentation of all research steps, including sampling rationale, interview procedures, and coding decisions. Reflexive journals were used throughout the study to document researchers' reflections and potential biases, contributing to confirmability and dependability.

Ethical Considerations

This study adhered to the ethical principles outlined in the Declaration of Helsinki and received approval from the Institutional Ethics Committee (Approval Number 215/EA/KEPK-FKM/2023). Participants provided informed consent after being briefed on the study's objectives, procedures, potential risks, and benefits. Confidentiality and anonymity were ensured, and participants were informed of their right to withdraw at any stage without repercussions.

Results

Table 1 Demographic Characteristics and Determinant Factors

Variable (n= 106)	Frequency (f)	Percentage (%)
Demographic Characteristics		
Gender	3	2.8
Male		
Female	103	97.2
Parents' age	89	84
Young (26-44 years)		
Middle-aged (45-65)	17	16

Variable (n= 106)	Frequency (f)	Percentage (%)
Education Level	56	52.8
Low (Elementary and Middle School)		
Moderate (High School)	39	36.8
High (College)	11	10.4
Family Income (Lebak RMW: IDR. 2.944.665)	68	64.2
< RMW		
> RMW	38	35.8
Determinant Factors	53	50
Knowledge		
Low		
High	53	50
Perception	50	47.2
Low		
High	56	52.8
Practice	42	39.6
Low		
High	6	60.4
Discussing about ARH	71	67
Ever		
Never	35	33
Most Discussed Topics (Based on those who have discussed n= 71)		
Personal Hygiene	18	25.3
Adolescent Pregnancy	4	5.6
Sexual Violence	2	2.8
Religious Norms on Sexuality and Reproduction	6	8.5
Dating	6	8.5
Puberty	35	49.3
Discussion of Obstacles	99	93.4
Available		
Unavailable	7	6.6
Types of Obstacles (Based on who has obstacles n= 99)		
Worried about finding out on the internet	1	1
Worried about causing sexual/negative stimulation in children	10	10
Lack of knowledge	58	58.6
Embarrassed or ashamed to discuss the topic	19	19.2
No time/busy	5	5.1
Do not know how to discuss the topic	6	6.1

Demographic Characteristic & Determinant Factors

A total of 106 parents participated in this study, the vast majority of whom were female (97.2%), with only 2.8% identifying as male. Most respondents were in the young adult age group (26–44 years), accounting for 84%, while 16% were classified as middle-aged (45–65 years). In terms of educational attainment, over half of the participants (52.8%) had a low level of education, having completed only elementary or middle school. Approximately 36.8% had completed high school, and 10.4% held a college degree. Regarding household income, 64.2% of the participants reported earning below the regional minimum wage (RMW) for Lebak Regency (Rp. 2.944.665), while 35.8% had income above the RMW.

Analysis of knowledge related to adolescent reproductive health (ARH) showed an equal distribution, with 50% of parents demonstrating low knowledge and 50% reporting high knowledge. Similarly, perceptions were fairly balanced, with 52.8% exhibiting a high perception of ARH communication and 47.2% reporting a low perception. In practice, 60.4% of respondents were categorized as having high levels of communication practice, while 39.6% reported low levels.

Approximately 67% of parents stated they had previously discussed ARH with their children, whereas 33% had never done so. Among those who had engaged in such discussions (n=71), the most frequently discussed topic was puberty (49.3%), followed by personal hygiene (25.3%). Other topics such as dating and religious norms around sexuality and reproduction were each discussed by 8.5% of parents, while adolescent pregnancy (5.6%) and sexual violence (2.8%) were addressed less frequently. A large majority (93.4%) of

parents reported encountering obstacles in discussing ARH with their children. The most commonly cited barrier was a lack of knowledge (58.6%), followed by feelings of embarrassment or shame (19.2%), concern about causing sexual stimulation or negative thoughts in children (10.1%), not knowing how to initiate the conversation (6.1%), limited time (5.1%), and fear that children might seek information from the internet (1%)

Table 2 Sample of coding process & generating themes

Quotation	Code	Category	Theme
The signs for girls are menstruation. For boys, I think it's their voice because it wasn't like this before (Mrs. Sf)	Physical changes as puberty markers	Physical Puberty Knowledge	Basic Understanding of Adolescent Reproductive Health
She uses a towel and says she has to be neat because she's grown up. (Mrs. Uk)	Self-awareness and modesty in adolescence	Psychosocial Changes	
You can be friends with boys or girls, but just don't date. (Mrs. Wl)	Friendship allowed, dating prohibited	Boundary Setting	
I often check the phone because I have it set to parent supervision mode. (Mrs. Sh)	Digital surveillance	Monitoring Digital Exposure	Education on Values and Norms
It's better in a WhatsApp group... (Mrs. Ls)	Digital group learning	Media Channel Preference	

To illustrate the process of theme generation in the qualitative analysis, a summary table containing selected quotations, codes, categories, and their corresponding themes is presented below (Table 2). This table serves as an example of how raw interview data were interpreted and organized.

Basic Understanding of Adolescent Reproductive Health

The majority of respondents demonstrated an initial comprehension of adolescent reproductive health, primarily emphasizing physical signs of puberty. The most commonly recognized indicators included menstruation, voice changes in boys, breast development, and increased attention to hygiene and appearance. These responses indicate that parental understanding remains grounded in biological and visible transformations, often interpreted through everyday observations of their children.

> *The signs for girls are menstruation. For boys, I think it's their voice because it wasn't like this before. (Mrs. Sf)*

> *She was shy to wear clothes, but now, since she's grown up, she says she's more mature. After taking a shower, she usually runs around, but now she uses a towel and says she has to be neat because she's grown up. (Mrs. Uk)*

Notably, psychological developments such as increased shyness, self-awareness, and curiosity were also acknowledged, reflecting parents' awareness of adolescence as a multifaceted developmental stage. These insights underscore a tacit recognition that adolescence involves more than physiological maturation. Hygiene-related practices during menstruation emerged as a focal point of parental guidance, especially among mothers, who often assumed responsibility for teaching their daughters. The emphasis on cleanliness, discretion in using sanitary products, and the importance of not exposing intimate matters to others points to a normative framework that blends health, modesty, and gendered socialization.

> *I tell her to maintain cleanliness, like washing her underwear herself. Also, when she wears sanitary napkins, I tell her not to let others see it. That's what I say, and she understands. (Mrs. Ls)*

Beyond bodily changes, parents expressed awareness of risky behaviors such as dating and exposure to pornography, recognizing these as pressing concerns in the contemporary social and digital landscape. While a general awareness was evident, parents' framing of these behaviors often reflected moral judgments rather than medically informed perspectives, suggesting a gap between knowledge and comprehensive sexual health literacy.

Education on Values and Norms Related to Adolescent Reproductive Health

Parents played a central role in transmitting social norms and moral expectations to their children, particularly around gender interaction and digital exposure. The dominant values communicated involved setting clear boundaries for behavior, especially with members of the opposite sex. Friendships were largely tolerated, but romantic involvement was strongly discouraged, often framed as premature and potentially disruptive to education.

> *It's fine to be friends, no problem. You can be friends with boys or girls, but just don't date... It's fine to just be friends. (Mrs. Wl)*

The digital environment was perceived as both a risk factor and a monitoring opportunity. All respondents shared a heightened awareness of the potential for exposure to pornography and other inappropriate content. Restrictions on smartphone use, ranging from supervised access to limited screen time, were prevalent with parental control tools being employed in some cases.

> *I often check the phone because I have it set to parent supervision mode... I tell her, 'If you see anything inappropriate, you shouldn't look at it. (Mrs. Sh)*

While these efforts reflect proactive parenting, they also reveal a reactive, often moralistic approach rooted in fear and surveillance rather than digital literacy. The advice given to children such as deleting or ignoring explicit content demonstrates an urgent desire to protect, though without deeper engagement or critical discussion about sexuality and media.

> *How do you tell them? I just tell her not to look at things like that. (Mrs. Rn)*

Additionally, physical modesty and self-protection were commonly emphasized, with a focus on appropriate clothing and avoiding public exposure. This aligns with cultural norms around propriety, particularly for girls, and further highlights the gendered expectations within parental guidance.

Parental Concerns Regarding External Challenges and Social Interactions

Parental anxieties extended beyond the home to the broader social environment. Concerns regarding peer influence, potential predators, and moral degradation in society were strongly voiced. The family, paradoxically, was perceived both as a protective unit and a potential source of harm, as evidenced by parents' reminders that inappropriate behavior can originate even from within the household.

> *Because nowadays, the predators can sometimes even come from within the family... I always remind her like that. (Mrs. Sh)*

The fear of dating was especially pronounced, often associated with fears of academic distraction and premature sexual engagement. Dating was viewed not merely as a social milestone, but as a potential gateway to risk and moral decline.

> *Dating, I'm afraid it might disrupt her education and her teenage years... in today's world, it's a different story." (Mrs. Ls)*

These concerns reveal an underlying moral panic regarding adolescence and sexuality, where protective instincts intersect with anxieties about modernity and media. Parents positioned themselves as both educators and gatekeepers, striving to insulate their children from perceived threats while imparting normative expectations.

The Dynamics of Reproductive Health Communication between Parents and Early Adolescents

Communication on reproductive health was found to be situational and often reactive rather than planned or developmental. Discussions were frequently limited to menstruation and hygiene and typically initiated only after the child had already experienced the onset of puberty.

Mostly it's about menstruation, that's it. (Mrs. Ob)

Moreover, conversations were brief and occurred sporadically, usually embedded within everyday tasks rather than designated dialogues. Parents frequently expressed concern about "over-communicating," fearing their children might grow uncomfortable, disinterested, or prematurely curious.

Oh, I only talk about it occasionally... I'm worried it might get boring for her. (Mrs. Sh)

Such infrequent communication reflects both a lack of confidence in discussing sensitive topics and a perception that reproductive health is a one-time conversation rather than an ongoing dialogue. Cultural norms and personal discomfort further restrict openness, reinforcing silence around topics deemed inappropriate for children.

Age perception played a critical role in communication timing. Parents often postponed conversations, assuming their children were "not yet ready," even when signs of puberty were evident. This perception created a communication lag, risking missed opportunities for early and preventive education.

The challenges and barriers in communication about reproductive health topics

Several interrelated barriers impeded open reproductive health communication. First, the cultural taboo surrounding sexuality and bodily discussions was a primary constraint. Topics such as genitals or sexual behavior were shrouded in euphemisms or avoided altogether, driven by a fear of encouraging curiosity or disrespect.

Because there are things that are considered taboo, like private parts... I have taught them that no one should see except themselves. (Mrs. Sh)

Second, embarrassment both on the part of the child and parent hindered effective dialogue. Parents described their children as resistant to discussing sensitive issues, often exhibiting discomfort or disinterest. This response, however, was rarely explored further, and parents tended to accept it as natural rather than addressable.

Yes, it's more about the shame. They might think, 'Oh, maybe I'm too young to talk about it. (Mrs. En)

Third, technological anxiety and fear of digital exposure served as both a motivation and a barrier. Parents sought to prevent harm by limiting access, but lacked the tools or confidence to engage in critical conversations about media literacy or sexual content.

Yes, that's why I don't give them too much freedom with their phones... I try to control their phone usage. (Mrs. Rn)

Collectively, these findings point to a complex web of socio-cultural constraints, informational gaps, and intergenerational dynamics that inhibit reproductive health communication.

Parental Role in Adolescent Reproductive Health Education Based on Gender

This theme identifies categories regarding the contributions of fathers and mothers in communicating reproductive health to their children. The interview results show that most respondents experience differences in communication patterns and the intensity of involvement between fathers and mothers in child education activities. Notably, the father's role in reproductive health communication appears to be very limited. Some respondents mentioned that their fathers work in other cities and only return home once a week. Other respondents indicated that their fathers are indifferent or unconcerned about discussions related to reproductive health.

Gendered divisions of labor were evident in how parents assumed responsibility for reproductive health education. Across all interviews, mothers emerged as the primary communicators, responsible for both instruction and emotional labor.

When we talk, his father doesn't really care. (Mrs. Sm)

Because he tells everything to me. (Mrs. Ls)

In instances where fathers did participate, it was often in a limited or secondary capacity, such as supervising behavior or intervening when mothers felt overwhelmed.

I just tell him, 'Just let your father talk to you about it'... But if it's something I can still manage, I'll do it myself." (Mrs. Wl)

These patterns reflect broader patriarchal norms where emotional and reproductive health labor is feminized. Fathers' disengagement may stem from discomfort, lack of knowledge, or a belief that such topics are outside their domain. This gender imbalance may further restrict male adolescents' access to male-specific guidance, leaving gaps in reproductive health education for boys.

Needs for Materials, Methods, and Media for Early Adolescent Reproductive Health Education

All respondents expressed a need for practical guidance on how to educate their children about puberty and reproductive health. There was a consensus that while parents understood the importance of early education, they lacked both the material and methodological support to do so effectively.

Maybe just about that, ma'am, maybe puberty. (Mrs. Wl)

The topic is about the child's issues, like how to approach the child... (Mrs. Sf)

In terms of delivery methods, parents favored interactive, face-to-face engagements over passive content consumption. Educational sessions were preferred for their ability to foster dialogue, ask questions, and clarify misconceptions.

Maybe from talking, that could work, but with videos, we can't ask questions. (Mrs. Rn)

It's better to have a face-to-face meeting like that. Just tell it to the mother. (Mrs. Sm)

WhatsApp groups emerged as a popular medium due to their accessibility and daily usage, especially among school-based parent networks. These groups served as informal yet effective platforms for peer learning and information exchange.

It's better in a WhatsApp group than gathering like this. (Mrs. Ls)

Books were also mentioned as helpful resources, particularly those resembling maternal-child health manuals that parents were already familiar with.

I like to read books like the KIA book... Sometimes, there are WhatsApp groups, like the pregnancy groups, and I still read those." (Mrs. Rn)

The findings suggest that reproductive health education must be multi-modal, culturally sensitive, and embedded within platforms parents already trust and use. Education initiatives should consider parent-centric formats, such as workshops and digital forums, that align with parental learning habits and community dynamics.

Discussion

The first theme provides an overview of parents' knowledge and their needs in educating their children on reproductive health. A basic understanding of reproductive health, encompassing biological aspects, anatomical awareness, physical development**,** puberty, and personal hygiene, is emphasized. The term "body education" has been refined to reflect an understanding of the human body's anatomy, functions, and changes during puberty, particularly concerning sexual and reproductive development. These findings are consistent with similar reports (Akatukwasa et al., 2022; Mbachu et al., 2020). Rather than merely corroborating prior findings, these results emphasize that such foundational knowledge is essential for parents to confidently initiate discussions, correct misinformation, and tailor communication strategies to their child's developmental stage. Additionally, education on values and norms, emphasizing social, religious, or cultural principles, is conveyed to children to help them navigate adolescence, as also reported in other studies (Kapetanovic et al., 2020; Mbarushimana et al., 2022). This underscores the dual role parents play in transmitting both biological knowledge and moral frameworks, a balance particularly crucial in contexts where formal sex education is limited or contested.

The subsequent theme addresses parental concerns and how their perceptions influence the need for reproductive health communication with adolescents. Concerns regarding external challenges, including perceptions of threats from the social environment and adolescents' interactions with the outside world, are identified. These perceptions have been shown to act as either drivers or barriers to reproductive health

communication. Similar findings have been reported in related research (Othman et al., 2020; Yimer & Ashebir, 2019). However, this study extends prior work by illustrating how parental fear especially surrounding peer influence, digital exposure, and precocious social behavior leads to heightened monitoring but does not necessarily translate into increased or effective communication. The tension between protection and silence creates an internal conflict for parents, particularly when they lack reliable knowledge or feel culturally constrained.

The theme of values and culture in reproductive health communication highlights the influence of social, cultural, and religious norms on parent-child communication. Barriers to communication due to taboos and normative reasons, such as the topic of covering intimate parts, are critical considerations when developing educational programs for parents. These challenges have been similarly documented in prior studies (Kumalasari et al., 2019; Noe et al., 2018). Another significant barrier is the belief that children are too young to discuss sensitive topics. Considering the trend of earlier puberty, often occurring at ages 10–12, early initiation of puberty education has been suggested. This study contributes to the literature by showing how cultural taboos manifest differently across families some parents delay conversations entirely, while others speak only in metaphors or euphemisms leading to gaps in adolescents' understanding and increased vulnerability to misinformation. Moreover, practical strategies for overcoming such taboos could involve framing reproductive health in terms of child protection, cleanliness, and religious obligations, thus making the discourse more culturally acceptable. This recommendation aligns with findings from studies on puberty onset (Kågesten et al., 2021; Setyowati et al., 2019).

The challenges encountered by parents form another theme. Concerns regarding the negative impact of digital technology use have led parents to restrict their children's mobile phone use. However, the absence of concrete rules regarding appropriate and inappropriate content limits the potential for receiving positive information from digital media. This issue is linked to parents' low confidence due to inadequate reproductive health information. It has been recommended that restrictions on mobile phone use should be accompanied by training for parents on leveraging technology as an educational tool. These findings corroborate prior research (Kusumaningrum et al., 2022; Parkes et al., 2013). A smoother narrative transition highlights that these digital anxieties also intersect with broader parenting uncertainties. For instance, the ambiguity about what counts as "dangerous" content often results in blanket bans, which may inadvertently hinder opportunities for guided learning. This underscores a broader need for interventions that not only build knowledge but also digital literacy and content evaluation skills among parents.

The dynamics of reproductive health communication between parents and children are illustrated as another theme. This theme underscores the complexity of methods, content, timing, and strategies employed in discussing reproductive health. Open communication patterns and a close parent-child relationship have been identified as essential factors for effective reproductive health education. This aligns with findings from previous studies (Somers et al., 2019). It has been suggested that parents should be equipped with a broader range of topics relevant to early adolescents, including physiological, psychological, and social aspects, as well as adolescent peer relationships and preventive measures for reproductive health issues. Such recommendations are supported by prior research (Nash et al., 2019; Salehin, 2020; Shaluhiyah et al., 2017). These findings reinforce the argument that timing and relational closeness are not incidental but central to communication success. Parents with open communication styles reported greater ease and receptivity from their children, whereas those with authoritarian styles struggled with resistance or secrecy.

The theme regarding parenting patterns provides insights into the role of parents in reproductive health education. Parenting styles, gender role dynamics, and protective efforts have been described. Parenting styles reflect whether strict control or educational approaches are applied in reproductive health education strategies. Gender roles reveal that mothers are more dominantly involved as reproductive health educators, while fathers focus on supervision and rule enforcement. These findings are consistent with previous studies (Lindstrom et al., 2019; Mpondo et al., 2018; Pop & Rusu, 2015; Zakaria et al., 2019). However, this gendered division of labor is not only reflective of household roles but also of broader socio-cultural expectations about masculinity and caregiving. Fathers' limited involvement may stem from discomfort, lack of knowledge, or social norms that discourage male participation in emotionally sensitive topics. Programs seeking to improve adolescent reproductive health education should therefore consider gender-transformative approaches that actively engage fathers and challenge these normative constraints. (Boldt et al., 2021)

External factors influencing reproductive health education and adolescent behavior are explored as a final theme. Digital media is identified as both a source of positive information and a channel for negative content, such as pornography and sexual violence, which pose challenges to parents and adolescents. Peer relationships are also recognized as influential in shaping adolescents' reproductive health behaviors and understanding. These findings are consistent with earlier research (Chokprajakchad et al., 2020; Juariah, 2018; M. Scull et al., 2019). Importantly, this study illustrates that parental concern is often focused on risk avoidance, with less emphasis on equipping adolescents to critically assess peer and media influences. This signals the need for parent-based programs to include modules on adolescent media literacy and peer pressure navigation.

The results of the needs analysis regarding content, methods, and media have been utilized to design a reproductive health program tailored to parents' needs. Topics such as puberty, maturity, and approaches for discussing these subjects with children have been incorporated into educational materials. Delivery methods include school-based counseling and face-to-face meetings, while media such as books and WhatsApp group communication have been deemed effective. Instead of reiterating that the findings align with previous work, it is more pertinent to state that this needs analysis directly shaped programmatic elements ensuring culturally sensitive, accessible, and sustainable delivery formats**.** This needs analysis has been used as a foundation for designing interventions to enhance parents' capacities as educators of adolescent reproductive health. The effectiveness of similar interventions has been reported in prior studies (Baku et al., 2017; O'Donnell & Fuxman, 2017; Pinandari et al., 2023; Shokoohi-Yekta et al., 2015).

Strengths and Limitations of the Research

The data obtained adequately represents the views of the subjects, parents living in suburban areas in Indonesia. These findings may differ if the subjects were from urban areas or from communities with higher educational and economic levels. One limitation encountered early in data collection was the challenge of using terms such as reproductive health and puberty, which were often unfamiliar or uncomfortable for respondents. To obtain relevant information, the researcher used examples and terms that were easier to comprehend, such as health for children who have reached puberty. This methodological adaptation was essential for maintaining rapport and eliciting meaningful responses. Future studies should anticipate such linguistic barriers and develop culturally appropriate glossaries or visual aids to support participant comprehension. This is consistent with the characteristics of the study respondents, who have limited knowledge about reproductive health.

Conclusion

This study has provided an in-depth exploration of parents' perspectives on early adolescent reproductive health education in suburban Indonesia. The findings highlight that while parents recognize the importance of reproductive health knowledge including puberty, personal hygiene, and physical development they often lack the confidence, vocabulary, and culturally appropriate strategies to communicate effectively with their children. Cultural and religious values significantly shape communication practices, often reinforcing taboos and leading to delayed or euphemistic discussions. Furthermore, the role of digital media and peer influence emerges as a double-edged sword, simultaneously providing information and posing risks that many parents feel ill-equipped to manage. The study also underscores the gendered dimensions of parenting, where mothers predominantly act as communicators while fathers assume supervisory roles. This division, rooted in social norms and gender expectations, limits the potential for a more comprehensive and balanced educational environment for adolescents. Interventions that aim to improve parental capacity must therefore be gender-sensitive and culturally grounded, providing both mothers and fathers with tools and confidence to participate actively.

These insights have directly informed the design of a parent-focused reproductive health education program, incorporating not only biological and psychosocial content but also delivery methods suitable to the local context such as school-based counseling and WhatsApp-based communication. The program's responsiveness to local concerns, media literacy gaps, and parenting patterns enhances its relevance and sustainability. While this study was contextually situated in suburban communities with lower levels of reproductive health knowledge, it sheds light on the universal challenges faced by parents navigating adolescent transitions in conservative environments. Future research should explore scalable models of intervention and expand to include more diverse socio-economic and cultural settings. In doing so, a more inclusive and context-sensitive approach to reproductive health education can be developed to support both parents and adolescents during this critical life stage.

Conflict of Interest

The author declares no conflict of interest

Funding information

This research is supported by the Indonesia Ministry of Health, Indonesia

Acknowledgments

The authors express their gratitude to the supervisor at the Faculty of Public Health, Diponegoro University, for their valuable input and discussions during the preparation of this manuscript. Appreciation is also extended to all respondents for their willingness to participate in this research

Author contribution

All authors contributed to the development of the research concept and design. During subsequent stages, the first author took primary responsibility for data collection, analysis, and report preparation. The second, third, and fourth authors provided critical input into data analysis and manuscript review. Ultimately, all authors collaborated in finalizing the manuscript for publication.

Author's Biographies

Rery Kurniawati Danu Iswanto is a Student Program Doctoral of Public Health, Faculty of Public Health, Diponegoro University, Indonesia

Zahroh Shaluhiyah is a Lecturer at Department of Health and Promotion, Faculty of Public Health, Diponegoro University, Indonesia

Bagoes Widjanarko is a Lecturer at Public Health, Faculty of Public Health, Diponegoro University, Indonesia

Cahya Tri Purnami is a Lecturer at Department of Health Policy and Administration Program, Faculty of Public Health, Diponegoro University, Indonesia

References

Akatukwasa, C., Nyakato, V. N., Achen, D., Kemigisha, E., Atwine, D., Mlahagwa, W., Neema, S., Ruzaaza, G. N., Coene, G., Rukundo, G. Z., & Michielsen, K. (2022). Level and comfort of caregiver–young adolescent communication on sexual and reproductive health: a cross-sectional survey in south-western Uganda. *BMC Public Health*, *22*(1), 1–14. https://doi.org/10.1186/s12889-022-14561-3

Azimi, K. (2020). The Trend of Girl Child Marriage in Iran Based on National Census Data. *Sexual and Reproductive Health Matters*, *28*(1), 96–98. https://doi.org/10.1080/26410397.2020.1820655

Baku, E. A., Agbemafle, I., & Adanu, R. M. K. (2017). Effects of parents training on parents' knowledge and attitudes about adolescent sexuality in Accra Metropolis, Ghana. *Reproductive Health*, *14*(1), 1–15. https://doi.org/10.1186/s12978-017-0363-9

BKKBN. (2017). Survei Demografi Dan Kesehatan: Kesehatan Reproduksi Remaja 2017. *Badan Kependudukan Dan Keluarga Berencana Nasional*, 1–606. http://www.dhsprogram.com.

Chokprajakchad, M., Phuphaibul, R., Sieving, R. E., & Phumonsakul, S. (2020). Effectiveness of parent participation in a technology-based adolescent sexuality education program: A randomized control trial. *Pacific Rim International Journal of Nursing Research*, *24*(2), 219–233.

Cortez, R., Saadat, S., Marinda, E., & Odutolu, O. (2016). Adolescent fertility and sexual health in Nigeria. (Health, Nutrition and Population Discussion Paper). *Adolescent Fertility and Sexual Health in Nigeria*, *92*(April). https://doi.org/10.1596/24041

Cresswell, J. W. (2009). Research design: Qualitative, quantitative, and mixed methods approaches. In *Sage Publications*. Sage Publications.

Elnimeiri, M. K. M., Satti, S. S. M., & Ibrahim, M. K. M. (2020). Barriers of Access and Utilization of Reproductive Health Services by Adolescents-Khartoum State-Sudan-2020: Study Protocol. *Reproductive Health*, *17*(1), 1–6. https://doi.org/10.1186/s12978-020-00967-y

Giorgio, M. M., Utomo, B., Soeharno, N., Aryanty, R. I., Besral, Stillman, M., Philbin, J., Singh, S., & Sedgh, G. (2020). Estimating the Incidence of Induced Abortion in Java, Indonesia, 2018. *International Perspectives on Sexual and Reproductive Health*, *46*(May 2022), 211–222. https://doi.org/10.1363/46e0220

Hardy, M. N., Saraswati, L. D., & Udiyono, A. (2016). Gambaran Perkembangan Pubertas Dan Perbedaan Usia Awal Pubertas Pada Siswa - Siswi Sekolah Dasar (Studi Di Kecamatan Semarang Tengah Kota Semarang). *Jurnal Kesehatan Masyarakat (e-Journal)*, *4*(1), 153–158. https://ejournal3.undip.ac.id/index.php/jkm/article/view/11690

Juariah, J. (2018). Adolescents' reproductive health in north coastal line West Java: perceptions of adults. *Berita Kedokteran Masyarakat*. https://doi.org/10.22146/bkm.37288

Kågesten, A. E., Pinandari, A. W., Page, A., Wilopo, S. A., & van Reeuwijk, M. (2021). Sexual wellbeing in early adolescence: a cross-sectional assessment among girls and boys in urban Indonesia. *Reproductive Health*, *18*(1), 1–17. https://doi.org/10.1186/s12978-021-01199-4

Kapetanovic, S., Rothenberg, W. A., Lansford, J. E., Bornstein, M. H., Chang, L., Deater-Deckard, K., Di Giunta, L., Dodge, K. A., Gurdal, S., Malone, P. S., Oburu, P., Pastorelli, C., Skinner, A. T., Sorbring, E., Steinberg, L., Tapanya, S., Uribe Tirado, L. M., Yotanyamaneewong, S., Peña Alampay, L., Bacchini, D. (2020). Cross-Cultural Examination of Links between Parent–Adolescent Communication and Adolescent Psychological Problems in 12 Cultural Groups. *Journal of Youth and Adolescence*, *49*(6), 1225–1244. https://doi.org/10.1007/s10964-020-01212-2

Kumalasari, N., Kuswardinah, A., & Deliana, S. M. (2019). The Influence of Reproductive Health Education to Knowledge and Percieved Behavior Sexual Adolescent Control. *Public Health Perspective Journal*, *5*(07), 16–24.

Kusumaningrum, T. A. I., Suci, D. L., & Wulandari, D. (2022). Parents behavior for delivering adolescent reproductive health education. *International Journal of Public Health Science*, *11*(4), 1202–1209.

https://doi.org/10.11591/ijphs.v11i4.21440
Lindstrom, D. P., Liu, M. M., & Jira, C. (2019). The Role of Parents and Family Networks in Adolescent Health-Seeking in Ethiopia. *Journal of Marriage and Family*, *81*(4), 830–846. https://doi.org/10.1111/jomf.12567
M. Scull, T., V. Malik, C., M. Keefe, E., & Schoemann, A. (2019). Evaluating the Short-term Impact of Media Aware Parent, a Web-based Program for Parents with the Goal of Adolescent Sexual Health Promotion. *Journal of Youth and Adolescence*, *48*(9), 1686–1706. https://doi.org/10.1007/s10964-019-01077-0
Malango, N. T., Hegena, T. Y., & Assefa, N. A. (2022). Parent–adolescent discussion on sexual and reproductive health issues and its associated factors among parents in Sawla town, Gofa zone, Ethiopia. *Reproductive Health*, *19*(1), 1–12. https://doi.org/10.1186/s12978-022-01414-w
Mbachu, C. O., Agu, I. C., Eze, I., Agu, C., Ezenwaka, U., Ezumah, N., & Onwujekwe, O. (2020). Exploring Issues in Caregivers and Parent Communication of Sexual and Reproductive Health Matters with Adolescents in Ebonyi State, Nigeria. *BMC Public Health*, *20*(1), 1–10. https://doi.org/10.1186/s12889-019-8058-5
Mbarushimana, V., Conco, D. N., & Goldstein, S. (2022). "Such conversations are not had in the families": a qualitative study of the determinants of young adolescents' access to sexual and reproductive health and rights information in Rwanda. *BMC Public Health*, *22*(1), 1–15. https://doi.org/10.1186/s12889-022-14256-9
Mpondo, F., Ruiter, R. A. C., Schaafsma, D., Borne, B. van den, & Reddy, P. S. (2018). Understanding the role played by parents, culture and the school curriculum in socializing young women on sexual health issues in rural South African communities. *Journal of Social Aspects of HIV/AIDS*, *15*(1), 42–50.
Nash, K., O'Malley, G., Geoffroy, E., Schell, E., Bvumbwe, A., & Denno, D. M. (2019). "Our girls need to see a path to the future" - Perspectives on Sexual and Reproductive Health Information Among Adolescent Girls, Guardians, and Initiation Counselors in Mulanje District, Malawi. *Reproductive Health*, *16*(1), 1–13. https://doi.org/10.1186/s12978-018-0661-x
Noe, M. T. N., Saw, Y. M., Soe, P. P., Khaing, M., Saw, T. N., Hamajima, N., & Win, H. H. (2018). Barriers Between Mothers and Their Adolescent Daughters with Regards to Sexual and Reproductive Health Communication in Taunggyi Township, Myanmar: What Factors Play Important Roles? *PLoS ONE*, *13*(12), 1–17. https://doi.org/10.1371/journal.pone.0208849
O'Donnell, L., & Fuxman, S. (2017). Effectiveness of a Brief Home Parenting Intervention for Reducing Early Sexual Risks Among Latino Adolescents: Salud y Éxito. *Journal of School Health*, *87*(11), 858–864. https://doi.org/10.1111/josh.12560
Othman, A., Shaheen, A., Otoum, M., Aldiqs, M., Hamad, I., Dabobe, M., Langer, A., & Gausman, J. (2020). Parent–child Communication About Sexual and Reproductive Health: Perspectives of Jordanian and Syrian Parents. *Sexual and Reproductive Health Matters*, *28*(1), 313–323. https://doi.org/10.1080/26410397.2020.1758444
Parkes, A., Wight, D., Hunt, K., Henderson, M., & Sargent, J. (2013). Are sexual media exposure, parental restrictions on media use and co-viewing TV and DVDs with parents and friends associated with teenagers' early sexual behaviour? *Journal of Adolescence*, *36*(6), 1121–1133. https://doi.org/10.1016/j.adolescence.2013.08.019
Pinandari, A. W., Kågesten, A. E., Li, M., Moreau, C., van Reeuwijk, M., & Wilopo, S. A. (2023). Short-Term Effects of a School-Based Comprehensive Sexuality Education Intervention Among Very Young Adolescents in Three Urban Indonesian Settings: A Quasi-Experimental Study. *Journal of Adolescent Health*, *73*(1, Supplement), S21–S32. https://doi.org/https://doi.org/10.1016/j.jadohealth.2023.01.030
Pop, M. V., & Rusu, A. S. (2015). The Role of Parents in Shaping and Improving the Sexual Health of Children – Lines of Developing Parental Sexuality Education Programmes. *Procedia - Social and Behavioral Sciences*, *209*, 395–401. https://doi.org/10.1016/J.SBSPRO.2015.11.210
Salehin, S. (2020). Iranian mothers' needs for reproductive health education of their adolescent daughters: a qualitatif study. *International Journal of Adolescent Medicine and Health.*, *20180144*, 1–13. https://doi.org/10.1515/ijamh-2018-0144
Setyowati, S., Rizkia, M., & Ungsianik, T. (2019). Improving Female Adolescents' Knowledge, Emotional Response, and Attitude toward Menarche following Implementation of Menarcheal Preparation Reproductive Health Education. *Asian/Pacific Island Nursing Journal*, *4*(2), 84–91. https://doi.org/10.31372/20190402.1041
Shaluhiyah, Z., Suryoputro, A., & Setyawati, A. (2017). The Needs of Information Services on Reproductive Health, STIs and HIV in Middle Adolescence. *Jurnal Kesehatan Masyarakat; Vol 12, No 2 (2017)DO - 10.15294/Kemas.V12i2.5366* . https://journal.unnes.ac.id/nju/kemas/article/view/5366/6031
Shokoohi-Yekta, M., Malayeri, S. A., Zardkhaneh, S. A., & Mahmoudi, M. (2015). Effectiveness of an Intervention Program to Improve Parent-Adolescent Relationships. *Procedia - Social and Behavioral Sciences*, *205*, 43–47. https://doi.org/10.1016/J.SBSPRO.2015.09.009
Somers, C., Avendt, E., & Sepsey, A. (2019). Parent-adolescent sexual dialogue: Does content and approach matter in adolescent sexual attitudes and behaviors? *Health Education*, *119*(3), 215–229.

https://doi.org/10.1108/HE-08-2018-0038
Stillman, M., Leong, E., Utomo, B., Dadun, D., Aryanty, R. I., Sedgh, G., & Giorgio, M. M. (2020). An Application of The Confidante Method to Estimate Induced Abortion Incidence in Java, Indonesia. *International Perspectives on Sexual and Reproductive Health*, *46*(May 2022), 199–210. https://doi.org/10.1363/46e0120
Suhariyati, S., Haryanto, J., & Probowati, R. (2020). Trends of Early Marriage in Developing Countries: A Systematic Review. *Jurnal Ners*, *14*(3), 277. https://doi.org/10.20473/jn.v14i3.17019
World Health Organization. (2018). *WHO Recommendations On Adolescent Sexual and Reproductive Health and Rights*. http://apps.who.int/iris.
Yimer, B., & Ashebir, W. (2019). Parenting perspective on the psychosocial correlates of adolescent sexual and reproductive health behavior among high school adolescents in Ethiopia. *Reproductive Health*, *16*(1), 1–9. https://doi.org/10.1186/s12978-019-0734-5
Zakaria, M., Xu, J., Karim, F., & Cheng, F. (2019). Reproductive Health Communication Between Mother and Adolescent Daughter in Bangladesh: A Cross-sectional Study. *Reproductive Health*, *16*(1), 114. https://doi.org/10.1186/s12978-019-0778-6