Strengthening Understanding of Adolescent and Maternal Reproductive Health in Indonesia and Suriname: a Collaborative Community Service Program Using a Participatory Qualitative Approach

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Abstract

Background: An adequate understanding of reproductive health is fundamental to preventing adolescent pregnancy, sexually transmitted infections, gender-based violence, and complications during pregnancy and childbirth. Adolescents and mothers in Indonesia and Suriname continue to face gaps in access to accurate, safe, and culturally appropriate reproductive health information. Objective: This community service program aimed to strengthen adolescents' and mothers' understanding of reproductive health through an Indonesia–Suriname collaborative initiative using a participatory qualitative approach. Methods: The program was implemented through collaboration among academics, university students, healthcare professionals, teachers, community health volunteers, and local stakeholders in Indonesia and Suriname. A qualitative approach was employed through participant observation, focus group discussions, in-depth interviews, and document analysis. Participants included adolescents, mothers, teachers, community health volunteers, and healthcare professionals. Data were analyzed thematically through data condensation, data display, and conclusion drawing. Results: The program enhanced participants' understanding of reproductive anatomy and physiology, personal hygiene, menstruation, adolescent pregnancy prevention, sexually transmitted infections, adolescent mental health, parent–adolescent communication, violence prevention, and care during pregnancy and childbirth. The main themes identified were limited reproductive health literacy, the influence of myths and stigma, the important roles of families and schools, the need for adolescent-friendly health services, and the effectiveness of a participatory, community-based approach. Conclusion: The collaborative Indonesia–Suriname community service program, grounded in a participatory qualitative approach, effectively strengthened adolescents' and mothers' understanding of reproductive health. Sustaining the program requires the continued involvement of schools, primary healthcare facilities, community organizations, families, and local governments.

Keywords: *adolescent reproductive health; maternal reproductive health; health literacy; community service; qualitative approach; Indonesia–Suriname collaboration*

Introduction

Reproductive health refers to a state of physical, mental, and social well-being in all matters relating to the reproductive system and its functions and processes. A sound understanding of reproductive health encompasses not only knowledge of anatomy and physiology but also the ability to make safe, responsible, and rights-based decisions (World Health Organization [WHO], 2023).

Adolescents are particularly vulnerable to reproductive health problems, including unintended pregnancy, early childbearing, sexually transmitted infections, sexual violence, and stigma

associated with accessing healthcare services. WHO (2025) emphasizes that comprehensive sexuality education, access to adolescent-friendly health services, and the prevention of child marriage are important strategies for reducing adolescent pregnancy and improving the health of young women.

In Indonesia, adolescent reproductive health literacy varies and is influenced by families, teachers, peers, and healthcare professionals. A study involving female students at Islamic secondary schools found that reproductive health literacy was moderate and remained inadequate, with support from teachers and families identified as influential factors (Nasution et al., 2023). Limited open communication between parents and adolescents also frequently leads adolescents to obtain information from unreliable sources, including social media (Ministry of Health of the Republic of Indonesia, 2023).

Similar challenges are evident in Suriname, particularly among coastal and interior communities, including Indigenous and tribal populations. Findings from the Multiple Indicator Cluster Survey and the MILENA study indicate high levels of adolescent pregnancy and early childbearing in rural and interior areas of Suriname. These outcomes are associated with lower educational attainment, socioeconomic disadvantage, and limited knowledge of family planning and contraception (United Nations Population Fund [UNFPA] Caribbean, 2024). In the districts of Brokopondo, Marowijne, and Sipaliwini, adolescent birth rates have been reported to be substantially higher than the national average (UNFPA Caribbean, 2024).

Mothers play a strategic role in shaping children's and adolescents' understanding of reproductive health. Mothers with adequate knowledge can serve as primary sources of information within the family, support their children through puberty, discourage unhealthy practices, and recognize warning signs during pregnancy and childbirth. However, these roles are often constrained by cultural myths, embarrassment, limited communication skills, and unequal access to information (Ministry of Health of the Republic of Indonesia, 2022).

The collaborative Indonesia–Suriname community service program was developed in response to the shared challenges faced by both countries in strengthening adolescent and maternal reproductive health. At the same time, the two countries offer cultural resources, community experience, and opportunities for mutual learning. A participatory qualitative approach enables the program team to develop an in-depth understanding of community experiences, needs, barriers, and cultural values, rather than focusing solely on quantitative measures of knowledge improvement (Creswell & Creswell, 2018).

The program aimed to improve adolescents' understanding of reproductive health, puberty, personal hygiene, adolescent pregnancy prevention, sexually transmitted infections, and mental health; strengthen mothers' capacity to communicate reproductive health information within the family; identify cultural, social, and structural barriers to accessing reproductive health information; and develop a sustainable model of cross-national collaboration among academics, healthcare professionals, schools, and communities in Indonesia and Suriname.

Methods

Program Design

community service program employed a collaborative, participatory design with a qualitative approach. This approach was selected to explore participants' experiences, perceptions, social norms, and practical barriers related to reproductive health (Miles, Huberman, & Saldaña, 2014). Program activities included interactive education, group discussions, mentoring, and collective reflection.

The collaboration involved academics and university students from Indonesia, together with academic partners, healthcare professionals, teachers, community health volunteers, community organizations, and local stakeholders in Suriname. Local partners were involved to ensure that the educational materials were appropriate to local languages, cultural values, community needs, and healthcare service contexts (UNFPA Caribbean, 2025).

Program Setting and Delivery

The program was delivered in a hybrid format, combining face-to-face activities at partner sites in Indonesia and Suriname with online sessions for coordination, facilitator training, and joint

evaluation. The target groups comprised adolescents aged 12–19 years, mothers of reproductive age, teachers, community health volunteers, and community healthcare professionals.

Participants and Recruitment

Participants were selected purposively according to the following criteria:

Adolescents aged 12–19 years who were willing to participate in the full program.

Mothers of adolescent children or women serving as primary caregivers.

Teachers, community health volunteers, or healthcare professionals involved in reproductive health education and service provision.

Willingness to provide informed consent.

Parental or guardian consent for adolescents younger than 18 years.

The number of participants was determined by the adequacy of the qualitative data, with recruitment continuing until no substantially new information or themes emerged, indicating data saturation.

Program Stages

The program was implemented in five stages.

The first stage involved a needs assessment. The team conducted preliminary observations, brief interviews, and discussions with partners to identify priority reproductive health issues.

The second stage involved the development of educational materials. Materials were prepared using guidance from WHO, the Ministry of Health of the Republic of Indonesia, and UNFPA, and were subsequently adapted to the cultural contexts of Indonesia and Suriname.

The third stage comprised facilitator training. Teachers, community health volunteers, university students, and healthcare professionals received training to facilitate reproductive health education.

The fourth stage involved the delivery of educational activities through interactive presentations, educational games, case studies, role-playing, demonstrations, group discussions, and question-and-answer sessions.

The final stage consisted of evaluation and follow-up. Evaluation activities included end-of-program focus group discussions, participant reflection, partner feedback, and the development of a sustainability plan.

Program Content

The educational content covered reproductive anatomy and physiology; pubertal changes in boys and girls; personal and reproductive hygiene; menstrual health and the management of menstrual pain; adolescent pregnancy and child marriage prevention; sexually transmitted infections and HIV prevention; adolescent mental health and emotional regulation; effective parent–adolescent communication; the prevention of sexual and gender-based violence; reproductive rights and access to adolescent-friendly health services; healthy pregnancy, pregnancy warning signs, birth preparedness, and postpartum care; and nutrition for pregnant and breastfeeding women and adolescents.

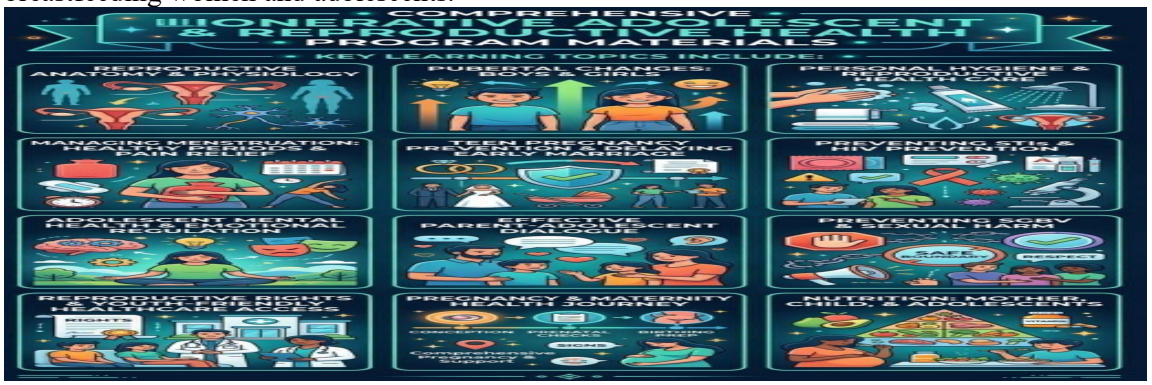


Figure 1. Material of communiti services

Data Collection

Data were collected through participant observation during educational activities and discussions, separate focus group discussions with adolescents and mothers, and in-depth interviews with teachers, community health volunteers, healthcare professionals, and community leaders. Documentary materials included field notes, recordings of program activities, photographs, participant worksheets, and educational resources.

The interview guide explored participants' understanding of reproductive health, sources of information, communication barriers, experiences of reproductive health concerns, the roles of families and schools, and expectations of healthcare services.

Data Analysis

Data were analyzed thematically. The analysis involved transcribing interview and focus group data, repeatedly reading the transcripts to become familiar with the data, conducting open coding to identify units of meaning, grouping codes into categories and themes, presenting findings through narrative accounts and thematic matrices, and drawing conclusions. Findings were validated through member checking.

Trustworthiness was strengthened through triangulation across data sources and collection methods, discussions among researchers, and confirmation of findings with local partners (Lincoln & Guba, 1985).

Ethical Considerations

The program upheld the principles of informed consent, confidentiality, anonymity, participant safety, voluntary participation, the right to decline or withdraw, and the protection of adolescents. Reproductive health discussions were conducted in a scientifically grounded, respectful, and age-appropriate manner. The educational materials were intended not to encourage risk-taking behavior but to strengthen adolescents' and families' capacity to make healthy and responsible decisions.

Results and Discussion

Participant Overview

Participants included adolescents, mothers, teachers, community health volunteers, and healthcare professionals from partner sites in Indonesia and Suriname. Most adolescents reported that they had received reproductive health information from schools, the internet, peers, or family members. However, this information was often incomplete and created confusion.

Mothers expressed a desire to support their adolescent children but reported difficulty initiating conversations about puberty, menstruation, adolescent relationships, and pregnancy prevention. Some mothers acknowledged relying on prohibitions without providing explanations, which encouraged adolescents to seek information elsewhere.

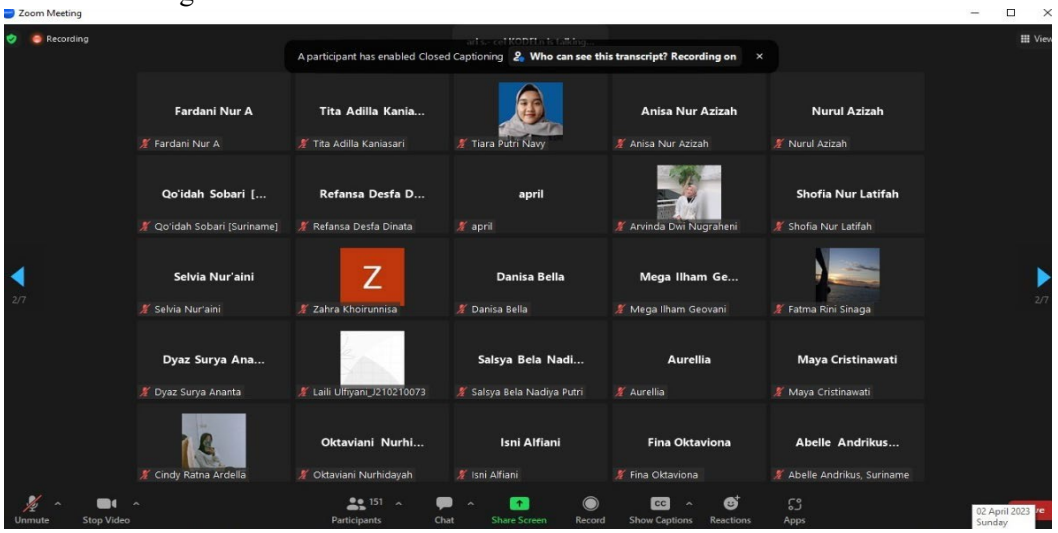


Figure 2: Activity of community services

Adolescents' Initial Understanding

Observations and focus group discussions indicated that adolescents' initial understanding of reproductive health centered primarily on biological aspects, particularly menstruation, nocturnal emissions, and the physical changes associated with puberty. Their understanding of reproductive rights, sexual violence prevention, mental health, and access to adolescent-friendly health services remained limited.

Adolescents also described prevailing community myths, including the belief that discussing reproductive health encourages adolescent sexual activity. In contrast, age-appropriate comprehensive sexuality education helps adolescents understand their bodies, recognize social pressures, prevent violence, and access healthcare services appropriately (UNESCO, 2018; WHO, 2025).

Figure 1. Educational materials used in the community service program.

Mothers' Role in Family-Based Education

Mothers served as an initial source of information for their children, particularly regarding menstruation, personal hygiene, physical changes, and moral values. However, their ability to communicate reproductive health information was influenced by their knowledge, personal experiences, cultural norms, and the degree of openness within the family.

Figure 2. Implementation of the community service program.

After participating in the program, mothers reported greater confidence in supporting their adolescent children. They recognized the importance of listening without judgment, using age-appropriate language, and referring their children to healthcare professionals when more complex concerns arose. This finding is consistent with evidence identifying family support as an important factor influencing adolescent reproductive health literacy (Nasution et al., 2023).

Improvements in Understanding Following the Program

Qualitative findings indicated improvements in participants' understanding across several key areas, as summarized in Table 1.

Table 1. Qualitative changes in participants' understanding following the program.

Area	Initial condition	Changes following the program
Puberty and hygiene	Understanding was limited and influenced by myths.	Participants could explain pubertal changes and appropriate hygiene practices.
Menstruation	Menstruation was still regarded as taboo and a source of embarrassment.	Participants understood the menstrual cycle, menstrual hygiene, and signs of menstrual abnormalities.
Adolescent pregnancy	Adolescent pregnancy was viewed primarily as an individual problem.	Participants recognized its health, educational, social, and economic consequences.
Sexually transmitted infections	Knowledge was limited.	Participants understood routes of transmission, prevention, and the importance of testing.
Family communication	Communication tended to be restricted.	Mothers and adolescents became more open to discussion.
Sexual violence	The topic was rarely discussed.	Participants could recognize forms of violence, understand their rights, and identify ways to seek help.
Healthcare services	Accessing services was perceived as embarrassing, or services were considered insufficiently adolescent-friendly.	Participants understood their right to access healthcare and the role of healthcare professionals.

These findings suggest that interactive education involving both adolescents and mothers can strengthen understanding and support healthier communication within families.

Barriers to Strengthening Reproductive Health

The thematic analysis identified four principal barriers: stigma and taboos, limited health literacy and access to reliable information, insufficient adolescent-friendly services, and social and geographical inequalities.

Reproductive health continued to be regarded as a sensitive topic, making adolescents and parents reluctant to discuss it openly. Stigma may also discourage adolescents from accessing healthcare services (WHO, 2025).

Adolescents frequently obtained information from the internet and peers, but not all of this information was accurate. Limited reproductive health literacy was associated with reduced ability to evaluate information and make informed health decisions (Nasution et al., 2023).

Some participants reported feeling embarrassed or fearing negative judgment when consulting healthcare professionals. Adolescent-friendly health services therefore need to be accessible, confidential, nonjudgmental, and responsive to adolescents' needs (WHO, 2019).

In Suriname, interior communities and Indigenous populations face barriers to reproductive healthcare and comprehensive sexuality education. UNFPA Caribbean (2024) reported substantially higher adolescent birth rates in interior areas than the national average, highlighting the importance of addressing geographical inequalities.

Value of the Participatory Qualitative Approach

The participatory qualitative approach helped the program team understand reproductive health concerns within their local contexts. Through focus group discussions and interviews, the team not only delivered educational content but also listened to participants' lived experiences. This process made the educational materials more relevant and acceptable to participants.

The involvement of mothers, teachers, community health volunteers, and healthcare professionals from the planning stage fostered a sense of program ownership. Participants were not merely recipients of information; they also contributed to developing practical solutions. This participatory approach is consistent with UNFPA recommendations that efforts to strengthen adolescent reproductive health should integrate communities, families, schools, and healthcare services (UNFPA Caribbean, 2025).

Contribution of Indonesia–Suriname Collaboration

The Indonesia–Suriname collaboration created opportunities to exchange experiences in reproductive health education. Indonesia contributed experience in engaging community health volunteers, integrated community health posts (posyandu), community health centers (puskesmas), and schools in health promotion. Suriname contributed experience in community-based comprehensive sexuality education, particularly among Indigenous and tribal populations.

This exchange enriched the program's strategies. For example, learning groups involving mothers and community health volunteers, commonly used in Indonesia, could inform efforts to strengthen family support in Suriname. Conversely, community dialogue and the engagement of Indigenous youth in Suriname could inform adolescent empowerment approaches in Indonesia (UNFPA Caribbean, 2024).

Follow-Up and Sustainability

Program sustainability requires coordinated action at the family, school, community, and healthcare service levels. Priorities include establishing reproductive health peer educator groups in schools and communities, providing regular training for teachers, community health volunteers, and healthcare professionals, and developing bilingual educational modules adapted to the languages and cultural contexts of participating communities in Indonesia and Suriname.

Further priorities include strengthening adolescent-friendly services at community health centers, clinics, and other community healthcare facilities, alongside establishing regular parent–adolescent communication forums. Sustainable partnerships among universities, local health authorities, schools, community organizations, and international partners are also essential. Annual monitoring and evaluation should assess knowledge, attitudes, communication skills, and the use of healthcare services.

Conclusion

The collaborative Indonesia–Suriname community service program, using a participatory qualitative approach, strengthened adolescents' and mothers' understanding of reproductive health. Improvements were evident in participants' understanding of puberty, reproductive hygiene, menstruation, adolescent pregnancy prevention, sexually transmitted infections, mental health, family communication, violence prevention, and healthcare service use.

The principal barriers identified were stigma, taboos, limited health literacy, restricted family communication, insufficient adolescent-friendly services, and geographical inequalities in access. Strengthening reproductive health therefore requires sustained collaboration among families, schools, healthcare facilities, communities, universities, and government institutions.
The program indicates that a participatory qualitative approach can support not only knowledge development but also critical awareness, communication skills, and community empowerment. Indonesia–Suriname collaboration offers a potential model for sustainable international community service initiatives aimed at strengthening adolescent and maternal reproductive health.

Acknowledgments

The authors thank all participants, academic partners, healthcare professionals, teachers, community health volunteers, community organizations, university students, and stakeholders in Indonesia and Suriname for their support and contributions to the implementation of this community service program.

Conflict of Interest Statement

The authors declare no conflicts of interest related to the preparation and publication of this article.

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