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Empowerment of Mother's Groups to Improve Adolescent Reproductive Health

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ABSTRACT
Adolescent reproductive health is a multidimensional issue encompassing physical, mental, and social well-being. In rural communities such as Telogo Pojok Village, Gresik, discussions about reproductive health between parents and adolescents are often considered taboo, resulting in limited parental involvement and inadequate adolescent understanding of sexual health risks. This condition contributes to early sexual activity, poor hygiene practices, and vulnerability to reproductive health problems. This action research aimed to empower mothers to improve their knowledge and active role in monitoring adolescent reproductive health. The intervention was conducted in five phases: health education, group mentoring, maternal monitoring, empowerment, and evaluation. Forty mothers representing each neighborhood unit (RT) participated in structured sessions facilitated by qualified mentors. Data were collected through pre- and post-tests, observational monitoring, and self-reported questionnaires. Results showed a significant increase in maternal knowledge, with the proportion of mothers categorized as having "good" knowledge rising from 25% to 47.5% after the intervention. All mothers (100%) demonstrated active involvement in educating and monitoring their adolescent children, compared to none prior to the program. Adolescents monitored showed normal reproductive development, good hygiene practices, and no reported health issues. In conclusion, the study demonstrates that structured mentoring and empowerment of mothers can effectively enhance adolescent reproductive health outcomes. The findings highlight the importance of family-based interventions and culturally sensitive education in addressing reproductive health challenges in rural settings.
Keywords: adolescent reproductive health; maternal empowerment; mentoring; parental involvement

INTRODUCTION
Adolescent reproductive health refers to a state of complete physical, mental, and social well-being; not merely the absence of disease or infirmity in all matters related to the reproductive system, its functions, and processes. In recent years, adolescents have adopted more liberal attitudes toward sexuality compared to their parents, with increased opportunities for romantic relationships, dating, and even premarital sexual activity. Among the most pressing reproductive health issues facing adolescents is premarital sex.(1-3)

According to the 2012 Indonesian Demographic and Health Survey (SDKI), premarital sexual activity among adolescents begins as early as age 15.(4) The same survey revealed that reproductive health knowledge among adolescents remains inadequate: only 35.3% of girls and 31.2% of boys aged 15–19 understood that pregnancy can occur from a single sexual encounter. The prevalence of dating behavior is nearly equal between urban and rural areas, indicating that geographic location does not significantly influence adolescent exposure to sexual relationships. These findings underscore the critical role of parents in monitoring and guiding adolescents through the physical and emotional changes of puberty.(5)

The emergence of reproductive health problems among adolescents often reflects insufficient parental supervision and limited adolescent understanding of sexual risks, healthy living, and the ability to resist unwanted sexual advances. Research has shown that adolescent commitment plays a significant role in maintaining reproductive health. Commitment is measured through indicators such as interest and awareness to act.(6) Adolescents who demonstrate strong interest and awareness are more likely to engage in positive reproductive health behaviors. This aligns with behavioral theory, which posits that individual actions are shaped by interest, intention, and awareness of the consequences, whether positive or negative of those actions.(7-9)

Adolescents with strong commitment and awareness require family support, particularly from mothers, to reinforce behaviors such as genital hygiene, menstrual management, and recognition of reproductive system disorders. Maternal support serves as a positive internal force for adolescents. This is consistent with empowerment theory, which defines

empowerment as a process that enables individuals to gain control over decisions and actions that affect their reproductive health and prevent sexually transmitted infections.[10]

Sexually transmitted infections (STIs) are a major reproductive health concern among adolescents, often resulting from unsafe sexual practices. Adolescents and young adults represent the age group most affected by STIs compared to other age cohorts. Given their rapid physical development and natural curiosity, adolescents possess great potential that must be channeled into constructive activities. Parental involvement is essential, especially as adolescents begin to shift socially from dependence on parents to reliance on peers. This developmental transition from dependence to independence is a natural part of adolescence.[11]

Therefore, empowering parents; particularly mothers is crucial to ensure they can effectively monitor and support their adolescent children's reproductive health. Family-based interventions offer a strategic pathway to improving adolescent reproductive health outcomes.

Demographic data from the Gresik District Civil Registry Office show that by the end of 2015, the population of Gresik was 1,303,773, comprising 655,460 males and 648,313 females. With a land area of 1,191.25 km², the population density was 1,094.46 people/km². The sex ratio was 1:1.011. Nationally, adolescents account for approximately 30% of Indonesia's total population. If managed properly, this demographic segment represents a valuable asset for national development, particularly in terms of reproductive health quality.

The 2013 Basic Health Research (*Riskesdas*) reported that reproductive health issues often begin with early marriage or cohabitation. Among women aged 10–54, 2.6% were married before age 15, and 23.9% between ages 15–19. Early marriage is a reproductive health concern because it extends the reproductive lifespan. The pregnancy rate among women aged 10–54 was 2.68%, with 0.02% occurring under age 15 and 1.97% among adolescents aged 15–19. Without proper family planning, this trend could significantly impact Indonesia's fertility rate. Adolescent pregnancies under age 20 carry a 2–4 times higher risk of maternal and infant mortality compared to pregnancies in women aged 20–35.[12]

Given the magnitude of these challenges, one effective strategy is to provide structured mentoring for mothers of adolescents. Previous research found that only 32% of mothers (from a sample of 31) possessed good knowledge of adolescent reproductive health. Expert discussions with the East Java BKKBN during a 2016 research grant program revealed that cultural norms continue to dominate reproductive health discourse, particularly regarding early marriage. Parents often consider reproductive health discussions taboo, resulting in adolescents receiving little information from their families about menstruation and sexual relationships. Instead, adolescents turn to external sources and digital media, which are easily accessible and often unfiltered. This limits parental oversight and exposes adolescents to information beyond their developmental readiness.

Parental support is essential to motivate adolescents and strengthen parent-child relationships. Adolescents who are committed to maintaining their reproductive health need reinforcement from their parents, including access to appropriate resources and guidance.

Therefore, the objective of this action research was to empower mothers in Telogo Pojok Village, Gresik, to improve their knowledge and active role in monitoring adolescent reproductive health. Through structured education, mentoring, and community-based engagement, the study aimed to enhance maternal capacity to support adolescents in maintaining reproductive health, as reflected in the methodology and results presented in the following chapters.

METHODS

This action research was conducted to improve adolescent reproductive health awareness and strengthen the role of mothers in monitoring their children's reproductive well-being through a structured empowerment process. The study took place in Telogo Pojok village, Gresik District, East Java, a rural region where discussions about reproductive health between parents and children are often considered culturally sensitive or taboo. Despite this, the community showed openness to health workers, and access to health services was relatively good.

The research followed a systematic action research framework consisting of four key phases: input, process, output, and outcome.[13-16]

The **input phase** began with administrative approvals from Bakesbangpolinmas Gresik and Puskesmas Kampung Nelayan. The target population included mothers of adolescent boys and girls living in the area. Initial identification of reproductive health issues was carried out through interviews with healthcare personnel, community health volunteers, and local leaders. Baseline knowledge of mothers regarding adolescent reproductive health was assessed using pre-intervention questionnaires.

During the **process phase**, a health education module was developed and delivered to the mothers. This was followed by mentoring sessions that provided guidance and support as mothers began applying monitoring practices within their families. The mentoring emphasized practical skills and encouraged mothers to engage in independent monitoring of their children's reproductive health. Mothers were also asked to complete post-intervention questionnaires to assess changes in knowledge and perceived roles. Adolescents were involved through the administration of questionnaires to assess their own reproductive health awareness.

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The **output** of the program included the completion of educational sessions, distribution of the module, and active participation of mothers in mentoring and monitoring activities. The mothers demonstrated increased initiative in applying what they had learned, and adolescents showed improved awareness of reproductive health issues.

The **outcome** of the action research was a measurable improvement in maternal knowledge, confidence, and engagement in reproductive health monitoring. The project also contributed to shifting community attitudes toward open dialogue on reproductive health within families. This approach proved effective in addressing both informational gaps and behavioral barriers, offering a replicable model for similar rural communities facing challenges in adolescent health communication.

Throughout the implementation of this action research in Telogo Pojok Village, the entire research team adhered strictly to established ethical principles in health and social research. Ethical compliance was prioritized from the initial planning phase through to data collection, mentoring, and evaluation. The elements of ethics were informed consent, confidentiality, non-maleficent, beneficence and justice. Finally, the research team operated under the broader framework of professional integrity and accountability. All facilitators and mentors were qualified professionals who conducted themselves with transparency, respect, and ethical responsibility. The study was also preceded by formal approval from relevant local authorities, including Bakesbangpolinmas Gresik and Puskesmas Kampung Nelayan, ensuring institutional oversight and community alignment.

RESULTS

This action research was conducted in Telogo Pojok Village, Gresik District, East Java, targeting a group of 40 mothers representing each neighborhood unit (RT) in the village. The location is easily accessible due to its proximity to the main road, and the community is receptive to health workers. The research aimed to empower mothers to monitor and educate their adolescent children about reproductive health. The intervention was carried out in five structured phases.

Phase 1: Health Education for Mothers on Reproductive Health

The first phase took place on April 24, 2018. Prior to the health education session, a socialization meeting was held with the mothers to assess their initial knowledge and perceptions of reproductive health through interactive discussions. The results revealed that most mothers had limited understanding of the topic.

Table 1. Maternal knowledge before health education at Telogo Pojok Village, Gresik District

Knowledge level	Before health education		After health education	
	Frequency	Percentage	Frequency	Percentage
Good	10	25	19	47.5
Moderate	8	20	10	25
Poor	22	55	11	27.5

After the health education session, a post-test was administered to evaluate changes in knowledge. The results showed a significant improvement, with nearly half of the mothers reaching the “good” knowledge category (Table 1).

Phase 2: Group Mentoring

This phase was conducted on May 2, 2018. The 40 participants were divided into eight small groups, each guided by 2–3 faculty mentors. The list of mentors is presented in Table 3. Each group engaged in in-depth discussions on reproductive health topics. Every participant was assigned one topic to study and present in the next phase. The topics included: reproductive organs, menstruation and wet dreams, reproductive hygiene, and fertile period and pregnancy.

These topics were selected as essential knowledge for mothers to effectively monitor their children's reproductive health. Each participant was required to prepare a summary of their assigned topic.

Phase 3: Maternal Monitoring Activities

This phase was held on May 9, 2018. Mothers conducted independent monitoring of their adolescent sons and daughters and submitted their findings. The results are summarized in Table 2.

Table 2. Results of adolescent reproductive health monitoring at Telogo Pojok Village, Gresik District

Monitoring component	Frequency	Percentage
Gender		
- Male	21	51
- Female	19	49

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Reproductive organ development		
- Normal	40	100
- Abnormal	0	0
Reproductive hygiene		
- Good	35	—
- Poor	5	—
Reproductive health issues		
- Present	0	0
- Absent	40	100

The data indicated that most adolescents were male, all showed normal reproductive development, the majority practiced good hygiene, and no reproductive health issues were reported (Table 2).

Phase 4: Maternal Empowerment

This phase conducted on May 15, 2018, this phase involved mothers independently educating their children about reproductive health and continuing to monitor their well-being. Mentors acted as observers and provided support when mothers faced difficulties responding to their children's questions. The results showed that 85% of mothers successfully delivered the assigned material, while a small number still lacked confidence in explaining the topics.

Phase 5: Evaluation

The final phase was held on June 6, 2018, to evaluate the overall empowerment process. The mothers' roles in promoting reproductive health before and after the intervention are shown in Table 3.

Table 5. Maternal role in promoting adolescent reproductive health at Telogo Pojok Village, Gresik District

Maternal role	Before empowerment	After empowerment
Good	0 (0%)	40 (100%)
Poor	40 (100%)	0 (0%)

Before the intervention, none of the mothers had actively participated in reproductive health education or monitoring. After the empowerment process, all mothers had engaged in health education, monitored menstruation, discussed wet dreams with their sons, and addressed concerns related to reproductive organs (Table 3).

This action research demonstrates that structured mentoring and education can significantly enhance maternal involvement in adolescent reproductive health. The results highlight the importance of empowering mothers as frontline educators and monitors within the family setting, especially in rural communities where reproductive health remains a sensitive topic.

DISCUSSION

The results of this action research clearly demonstrate the transformative potential of maternal empowerment in improving adolescent reproductive health awareness and monitoring. Conducted in Telogo Pojok Village, Gresik, the study addressed a culturally sensitive issue in a rural setting where reproductive health is often considered taboo, especially when discussed between parents and children. Despite these cultural constraints, the intervention successfully elevated maternal knowledge and activated their role as primary educators and monitors of adolescent reproductive health.

Before the intervention, the majority of mothers (55%) had poor knowledge of reproductive health, as shown in the pre-test results. This reflects a broader issue in many rural Indonesian communities, where reproductive health education is limited and often excluded from family discourse due to social norms and discomfort. The structured health education session significantly improved maternal understanding, with 47.5% of participants reaching the "good" knowledge category post-intervention. This shift validates the effectiveness of targeted, context-sensitive education in bridging knowledge gaps and challenging cultural barriers.

The mentoring and group-based learning approach played a pivotal role in this transformation. By dividing participants into small groups and assigning them specific topics; such as reproductive organs, menstruation, wet dreams, hygiene, and fertility, the program fostered active learning and personal accountability. Each mother was required to study, summarize, and present her topic, which not only reinforced comprehension but also built confidence in communicating sensitive information. This aligns with adult learning theory, which emphasizes the importance of experiential and participatory methods in promoting behavioral change.[17]

The third phase, which involved mothers conducting direct monitoring of their adolescent children, yielded promising results. All adolescents were reported to have normal reproductive development, and 87.5% practiced good hygiene. No reproductive health problems were identified. While these findings may reflect the short-term nature of the

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monitoring, they also suggest that maternal involvement can serve as a protective factor in adolescent health. This supports previous research indicating that parental engagement is associated with improved adolescent health outcomes, particularly in areas of sexual and reproductive health.[18]

The fourth phase: maternal empowerment was perhaps the most critical. Mothers were encouraged to independently educate their children and monitor their health, with facilitators acting only as observers. Remarkably, 85% of mothers successfully delivered the assigned material, demonstrating not only knowledge retention but also a willingness to engage in previously avoided conversations. This behavioral shift is significant, as it indicates a breakdown of cultural taboos and the emergence of new norms around reproductive health communication within families.

The final evaluation phase confirmed the success of the intervention. Before the program, none of the mothers had actively participated in reproductive health education or monitoring. After the empowerment process, all 40 mothers (100%) were actively involved. They had begun discussing menstruation, wet dreams, and reproductive anatomy with their children; topics that were previously considered inappropriate or uncomfortable. This outcome reflects a deep internalization of the program's objectives and suggests that maternal empowerment can lead to sustainable behavioral change.

The strengths of this study lie in its participatory design, cultural sensitivity, and practical application. The use of action research allowed for iterative learning and adaptation, while the group-based mentoring fostered peer support and collective accountability.[19-21] The integration of education, monitoring, and empowerment created a comprehensive model that addressed both knowledge and behavior.

However, the study also has limitations. The absence of a control group limits the ability to attribute changes solely to the intervention, as external factors may have influenced outcomes. The reliance on self-reported data introduces the possibility of bias, particularly in a context where social desirability may affect responses. Additionally, the short duration of the study prevents assessment of long-term sustainability and impact on adolescent health outcomes.

Future research should consider a longitudinal design with control comparisons to strengthen causal inferences. Incorporating adolescent perspectives through interviews or focus groups could enrich understanding of how maternal involvement affects their attitudes and behaviors. Digital tools, such as mobile applications or online modules, may also enhance scalability and accessibility, especially in areas with high mobile penetration.

CONCLUSION

In conclusion, this action research provides compelling evidence that empowering mothers through structured education and mentoring can significantly improve their role in adolescent reproductive health. It challenges cultural taboos, builds maternal confidence, and fosters open communication within families. As Indonesia continues to address adolescent health challenges, community-based maternal empowerment should be considered a strategic component of national reproductive health policy.

Ethical consideration, competing interest and source of funding

-All ethical principles are upheld in this research.
-The authors declare that there is no conflict of interest.
-Source of funding is authors.

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