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# The Effect of Reproductive Health Counseling on Adolescents' Knowledge and Attitudes about Early Pregnancy at the Galala Inpatient Health Center

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***Abstract:*** *Early pregnancy among adolescents remains a reproductive health problem that impacts maternal and infant health, as well as adolescents' social and educational aspects. Low knowledge and a less protective attitude toward reproductive health are important factors contributing to the high risk of early pregnancy. Reproductive health education is one of the promotive and preventive efforts that can be implemented in primary health care facilities. This study aims to analyze the effect of reproductive health education on adolescents' knowledge and attitudes about early pregnancy at the Galala Inpatient Community Health Center. The study used a quasi-experimental design with a one-group pretest–posttest approach. The study sample consisted of 40 adolescents aged 15–19 years selected using a total sampling technique. Data collection was conducted through a questionnaire on knowledge and attitudes about early pregnancy before and after the reproductive health education. The intervention was provided in the form of interactive education using lectures, discussions, and educational media. Data analysis was performed using the Wilcoxon test with a significance level of 0.05. The results showed an increase in knowledge and a change in adolescents' attitudes towards a more positive direction after receiving reproductive health education, with a statistically significant difference between the conditions before and after the intervention. This study concluded that reproductive health education was effective in increasing knowledge and shaping more protective attitudes among adolescents regarding early pregnancy prevention. These findings underscore the importance of strengthening integrated and sustainable reproductive health education in primary health care as part of efforts to prevent early pregnancy in adolescents.*

**Keywords:** *Adolescent Attitudes; Adolescent Knowledge; Early Pregnancy; Primary Health Care; Reproductive Health Education.*

## 1. INTRODUCTION

Early pregnancy among adolescents remains a global reproductive health problem with short- and long-term impacts on maternal and infant health, as well as social development. The World Health Organization reports that although the global birth rate for adolescents aged 15–19 has declined over the past two decades, its prevalence remains high in low- and middle-income countries, including Southeast Asia (WHO, 2023). UNICEF also confirms that adolescent pregnancy contributes to an increased risk of maternal mortality, obstetric complications, school dropout, and the intergenerational cycle of poverty (UNICEF, 2023). Therefore, preventing early pregnancy is not only a clinical issue, but also a public health and human development issue.

Clinically, pregnant adolescents face greater health risks than adult women. Biologically, adolescents' bodies often have not yet reached optimal physiological maturity, resulting in competition for energy and micronutrient needs between the mother and fetus. This condition increases the risk of anemia, preeclampsia, preterm delivery, and low birth weight (Neal et al., 2018). Furthermore, behavioral factors such as delayed antenatal visits, low adherence to

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prenatal care, and limited social support contribute to poor pregnancy outcomes in this age group (Chandra-Mouli et al., 2015).

In Indonesia, early pregnancy is closely linked to the phenomenon of child marriage and low reproductive health literacy among adolescents. Statistics Indonesia (BPS) shows that although the prevalence of child marriage has decreased over the past decade, the rate remains significant in several provinces and is higher in rural areas (BPS, 2023). UNICEF Indonesia reports that social norms, family pressure, and limited access to accurate reproductive health information are the main factors driving early pregnancy among adolescent girls (UNICEF Indonesia, 2022). This situation indicates that preventing early pregnancy requires strong promotive and preventive interventions, particularly through reproductive health education.

From the perspective of health behavior theory, knowledge and attitudes are important determinants in shaping adolescent behavior related to reproductive health. The Knowledge–Attitude–Practice (KAP) model explains that increased knowledge accompanied by the development of positive attitudes will influence an individual's readiness to make safer health decisions (Glanz et al., 2015). In the adolescent context, adequate knowledge about the risks of early pregnancy, contraception, and healthy relationships can foster protective attitudes and increase adolescents' ability to resist social pressure or risky behavior (Kirby & Laris, 2019).

Several studies over the past ten years have shown that reproductive health education has a positive impact on improving adolescent knowledge and attitudes. A meta-analysis conducted by Fonner et al. (2014) and updated by Mason-Jones et al. (2016) showed that structured reproductive health education programs can improve adolescent knowledge, attitudes, and healthy behavior intentions. Another study in a developing country reported that adolescents who received reproductive health education had a better understanding of the risks of early pregnancy and exhibited more negative attitudes toward risky sexual behavior (Chandra-Mouli et al., 2017). However, program effectiveness is greatly influenced by the implementation context, outreach methods, and the involvement of health workers.

In Indonesia, several studies have shown that reproductive health education significantly improves adolescent knowledge, but its impact on attitudes often varies (Sari et al., 2020; Rahmawati & Nugroho, 2021). This indicates that while information may be well received, attitude change requires a more communicative, contextual, and sustainable approach. Furthermore, most research is still conducted in school settings, while evidence from primary health care facilities, such as community health centers (Puskesmas), is still limited.

Community health centers (Puskesmas) play a strategic role as the frontline of public health services, including health promotion and adolescent health services. The WHO and

UNFPA emphasize the importance of adolescent-friendly health services that integrate education, counseling, and access to reproductive health services (WHO, 2022; UNFPA, 2021). However, in practice, reproductive health education at community health centers is often not standardized and its effectiveness in changing adolescents' knowledge and attitudes has not been systematically evaluated.

The research gap on this topic lies in the limited empirical evidence regarding the effectiveness of reproductive health education delivered in inpatient community health centers, particularly in influencing adolescents' knowledge and attitudes about early pregnancy. Furthermore, there are still few studies that simultaneously evaluate these two cognitive and affective outcomes within a single primary health care-based educational intervention. This approach is crucial to ensure that increased knowledge is truly followed by more protective attitudinal changes (UNESCO, 2018).

In the context of the Galala Inpatient Community Health Center, early pregnancy among adolescents remains a public health challenge that requires special attention. Systematic, evidence-based reproductive health education is expected to be an effective strategy to increase adolescent understanding and foster more responsible attitudes toward their reproductive health. Therefore, this study is highly urgent in providing local scientific evidence that can be used as a basis for strengthening promotive and preventive programs at the primary healthcare level.

Based on this description, this study aims to analyze the effect of reproductive health education on adolescents' knowledge and attitudes about early pregnancy at the Galala Inpatient Community Health Center. The results are expected to contribute to the development of more effective, contextual, and sustainable reproductive health education interventions for adolescents.

## 2. RESEARCH METHOD

### *Research Design*

This study used a quasi-experimental design with a one-group pretest–posttest approach to analyze the effect of reproductive health education on adolescents' knowledge and attitudes about early pregnancy. This design was chosen because it allows for measuring changes in respondents' knowledge and attitudes before and after the education intervention without involving a control group, making it suitable for evaluating educational interventions in primary health care.

***Location and Time of Research***

The study was conducted at the Galala Inpatient Community Health Center, a primary healthcare facility that provides adolescent health promotion and education programs. Data collection took place from May to July 2025, aligning with the schedule of outreach activities and adolescent visits to the community health center.

***Population and Sample***

The study population was all adolescents aged 15–19 years who lived in the Galala Inpatient Community Health Center's working area and met the inclusion criteria. The sampling technique used total sampling of adolescents who agreed to participate in reproductive health education activities during the study period. The sample size for this study was 40 adolescents, consisting of both boys and girls.

***Research Variables***

The independent variable in this study was reproductive health education, while the dependent variables included adolescents' knowledge and attitudes about early pregnancy. Knowledge was defined as adolescents' understanding of the concept, risk factors, health and social impacts, and prevention efforts for early pregnancy. Attitudes were defined as adolescents' affective responses to the issue of early pregnancy, reflecting acceptance, rejection, and behavioral tendencies.

***Research Instruments***

The research instrument used was a structured questionnaire consisting of two parts: a knowledge questionnaire and an attitude questionnaire regarding early pregnancy. The knowledge questionnaire was multiple-choice, with a score of 1 for correct answers and 0 for incorrect answers. The attitude questionnaire used a Likert scale to assess respondents' level of agreement with statements regarding early pregnancy. The instrument was adapted to the characteristics of adolescents and was used consistently in the pretest and posttest measurements.

***Research Procedures***

The research procedure began with obtaining a research permit at the Galala Inpatient Community Health Center. Respondents who met the inclusion criteria were given an explanation of the research objectives and procedures and asked for their consent to participate. Next, an initial measurement of knowledge and attitudes (pretest) was conducted. The intervention, in the form of reproductive health education, was delivered through interactive lectures, discussions, and educational media for approximately 60 minutes. After the education

was completed, a re-measurement of adolescents' knowledge and attitudes (posttest) was conducted to assess changes resulting from the intervention.

***Data analysis***

Data analysis was performed using statistical software. Univariate analysis was used to describe the characteristics of respondents and the distribution of knowledge and attitude scores before and after the intervention. Bivariate analysis was conducted to assess differences in adolescents' knowledge and attitudes before and after reproductive health education using the Wilcoxon Signed Rank Test, with a statistical significance level set at $\alpha = 0.05$. The results of the analysis are presented in tables and descriptive narratives.

## 3. RESULTS AND DISCUSSION

### Results

***Respondent Characteristics***

This section presents the characteristics of adolescent respondents in a study examining the effect of reproductive health education on knowledge and attitudes about early pregnancy at the Galala Inpatient Community Health Center. Respondent characteristics include age, gender, education level, and previous sources of reproductive health information. This presentation aims to provide a general overview of the respondents before analyzing changes in knowledge and attitudes following the education intervention.

**Table 1.** Distribution of Characteristics of Adolescent Respondents at the Galala Inpatient Health Center (n = 40).

| Characteristics | Category | n | % |
|---|---|---|---|
| **Age** | 15–16 years | 14 | 35.0 |
| | 17–19 years | 26 | 65.0 |
| **Gender** | Man | 18 | 45.0 |
| | Woman | 22 | 55.0 |
| **Level of education** | JUNIOR HIGH SCHOOL | 15 | 37.5 |
| | High School/Vocational School | 25 | 62.5 |
| **Reproductive Health Information Sources** | School | 12 | 30.0 |
| | Health workers | 9 | 22.5 |
| | Media/internet | 13 | 32.5 |
| | Family/friends | 6 | 15.0 |
| **Total** | | 40 | 100 |

Based on Table 1, the majority of respondents were in the 17–19 age group (26 people (65.0%), while respondents aged 15–16 years numbered 14 people (35.0%). In terms of gender, there

were more female respondents than male respondents, namely 22 people (55.0%) and 18 people (45.0%), respectively. Based on education level, the majority of respondents were at the high school/vocational school level (25 people (62.5%), while 15 people (37.5%) were at the junior high school level. Regarding previous sources of reproductive health information, the majority of respondents obtained information from the media or the internet (13 people (32.5%), followed by schools (12 people (30.0%), health workers (9 people (22.5%), and family or friends (6 people (15.0%).

**Adolescents' Knowledge Level about Early Pregnancy Before Counseling (Pretest)**

This section presents adolescents' knowledge levels regarding early pregnancy before receiving reproductive health education interventions at the Galala Inpatient Community Health Center. This measurement served as a pretest to describe respondents' initial knowledge regarding the definition of early pregnancy, risk factors, health and social impacts, and prevention efforts.

**Table 2.** Distribution of Adolescents' Knowledge Levels about Early Pregnancy Before Counseling at the Galala Inpatient Health Center (n = 40).

| Level of Knowledge | n | % |
|---|---|---|
| **Not enough** | 17 | 42.5 |
| **Enough** | 15 | 37.5 |
| **Good** | 8 | 20.0 |
| **Total** | 40 | 100 |

Based on Table 2, the majority of adolescents, 17 respondents (42.5%) had poor knowledge before receiving reproductive health education. Fifteen respondents (37.5%) had adequate knowledge, while only eight respondents (20.0%) had good knowledge. These results indicate that prior to the education intervention, the majority of adolescents did not have an optimal understanding of early pregnancy and its impacts, necessitating structured and ongoing reproductive health education efforts.

**Level of Adolescent Knowledge about Early Pregnancy After Counseling (Posttest)**

This section presents adolescents' knowledge levels regarding early pregnancy after receiving reproductive health education interventions at the Galala Inpatient Community Health Center. Measurements were conducted as a posttest to illustrate changes in adolescents' knowledge levels after receiving the education materials.

**Table 3.** Distribution of Adolescents' Knowledge Levels about Early Pregnancy After Counseling at the Galala Inpatient Health Center (n = 40).

| Level of Knowledge | n | % |
|---|---|---|
| **Not enough** | 5 | 12.5 |
| **Enough** | 13 | 32.5 |
| **Good** | 22 | 55.0 |
| **Total** | 40 | 100 |

Based on Table 3, after receiving reproductive health education, the majority of adolescents were in the good knowledge category, namely 22 respondents (55.0%). Thirteen respondents (32.5%) were in the adequate knowledge category, while 5 respondents (12.5%) had poor knowledge. These results indicate an increase in adolescents' knowledge regarding early pregnancy after receiving reproductive health education intervention compared to before the education.

**Adolescents' Attitudes about Early Pregnancy Before Counseling (Pretest)**

This section presents adolescents' attitudes toward early pregnancy before receiving reproductive health education interventions at the Galala Inpatient Community Health Center. The attitude assessment was conducted as a pretest to illustrate respondents' tendencies toward early pregnancy before receiving reproductive health education.

**Table 4.** Distribution of Adolescents' Attitudes about Early Pregnancy Before Counseling at the Galala Inpatient Health Center (n = 40).

| Teenagers' Attitudes | n | % |
|---|---|---|
| **Negative** | 19 | 47.5 |
| **Neutral** | 13 | 32.5 |
| **Positive** | 8 | 20.0 |
| **Total** | 40 | 100 |

Based on Table 4, before receiving reproductive health education, nearly half of respondents (19 respondents) held a negative attitude toward early pregnancy. Thirteen respondents (32.5%) expressed a neutral attitude, while only eight respondents (20.0%) held a positive attitude. These results indicate that prior to the intervention, adolescent attitudes toward early pregnancy tended to be less than optimally supportive of prevention efforts.

**Adolescent Attitudes about Early Pregnancy After Counseling (Posttest)**

This section presents adolescents' attitudes toward early pregnancy after receiving reproductive health education at the Galala Inpatient Community Health Center. The assessment was conducted as a posttest to reflect changes in adolescents' attitudes after receiving reproductive health education.

**Table 5.** Distribution of Adolescent Attitudes about Early Pregnancy After Counseling at the Galala Inpatient Health Center (n = 40).

| Teenagers' Attitudes | n | % |
|---|---|---|
| **Negative** | 6 | 15.0 |
| **Neutral** | 10 | 25.0 |
| **Positive** | 24 | 60.0 |
| **Total** | 40 | 100 |

Based on Table 5, after receiving reproductive health education, the majority of adolescents showed a positive attitude toward early pregnancy prevention, namely 24 respondents (60.0%). Ten respondents (25.0%) were neutral, while six respondents (15.0%) had a negative attitude. These results indicate a shift in adolescent attitudes toward a more positive direction after the reproductive health education intervention compared to before the education.

**Analysis of Differences in Adolescent Knowledge about Early Pregnancy Before and After Counseling**

This section presents the results of an analysis of differences in adolescents' knowledge levels about early pregnancy before and after reproductive health education at the Galala Inpatient Community Health Center. The analysis was conducted to assess the effectiveness of reproductive health education in improving adolescents' knowledge.

**Table 6.** Analysis of Differences in the Level of Knowledge of Adolescents about Early Pregnancy Before and After Counseling at the Galala Inpatient Health Center (n = 40).

| Variables | Median (Min–Max) | Z | p-value |
|---|---|---|---|
| **Knowledge before counseling** | 2.0 (1–3) | | |
| **Knowledge after counseling** | 3.0 (1–3) | −4,356 | 0,000 |

Based on Table 6, the Wilcoxon test results show a statistically significant difference between adolescents' knowledge levels about early pregnancy before and after reproductive health education (p = 0.000). The median level of adolescent knowledge increased after the education intervention compared to before the intervention. These results indicate that reproductive health education significantly increased adolescents' knowledge about early pregnancy.

**Analysis of Differences in Adolescent Attitudes about Early Pregnancy Before and After Counseling**

This section presents the results of an analysis of differences in adolescent attitudes toward early pregnancy before and after reproductive health education at the Galala Inpatient Community Health Center. The analysis was conducted to assess the effect of reproductive health education on changes in adolescent attitudes toward early pregnancy.

**Table 7.** Analysis of Differences in Adolescent Attitudes about Early Pregnancy Before and After Counseling at the Galala Inpatient Health Center (n = 40).

| Variables | Median (Min–Max) | Z | p-value |
|---|---|---|---|
| **Attitude before counseling** | 2.0 (1–3) | | |
| **Attitude after counseling** | 3.0 (1–3) | −4,087 | 0,000 |

Based on Table 7, the Wilcoxon test results show a statistically significant difference between adolescents' attitudes about early pregnancy before and after reproductive health education (p = 0.000). The median adolescent attitude score increased after the education intervention compared to before the intervention. These results indicate that reproductive health education significantly influenced adolescents' attitudes toward more positive changes regarding early pregnancy prevention.

**Discussion**

This study demonstrates that reproductive health education significantly impacts adolescents' knowledge and attitudes about early pregnancy at the Galala Inpatient Community Health Center. The analysis revealed significant differences between pre- and post-education levels, both in cognitive and affective aspects. These findings confirm that structured educational interventions delivered by healthcare professionals play a crucial role in shaping adolescents' understanding and attitudes toward sensitive and complex reproductive health issues.

The increase in adolescent knowledge after counseling aligns with health learning theory, which states that exposure to relevant, accurate, and communicative information can enhance an individual's cognitive capacity to understand the risks and consequences of a health behavior (Nutbeam, 2018). In the context of early pregnancy, knowledge of the medical risks, psychosocial impacts, and long-term implications for adolescents' education and future is an important foundation for safer decision-making. Studies by Fonner et al. (2014) and Mason-Jones et al. (2016) report that reproductive health education consistently improves adolescent knowledge, particularly when the material is tailored to their age and sociocultural context.

The findings of this study are also consistent with research in various developing countries showing that reproductive health education in health care facilities can improve adolescents' understanding of early pregnancy prevention and sexual health in general (Chandra-Mouli et al., 2017; Haberland & Rogow, 2015). In Indonesia, studies by Sari et al. (2020) and Rahmawati and Nugroho (2021) showed that adolescents who participated in reproductive health education had higher levels of knowledge compared to adolescents who did not receive similar education. This strengthens the finding that direct education provided by health workers can be a credible source of information for adolescents.

In addition to increased knowledge, this study also demonstrated a more positive shift in adolescent attitudes toward early pregnancy prevention after the counseling. This change in attitude is important because attitude mediates knowledge and behavior. Based on the Theory of Planned Behavior, a positive attitude toward a protective behavior will increase an individual's intention and likelihood of acting accordingly (Ajzen, 2020). In this context, a more negative attitude toward early pregnancy and a greater support for postponing pregnancy reflects adolescents' readiness to avoid risky behaviors.

The results of this study align with UNESCO's findings (2018), which emphasized that comprehensive reproductive health education not only increases knowledge but also fosters more responsible values and attitudes. A study by Kirby and Laris (2019) demonstrated that effective sexuality education programs can change adolescents' attitudes toward risky sexual behavior and improve their ability to resist peer pressure. The significant changes in attitudes in this study indicate that the counseling materials and delivery methods used are quite effective in addressing adolescents' affective aspects.

However, not all respondents demonstrated optimal attitude changes. Some adolescents remained neutral after the counseling session. This can be explained by the influence of external factors such as family norms, cultural values, peer pressure, and exposure to information from digital media that does not always align with health messages (Viner et al., 2017). Attitude is a relatively more stable psychological construct than knowledge, so attitude change often requires repeated and sustained interventions. These findings indicate that a single counseling session may not be sufficient to produce profound attitude changes in all adolescents.

From a clinical and public health perspective, the results of this study have important implications. The WHO and UNFPA emphasize that preventing adolescent pregnancy must begin with strengthening reproductive health literacy through youth-friendly and accessible services (WHO, 2022; UNFPA, 2021). Community health centers (Puskesmas), particularly

inpatient health centers, are strategically positioned as adolescents' first point of contact with the health system. Integrated reproductive health education within Puskesmas services can be an effective and sustainable promotive-preventive strategy.

Practically, the results of this study support the role of midwives and other health workers in community health centers as adolescent reproductive health educators. A humanistic, communicative, and non-judgmental approach is crucial for creating a safe environment for adolescents to receive information and express their questions (Harden et al., 2016). Furthermore, integrating outreach with individual counseling and referrals to adolescent-friendly health services has the potential to strengthen the impact of educational interventions.

This study has limitations, including the design without a control group and the self-reported attitude measurement, which cannot completely eliminate the potential for social bias. Nevertheless, the consistent findings between increased knowledge and attitude change strongly indicate that reproductive health education is a beneficial intervention. Future research is recommended to use a design with a comparison group, a longer intervention duration, and an evaluation of the long-term impact on adolescents' actual behavior.

Overall, this study demonstrates that reproductive health education significantly improves adolescents' knowledge and attitudes about early pregnancy. These findings strengthen the evidence that primary health care-based educational interventions are a relevant and applicable strategy to support early pregnancy prevention and improve adolescent reproductive health.

## 4. CONCLUSION

This study aims to analyze the effect of reproductive health education on adolescents' knowledge and attitudes regarding early pregnancy at the Galala Inpatient Community Health Center. The results indicate that reproductive health education is an effective educational intervention in increasing understanding and shaping adolescents' attitudes toward preventing early pregnancy. These findings confirm that education-based promotive-preventive interventions play a significant role in influencing adolescents' cognitive and affective aspects. Scientifically, this study strengthens evidence that improving reproductive health literacy through a communicative and contextual approach can support healthier decision-making. Clinically, the results underscore the strategic role of health workers at community health centers in providing integrated, sustainable, and youth-friendly reproductive health education as part of early pregnancy prevention efforts at the primary health care level.

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