

Adolescents Scientific Understanding of Reproductive Health

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Abstract: Adolescents have an important role in shaping the future of a country. In reality, adolescents cannot avoid risky behavior. In North Sulawesi Province, based on the results of SKAP 2019, as many as 4.8 percent of adolescents have been involved in premarital sexual relations. This study aims to identify adolescents' knowledge about women's fertile period. This research is a quantitative study that applies a cross-sectional design and utilizes secondary data from the 2019 Program Accountability Performance Survey (SKAP) of North Sulawesi Province. Respondents in this study were unmarried adolescents aged 10-24 years. The results of the enumeration obtained 988 adolescents, with details of 546 men and the remaining 442 women. The dependent variable was the knowledge of adolescents about the female fertile period, the independent variables were age, residence and education. Variables were analyzed univariately and bivariate. The results showed that in general, adolescents in North Sulawesi province did not have good knowledge about the fertile period in women. Female adolescents have a higher percentage of knowledge about the fertile period of women than male adolescents, then the higher the age of men the better the knowledge about the fertile period of women. By region, adolescents in urban areas, both male and female, have higher knowledge about fertile period than those in rural areas. Finally, at the education level, male and female adolescents at the elementary and junior high school education levels had lower knowledge about the fertile period in women compared to high school and college education. The recommendation is to increase education about female childbearing period widely among adolescents and improve accessibility to health services in rural adolescents with high school education and below.

Keywords: adolescents, knowledge, adolescent reproduction, female fertile period.

Abbreviations: Program Accountability Performance Survey (SKAP), Indonesian Demographic Health Survey (IDHS)

Introduction

Adolescents have a very important role in shaping the future of a country, they are not only the successors of the development that has been done by their predecessors; but also as a hope that has the potential to become the strength of a nation. At the family level, they are expected to be agents of change who can raise the degree of the family through their achievements so that they will bring a good name to the family and society. In essence, the benchmark of adolescent quality not only reflects potential; but also becomes the key to the success and achievement of the nation in the future (Mustofa Rini et al., n.d.).

In reality, adolescents cannot avoid risky behavior. Referring to the results of the 2017

Indonesian Demographic Health Survey (IDHS), teenage dating activities have led to actions that should be avoided, such as kissing lips (50% of men, 30% of women) and groping (22% of men, 5% of women). 8 percent of men and 2 percent of women reported having experienced sexual intercourse before marriage (SDKI, 2017). Another survey, BKKBN's 2019 Program Accountability Performance Survey (SKAP), presented a slightly lower figure of 1.2 percent of adolescents having engaged in sexual intercourse, with male adolescents dominating with the highest percentage at 1.9 percent (Hermiwahyoeni et al., n.d.). Nationally, the percentage is small, but it should be noted that adolescents aged 10-14 years (0.1 percent) have also been involved in sexual

relations, this condition will add to the complexity of the dynamics of adolescent behavior in risky sexual behavior.

The situation of adolescents in North Sulawesi Province shows similarities with the national level. Based on the 2019 SKAP results, 4.8 percent of North Sulawesi adolescents had engaged in premarital sexual relations, placing the province third after West Papua and Papua (see Figure 1). Male adolescents in North Sulawesi were more dominant in the practice of premarital sexual intercourse with a percentage of 6.9%, while 5.5% of those involved admitted to having a girlfriend (Wijayanti, 2022). In the context of teenage pregnancy, research from the National Family Planning Association in 2016 recorded an increase of 16.3% compared to 2015 (26.5% compared to 10.2%) (Ria Rotinsulu et al., 2022). Data from the North Sulawesi Provincial Health Office stated that 454 teenagers experienced unwanted pregnancies (Retni & Lihu, n.d.). Interestingly, adolescents involved in premarital sexual intercourse were more likely to come from rural areas than urban areas, with the highest level of education being high school (Hermiwahyoeni et al., n.d.).



Figure 1. Percentage distribution of unmarried adolescents aged 10-24 years who have ever had sexual intercourse before marriage and province, Indonesia 2019

Various factors can trigger teenagers to fall into the practice of free sex. Starting from biological and psychological aspects, lack of knowledge, the role of the family, the impact of the media, and

environmental influences, to a less strong understanding of religion (Juariah & Fauziah, 2017). Therefore, it is important to provide an understanding of sex to adolescents, because on the biological and psychological side, adolescence as a transition period from children to adults increases curiosity, including about sexuality (Ria Rotinsulu et al., 2022). Furthermore, it is no longer the time to view the discussion of sex in adolescents as taboo and not worth giving. The role of parents is very significant in avoiding premarital sexual behavior; because the failure of family functions is one of the triggers for this behavior (Juariah & Fauziah, 2017). The media, while a source of information, can also act as an agent of sexual socialization that can encourage early or risky sexual activity for adolescents (M. Scull et al., 2019). In addition, the living environment also influences promiscuous sexual behavior. Research in Zambia shows that almost a third of women give birth before the age of 18, especially among poor families who feel pressure to engage in sexual relations for economic gain, making this practice common in their neighborhoods (Svanemyr et al., 2022). Sex education is expected to shape the mindset, insight, attitude, and responsibility of adolescents. The higher the level of education of adolescents, the more able they are to avoid behavior that is contrary to the rules, norms, and values around them, including in managing premarital sexual behavior (Sri Wahyuni & Ikhsan Fahmi, n.d.).

Referring to the SKAP results, adolescents in North Sulawesi province have been involved in premarital sexual relations and made the province nationally ranked third. The question is whether the adolescents in North Sulawesi know about Adolescent Reproductive Health in the form of knowledge about the fertile period in women correctly. For this reason, the purpose of this study is to identify adolescents' knowledge about the fertile period in women. This is important as input for policymakers in making programs that reach adolescents and then for parents to be able to take preventive actions to prevent risky sexual behavior in adolescents.

Materials and Methods

Study area

This research is a quantitative study that applies a cross-sectional design and utilizes secondary data from the 2019 Program Accountability Performance Survey (SKAP) in North Sulawesi Province. This SKAP has obtained approval from the Ethical Review Team through a letter from the Chair of the Ethical Review Team with number 454/LB.02/H4/2019, and the implementation of the survey followed the Head of BKKBN regulation number 11/2018.

Procedures

In SKAP 2019, sampling was conducted in three stages. The first stage involved the use of a complete list of villages or sub-districts with their urban and rural classifications. The second stage produced a list of clusters in the selected villages or sub-districts, while the third stage involved selecting sample households from the listing made by enumerators by visiting houses in the predetermined clusters. Within each cluster, 35 households were selected using a systematic random sampling technique that involved the listing of all households by enumerators or interviewers in the selected clusters. The next step in the selected households is to record family members who fall into the category of adolescents, namely those aged 10-24 years old who are not married. From the enumeration results, 988 adolescents were obtained, with details of 546 men and the remaining 442 women.

Data analysis

The instrument in this study was the 2019 SKAP adolescent questionnaire. The dependent variable is adolescents' knowledge about the fertile period in women which is categorized as not knowing, before menstruation, during menstruation, immediately after menstruation ends, in between

two periods, others and never heard of the term fertile period. Then the independent variables include age, place of residence, and education. The age variable was categorized into 10-14 years, 15-19 years, and 20-24 years. Residence is divided into urban and rural. Education was divided into elementary school, junior high school, high school, and college. All of these variables were analyzed univariately and bivariate to get a picture of adolescent knowledge about the fertile period in women.

Results and Discussion

Result-1

Adolescence is an important phase of every individual's life, in this phase, adolescents experience physical, emotional, and psychological changes occur. For this reason, a lot of knowledge is important for adolescents to have. One of them is knowledge about reproductive health in the aspect of knowledge about the fertile period in women. A good understanding of the fertile period is not only important for personal health; but also for making wise decisions regarding reproductive health in the future.

A fertile period is a period in a woman's menstrual cycle that has a high potential for pregnancy. Understanding when fertile days occur will help adolescent girls know their bodies better, as well as raise awareness about the importance of reproductive health. On the other hand, it can also be the basis for understanding broader sexual education, the goal of which is to build awareness about desired or unwanted pregnancies, as well as the prevention of sexually transmitted diseases.

Adolescents, adolescents still do not fully understand the fertile period in women well. An overview of this is described in detail in the following research results in North Sulawesi province.

Table 1. Adolescents' Knowledge (Male/Female) about Female Fertile Period.

Male							
Variable	Don't know	Before menstruation	During menstruation	Immediately after menstruation ends	In the middle between two periods	Other	Never heard of the term fertile period
Age							
10-14	24,4	2,4	0,7	3,3	0,2	0,2	9,9
15-19	16,1	7	1,6	10,8	1,5	0,7	3,8
20-24	4,9	2,4	0,2	6,6	2,6	0,2	0,5
Residence							
Urban	17,9	5,3	1,8	6,8	3,1	0,4	8,1
Rural	27,5	6,4	0,7	13,9	1,1	0,7	6,2
Education							
Primary School	11	0,5	0,2	2,9	0	0	3,7
Junior High School	15,4	2,7	0,5	3,7	0,9	0,2	6
High School	16,8	6,6	1,8	12,1	1,6	0,7	4
University	2,2	1,8	0	3	1,6	0,2	0,2
Total	45,4	11,7	2,6	20,7	4,2	1,1	14,3
Female							
Variable	Don't know	Before menstruation	During menstruation	Immediately after menstruation ends	In the middle between two periods	Other	Never heard of the term fertile period
Age							
10-14	26	5	3,4	4,8	0,7	0,2	9,7
15-19	7,7	5,9	3,4	16,7	3,4	0	0,9
20-24	2	2,3	0,9	4,5	2,3	0	0,2
Residence							
Urban	13,8	6,1	3,6	10,6	4,5	0	5,9
Rural	21,9	7	4,1	15,4	1,8	0,2	5
Education							
Primary School	14	1,1	1,6	0,9	0	0,2	5,4
Junior High School	10,9	4,1	2,3	5,4	0,2	0	3,8
High School	9	6,1	3,4	15,2	3,6	0	1,4
University	1,8	1,8	0,5	4,5	2,5	0	0,2
Total	35,7	13,1	7,7	26	6,3	0,2	10,9

The results of the study showed that in general, male and female adolescents in North Sulawesi province who have good knowledge about the fertile period in women, namely in the middle between two menstruations, have a low percentage, namely only 4.2% for men and 6.3% for women. Those who do not know, have a high percentage of men 45.4%, and women 35.7%. On the other hand, there are still adolescents who have never heard of the term fertile period, 14.3% for men and 10.9% for women. This finding shows that education about women's fertile period is still not widely spread among adolescents in North

Sulawesi province. Real steps need to be taken to improve adolescents' understanding of this issue, the goal is for adolescents in North Sulawesi to be able to make wiser decisions regarding reproductive health.

In terms of age categories, men aged 20-24 have better knowledge about the fertile period compared to the two younger age groups. This finding also shows that the older the men are, the better their understanding of the female fertile period, which is in the middle between two menstruations. Meanwhile, among women, those aged 15-19 have a higher percentage compared to

the 10-14 and 20-24 age groups (3.4 percent compared to 0.7 percent and 2.3 percent).

Based on region, there is a similar finding among both male and female adolescents, where those living in urban areas have greater knowledge about the fertile period than those in rural areas. Lastly, in terms of educational level, male adolescents with high school and college education have a higher percentage of knowledge about the female fertile period than those with only elementary or junior high school education. Meanwhile, among females, those with high school education have a higher percentage compared to females with elementary, junior high, and even college education.

Discussion

It is essential to provide adolescents with an understanding of reproductive health. Previous research indicates that knowledge of sexual education can help adolescents understand principled actions in maintaining their physical and reproductive health (Sabarrudin & Yulianti, 2023). Furthermore, effective sexuality education must be age-appropriate, culturally relevant, contextually suited to adolescent life, and provide accurate information (Miswanto, 2014). Additionally, appropriate education can also help reduce the rate of unwanted teenage pregnancies in North Sulawesi province. Research findings suggest that there is a relationship between knowledge and attitudes among teenage girls regarding adolescent pregnancy (Emi & Endang, 2023). Other studies have shown that reproductive health knowledge significantly influences adolescents who have experienced premarital sexual relations (Nasution, 2012).

Moreover, the role of parents and schools in providing accurate information about the fertile period is crucial in helping adolescents maintain their reproductive health. This role is vital in developing a good understanding of sexual issues. Parents and schools need to collaborate in providing sexual education to help adolescents become healthier individuals who are responsible for their sexual lives (Datu, 2023).

Furthermore, adolescent girls have a higher percentage of knowledge about the fertile period

compared to adolescent boys. This aligns with previous research, indicating a gap in understanding reproductive health among adolescents in the country. Moreover, only 33% of adolescent girls and 55% of adolescent boys correctly answered questions about female fertility awareness (Iqbal et al., 2020). Similar findings showed that female students had better knowledge than male students (Cahya & Falasifah, 2017).

In terms of age categories, the older the men are, the better their understanding of the female fertile period, specifically that it occurs in the middle of two menstrual cycles. Based on region, those living in urban areas have higher knowledge about the fertile period than those in rural areas. This indicates that access to information and reproductive health education is more readily available in urban settings than in rural areas. Women in urban areas are more frequently exposed to information on reproductive health and fertility through various sources, such as health clinics, electronic media, and print media. This aligns with previous research showing that urban women seem to benefit more from various reproductive health programs compared to women in rural areas.

Conversely, women in rural areas often face difficulties in obtaining the same information due to limited access to healthcare services and technology. These findings are consistent with a study in Colorado, which found that most women of reproductive age in rural Colorado experience barriers to accessing reproductive health services in their communities (Clure et al., 2023). This can lead to rural women having more limited knowledge about reproductive health and their fertility. Such conditions can also impact awareness levels regarding the importance of self-care and maintaining reproductive health, thereby increasing the risk of poor reproductive health outcomes.

Finally, in terms of education level, the higher the education, the better the knowledge about the fertile period. Therefore, the government and health organizations to increase accessibility to healthcare services and technology in rural areas so that everyone, especially women, can have equal access to information on reproductive health. With

improved access to information and healthcare services, awareness of the importance of self-care and maintaining reproductive health is expected to rise, thereby reducing the risk of poor reproductive health among women in rural areas.

Through higher education, both women and men can better understand the importance of reproductive health and take necessary preventive measures to avoid reproductive diseases and health issues. In addition, with greater access to technology, such as smartphones and the internet, information on reproductive health can be accessed quickly and easily by rural communities. This can help enhance understanding and awareness of the importance of reproductive health, which may reduce mortality rates and reproductive health issues that are prevalent among rural women. With collaborative efforts from the government, health institutions, and the community, women's reproductive health in rural areas can be better safeguarded.

Conclusions

Based on the results of the study, it can be concluded that in general adolescents in North Sulawesi province do not have good knowledge about the fertile period in women. Female adolescents have a higher percentage of knowledge about female fertility than male adolescents (female 6.3 percent and male 4.2 percent). In the age category, the higher the age of men, the better the knowledge about the fertile period in women. Based on the region, adolescents in urban areas, both men and women, have higher knowledge about the fertile period than in rural areas. Finally, at the education level, male and female adolescents at the elementary and junior high school education levels had lower knowledge about the fertile period in women compared to high school and college education. Suggestions for the future need to increase education about the fertile period of women widely among adolescents in North Sulawesi province. Then increase accessibility to

health services and technology regarding reproductive health information and education for adolescents in rural areas with high school education and below.

Conflict of Interest: The authors declare that there are no conflicts of interest concerning the publication of this article.

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