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## Studying Mothers' Knowledge and Perceptions of Adolescent Reproductive Health

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### ABSTRACT

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## BACKGROUND

Adolescence is a transition period between childhood and adulthood characterized by physical, emotional, and psychological changes. Adolescence, which begins between the ages of 10-19, is a period of maturation of human reproductive organs known as puberty. Sexual and reproductive health knowledge is critical to be given to adolescents because, at this time, there is rapid physical development, including the development of reproductive organs (Hapsari, 2019).

Sexuality education is a lifelong process of acquiring information and forming attitudes, beliefs, and values about sexuality. Sexuality education is "a curriculum-based process of teaching and learning about the cognitive, emotional, physical and social aspects of sexuality. Sexuality education aims to equip children and adolescents with knowledge, skills, attitudes, and values to empower them. Sexuality education helps realize adolescents' health, well-being, and dignity, develop respectful social and sexual relationships as a matter of choice, and consider protecting reproductive rights that affect the well-being of oneself and others (UNESCO, 2018).

The Indonesian Demographic and Health Survey (IDHS) 2017 report found that sexual behaviour in adolescents was 59% among males and 74% among females who had sexual intercourse at 15-19 years old (BKKBN, 2017). Lack of adolescent knowledge about reproductive health can lead to promiscuous sex, sexually transmitted diseases, HIV/AIDS, unwanted pregnancies, and marriage at a young age (Rahma, 2018). Knowledge about reproductive and sexual health comprehensively directly and indirectly impacts adolescent reproductive health. Adolescents have several sources to gain knowledge, such as parents, teachers, peers, and the Internet. However, parents who do not provide their children with explanations about reproductive health issues can limit access to information for adolescents. This lack of supervision leads them to seek information from various sources on social media without guidance from parents or teachers, leading to inaccurate information and potential harm (Akokuwebe & Afolabi, 2015).

Parents play a unique role in providing and facilitating their children in gaining sexual and reproductive health knowledge. Parents can help children recognize appropriate behaviour and foster moral values. Parental involvement can potentially delay or prevent children's sexual activity and promote safer sexual practices. Therefore, parents should be the most influential party as the primary reference in obtaining information related to sexuality and reproductive health education (Liu et al., 2011). However, parents experience obstacles in providing information about sexuality and reproductive health because sex education is considered taboo, sensitive, contrary to religion and customs, and lacks information from suitable sources. Some parents assume that adolescents who know about sex will increase their curiosity (Curtiss, 2018). Maximize openness between parents and children sharing reproductive health info to prevent early sexual activity. The involvement of parents, especially mothers, in sex and reproductive health education can address their concerns about sexual harassment and better understand how to support their child's interaction and social development (Leung & Lin, 2019).

## **OBJECTIVE**

The purpose of this study is to assess mothers' knowledge and perceptions regarding adolescent reproductive health.

## **METHODS**

This study is a quantitative study with a cross-sectional research design. The sample of this study were mothers who had adolescents aged 10 to 14 years in 2023. The survey included 135 participants and used purposive sampling. Inclusion criteria: Mothers who have adolescent children aged 10 to 14 years. Inclusion criteria are mothers who do not live with their children. Data sources were obtained through primary data using a structured questionnaire. The research instrument used was a questionnaire containing maternal characteristics: occupation (working, housewife), education (high, low), age (< 40 years,  $\geq$  40 years), number of children (one,  $\geq$  two). Knowledge variables are things that mothers know about parenting and adolescent reproductive health obtained through observation or observation through their senses, including structure and function of sexual organs, pregnancy and birth, reproductive health, including infectious diseases and sexual behaviour. Knowledge is assessed using a score from 0-48. Meanwhile, perception is how mothers believe or feel about reproductive health, including sexuality, marriage and birth, sexual behaviour and sexual violence, and gender roles. In this study, maternal perceptions were assessed using a score from 0-48.

Before administering the questionnaire, it underwent a pilot test to assess its content and structure. All questionnaires have been tested for validity and reliability on 20 respondents with similar characteristics to the research respondents with a corrected item-total item correlation value  $> 0.3$  and Cronbach's Alpha 0.852. Based on the results, the questionnaire is dependable and valid.

The characteristics of the respondents were analyzed using frequency distribution and percentage. The T-test was used to analyze knowledge and perception of sexual and reproductive health at a significance level of 0.05. The Pearson correlation coefficient using statistical software tested the correlation between subcategories of knowledge and perception.

**RESULTS****Table 1. Mother's characteristics**

Variables	N	%
Occupation		
Employed	69	51
Housewife	66	49
Education		
Above high school	119	88,1
Less than high school	16	11,9
Age (year)		
< 40 year	80	59,1
≥ 40 year	55	40,9
Number of Children		
One	48	35,6
≥ Two	87	64,4

Table 1 presents respondent characteristics; the majority are employed (51%), highly educated (88.1%), under 40 years old (59.1%), and have at least two children (64.4%).

**Table 2. Levels of knowledge and perception of adolescent reproductive health**

Variable	M±SD	Min-max
<b>Knowledge</b>	31.54±7.17	6-44
- Structure and function of sexual organs	7.12±1.84	0-10
- Pregnancy and childbirth	7.05±1.90	1-11
- Sexual health including sexually transmitted diseases	9.79±3.15	0-15
- Sexual behavior	7.51±2.05	0-11
<b>Perception</b>	52.15±8.21	25-68
- Sexual perception	14.92±2.96	4-20
- Marriage and childbirth	12.02±2.14	4-16
- Sexual etiquette and sexual violence	16.20±3.29	6-20
- Gender roles	9.01±2.04	2-12

\* Wilcoxon signed-rank test

The knowledge and perception of respondents about adolescent reproductive health are as follows: The average knowledge score was 31.54±7.17 out of a total of 48 points. According to the subcategories, "sexual health including sexually transmitted diseases" obtained the highest score of 9.79±3.15 followed by "sexual behaviour" with 7.51±2.05, "structure and function of sexual organs" with 7.12±1.84, and "pregnancy and birth" with 7.05±1.90. Participants' score for sexual perception was found to be 52.15±8.21 out of 68 points. Divided by subcategory, the highest score was for "attitudes toward sexual behaviour and sexual violence" (16.20±3.29), followed by "attitudes toward sexual perception" (14.92±2.96), "attitudes toward marriage and birth" (12.02±2.14), and "attitudes toward gender roles" (9.01±2.04).

**Table 3. Comparison of the scores of knowledges and perceptions base demographic characteristics**

Variable	Category	n (%)	Knowledge		Perception	
			M±SD	t (p-value)	M±SD	t (p-value)
Occupation	Employed	69 (51,0)	31.98±6.76	1.34 (0.182)	51.67±8.52	1.29 (0.198)
	Housewife	66 (49,0)	30.90±7.70		52.84±7.73	
Education	Above high school	119 (88,1)	31.61±7.33	0.57 (0.571)	51.93±8.41	0.18 (0.855)
	Less than high school	16 (11,9)	31.03±5.90		52.18±8.20	
Age (year)	<40 year	80 (59,1)	31.98±6.76	1.34 (0.182)	51.67±8.52	1.29 (0.198)
	≥ 40 year	55 (40,9)	30.90±7.70		52.84±7.73	
Number of Children	One	48 (35,6)	31.82±7.53	0.53 (0.599)	50.24±9.09	3.21 (0.001)
	≥ Two	87 (64,4)	31.39±6.98		53.20±7.50	

Adolescent reproductive health knowledge and perception, analyzed by respondent characteristics, are presented in Table III. There was a significant difference in the perception of respondents based on the number of children ( $t=3.21$ ,  $p=0.001$ ). Participants with two or more children ( $53.20\pm7.50$ ) had a higher perception score than participants with one child ( $50.24\pm9.09$ ).

**Table 4. Correlations between Sub-categories of knowledge and perception of adolescent reproductive health**

Variable	Knowledge	Sub-categorie knowledge			
		K1	K2	K3	K4
Perception	0.44**				
Sub-category perception	P1 (r)	0.21**	0.22**	0.16**	0.34**
	P2 (r)	0.25**	0.14**	0.22**	0.36**
	P3 (r)	0.40**	0.31**	0.30**	0.46**
	P4 (r)	0.23**	0.29**	0.22**	0.29**

\*\* $p < .010$ ; K1= Structure and function of sexual organs; K2= Pregnancy and childbirth; K3= Sexual health including sexually transmitted diseases; K4= Sexual behavior; P1= Sexual perception; P2= Marriage and childbirth; P3= sexual etiquette and sexual violence; P4= gender roles.

Statistically significant correlations were found between knowledge and perception ( $r=0.44$ ,  $p<0.001$ ) and between subcategories. Each subcategory between knowledge and perception showed correlations ranging from 0.14 to 0.46 ( $p$ -value  $<0.01$ ). (Table.4)

## DISCUSSION

This study was conducted to determine the knowledge and perceptions of mothers about adolescent reproductive health. The average knowledge score was 31.54; the

subcategory of knowledge about reproductive health, including infectious diseases, had the highest score among the knowledge subcategories, while the other three subcategories had similar average scores. The average perception score was 52.15 out of 68. Parents are increasingly concerned about child sexual abuse, causing perception of sexual behaviour and sexual violence to have the highest score among the four subcategories.

Most respondents fall within the productive age group, significantly impacting their cognitive and social abilities. Age is a significant factor in determining one's level of knowledge, as an individual becomes more mature in their thinking and problem-solving abilities as they age (Fischer et al., 2017). This study found no significant relationship between age, maternal education, and mothers' knowledge and perceptions regarding reproductive health. In addition to affecting cognitive viewpoints, age is related to beliefs. Trust increases with maturity, which affects understanding and mindset (Nasution et al., 2019).

More than half of the parents in this study were highly educated; education is essential in honing skills necessary to achieve educational goals. Education contributes significantly to human interaction with the environment. The skills and knowledge acquired will support health communication. Community education affects perceptions and conceptual abilities in conveying and receiving messages and information. It will also affect thoughts and feelings regarding the response or feedback given to a communicator or communicant. People with higher education may communicate more effectively in terms of both content and attitude. Learning can influence human perception, leading to changes in behaviour and worldview (Obaki, 2017). This study finds that higher-education parents provide their children with better reproductive health education at home.

Mothers believed it necessary to educate children on reproductive health for two main reasons: cultivating positive attitudes towards both sexes and providing proper guidance for children's curiosity. Mothers are the best sex educators for their children. They can provide sequential reproductive health education and offer timely information to address questions. In an Australian study, parents of primary school children responded that sex education is necessary when children are young because they need to know about their bodies and develop their sexuality. In particular, girls are considered to need sex education at a young age because their bodies develop faster, and they can be vulnerable to teenage pregnancy and sexual violence (Robinson et al., 2017).

Some mothers in this study did not want to provide reproductive health education to their children because they felt they did not know how to teach them and believed that the children were too young. This result is similar to previous research on parents who do not know how to discuss issues related to reproductive health and sex with their children. This finding is also in line with Flores D's literature review, which shows that several factors influence sex-related communication between parents and children, including a lack of knowledge about sex, their commitment to being a more responsible sex educator for their children, misinterpretation in discussions about sex such as children's permission to have sex, and the perception that their children are not old enough to talk about sex (Flores & Barroso, 2017).

Most parents find discussing reproductive health with their children challenging due to societal taboos and awkwardness (Oaa et al., 2017). This suggests that many parents may feel embarrassed or uncomfortable discussing topics related to reproductive health, which they often consider a private and taboo matter. After learning about the research topic, many parents immediately refused to participate in this study. Children

may seek reproductive health information without parental supervision, leading to misinformation or early sexual activity.

Previous research found that most parents did not receive reproductive health education during their youth. Therefore, parents often avoid discussing reproductive health with their children, which may lead to curiosity and experimentation (Robinson et al., 2017). Parents should answer children's reproductive health questions appropriately instead of avoiding the topic or scolding the child. This response can confuse children and lead them to seek information from unreliable sources.

It is essential to provide reproductive health education to adolescents early on in order to prevent sexual misbehaviour (Noe et al., 2018). By educating oneself about sexual health, one can gain the knowledge necessary to make informed decisions about their body. This knowledge can empower individuals to take control of their sexual health and well-being, ultimately leading to a happier and healthier life. Studies show early reproductive health education improves parent-child communication (Khoshsaligheh et al., 2018).

Early education can prevent health risk behaviours in adolescents. Talking openly about reproductive health can reduce teenage pregnancy rates. Poor communication skills and lack of confidence contribute to adolescent reproductive health problems. The higher the parents' education, the faster they discuss reproductive health issues with their children. Parents have the right to keep track of their children's growth by evaluating their needs. Parents should improve communication skills and learn about adolescent reproductive health to provide accurate information to their children. Parents can establish trust with their children by providing accurate reproductive health information, leading to a closer relationship.

Effective communication between parents and their children regarding reproductive health is imperative (Aliyu & Aransiola, 2023). Fathers should be included in educating their sons about reproductive health. Some parents hesitate to provide adequate reproductive health education to their children due to lack of knowledge. Mothers are interested in gaining knowledge about adolescent reproductive health. Attend seminars, contact schools, and seek expert guidance to succeed in this field. Policymakers and school teachers must provide up-to-date and precise information to parents. In addition, parents should learn to configure internet settings to block access to inappropriate websites for their children.

Most parents believe that reproductive health information is crucial for their children, but societal taboos and personal discomfort make it challenging to initiate these conversations. Parents use slang instead of proper terms to avoid discussing reproductive health directly due to taboos. The Indonesian Ministry of Health should empower parents to openly discuss reproductive health with their children, providing them with a reliable source of information in the family environment.

## **CONCLUSION**

This study concluded that mothers wanted to learn more about sex education from experts or health professionals. They were interested in male and female sexual structure, as well as sexual physiology. Mothers and children must communicate openly about sex-related issues. It is critical to provide parents with accurate and up-to-date sex education information so that they can effectively educate their children at home.

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Affiliation Correction