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Exploration of Javanese Children's Knowledge and Attitudes about Puberty and Reproductive Health

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Abstract

Every year, adolescent pregnancy cases in Javanese society become challenging. Reproductive health education must be provided before the child enters puberty despite experiencing cultural barriers in its delivery. This study aims to explore children's knowledge and attitudes about puberty and reproductive health to analyze the need for reproductive health education for children living in Javanese culture. This cross-sectional study sampled 174 children aged 9-11 years in the capital city of Central Java. Children in this study are female (54.6%) and male (45.4%), and 20.1% of them have already experienced puberty. As many as 48.9% of children have low knowledge, especially about puberty signs and menstruation. Most children have good attitudes about reproductive health, but 6.9% are permissive. There is no significant relationship between knowledge and attitudes (p-value=0.606). Puberty status is also unrelated to children's knowledge (p-value=0.678) and attitudes (p-value=0.291). Permissive attitudes regarding adolescent pregnancy need to be highlighted. This is potentially harmful to children, especially if the child does not immediately engage in proper reproductive health education. The reproductive health educational model does not need to separate children's classes based on their puberty status. The Ministry of Health and Education needs to improve children's reproductive health knowledge by considering the character of Javanese society, which is still taboo.

Introduction

The role of youth in national development is the key to national success in the future. The progress of any country depends on how productive and creative the young population is. Healthy and qualified young people are the engine for a country to grow and develop (Khan, 2022). Adolescence is often seen as an exciting and challenging phase of life. At this time, attraction to the opposite sex began to appear as one of the signs of puberty in boys and girls (Yao et al., 2022). Reproductive health education should be provided to prepubescent children so they can enjoy adolescence with positive activities that do not harm their health (Indraswari et al., 2023).

The delivery of health information often encounters obstacles in cultural aspects (Mbarushimana et al., 2022). In Javanese culture, people believe that information about puberty and reproductive health is a taboo thing to talk about (Indraswari et al., 2021; Widjanarko et al., 2022). Children look for information by themselves through the internet and peers (Hoffmann-Wróblewska et al., 2021; Shaluhiyah, Musthofa, et al., 2020). Incorrect information can be dangerous because it can form erroneous understandings and negative attitudes among children (Friedman et al., 2022; Shaluhiyah, Suryoputro, et al., 2020). This is sourced from reports of risky behavior of adolescents in Indonesia. From those reports, it can be concluded that some teenagers have already made their sexual debut at a

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very young age, that is, as soon as they enter puberty (Wahab et al., 2018). Global School-based Health Survey (GSHS) for Indonesia in 2015 found that 5.3% of adolescent students in Indonesia have experienced sexual intercourse (Ministry of Health Indonesia, 2016).

Data from one of the big cities in Java shows that adolescent pregnancies always occur every year, even increasing during the COVID-19 pandemic (Health Office of Central Java Province, 2020). Pregnant students are not allowed to continue their education (Bearak et al., 2018). Their chances of getting a job with a better income are also getting less (Ahonsi et al., 2019). The most crucial option is to continue the pregnancy or abort the fetus. Often Javanese people choose to continue the pregnancy, even with various risks in the future. Abortion is not a choice since they believe their sin will multiply (Widjanarko et al., 2022). The high problem of reproductive health among adolescents in Indonesia has caused the Ministry of Health to prioritize adolescents as the target of its intervention program.

A large amount of attention to adolescent reproductive health issues led to scarce references to knowledge and attitudes about puberty and reproductive health among prepubescent children, especially those who lived in patriarchal Javanese culture (Shaluhiyah et al., 2023; Widjanarko et al., 2023). Prevention efforts need to be carried out as early as possible before children enter adolescence. This study explores the knowledge of and attitudes about puberty and reproductive health among Javanese children and the relationship between them. The study also investigated whether children's knowledge and attitudes about puberty and reproductive health are affected by puberty status. This will be very useful as the basis assessment for designing a reproductive health education program for middle-aged children. The result of this study can also be used as a reference for or comparison with other studies that would like to investigate knowledge and attitudes about puberty and reproductive health in children surrounded by taboo cultural environments.

Method

This research design is cross-sectional and conducted during the pandemic. The respondents in this study were students in grades 4-6 elementary school in Semarang, the capital city of Central Java. There were 174 students with an age range of 9-11 years participated in this study. Data collection was carried out for 2 weeks, with a self-administered questionnaire through Google Forms. Informed consent that has been approved by parents, teachers, and children was received through the Google Form system. The study was authorized by the Ethics Committee (Approval ID: 050/EA/KEPK-FKM/2023) of the Faculty of Public Health, Universitas Diponegoro.

In addition to the characteristics of the child which include sex and puberty status, the other variables measured in this study were knowledge and attitude about puberty and reproductive health matters. The questionnaire was developed by the authors for the present study. The component of each variable revealed good internal consistency (Cronbach's alpha for knowledge = 0.657; Cronbach's alpha for attitude = 0.700). Univar¬iate analysis assisted with the software package used to obtain the frequency distribution of each variable. Chi-square is used to determine the relationship between knowledge and attitude, as well as the relationship between puberty status towards knowledge and attitude (p-value = 0.05).

Knowledge of puberty is measured using 7 item questions which include: understanding puberty, signs of puberty in boys and girls, knowledge of menstruation, and male and female genitalia. Correct answers are given a score of 1, while incorrect answers are given a score of 0. The total correct score in the knowledge variable amounted to 24, with a median of 11. Knowledge of puberty is categorized as good if the total score is above 11, while knowledge of puberty is categorized as bad if the total score is below or equal to 11. Attitudes about reproductive health are measured using 4 item questions that include: attitudes about courtship, interactions with the opposite sex, pornography, and teenage pregnancy. The score varies between 0-3. Zero scores are given for non-permissive answers. Scores of 1 – 3 are given based on the level of permissiveness. In the question of interaction with the opposite sex, the answers sitting next

to each other and alone were scored 1 because regarded as quite unethical. A score of 2 is given to the answer of hugging/cuddling, touching the cheeks, lips, and buttocks because Javanese culture considers it very unethical although it is not risky. A score of 3 for highly permissive behavior answers such as kissing cheek and lip, seeing/showing body parts that are normally covered by clothes, accessing pornography, and teenage pregnancy. The total correct score in the attitude variable amounted to 25, with a median of 1. Attitudes are categorized as permissive if the total score is above 1, while attitudes are categorized as good or not permissive if the total score is below or equal to 1.

Results and Discussion

Respondents in this study consisted of 54.6% girls and 45.4% boys aged 9-11 years. As many as 20.1% of children have experienced puberty. This means that women can already get pregnant because their eggs can be fertilized, while boys have produced sperm so that they can fertilize the ovum. Pregnancy can occur if a pubescent male and female perform sexual intercourse so that the sperm meets the ovum. This is called conception. This is very important for middle-aged children to know. Unfortunately, children's knowledge of conception was not measured in this study, because almost all parents objected if their children received questions about sexual intercourse during conception and pregnancy. Parents reasoned that questions about these things are considered unethical or taboo, especially when asked to children of primary school age. It can be concluded that parents also limit the information about reproductive health that children need. Parents are often dishonest in providing information about reproductive health because they find it awkward to discuss. The topic is considered unethical to discuss with the child (Indraswari et al., 2021). Poor communication between parents and children regarding reproductive health information makes children more likely to have pregnancies in adolescence (Nambambi & Mufune, 2011). Good knowledge and attitude are strongly influenced by the quality of the information obtained by children (Mosavi et al., 2014; Somba et al., 2014).

Table 1 shows that there are still many children who do not have sufficient knowledge of puberty and reproductive health (48.9%). Most children know the meaning of puberty, but many cannot name the signs of puberty in males and females in detail. The most widely known signs of puberty are wet dreams for men (71.3%) and menstruation for women (90.8%). When they were asked about their understanding of menstruation, children only understand that there is blood coming out of the vagina, but they are not familiar with the cycle and the causes of menstruation. Not all children know that penis and vagina are terms of male and female genitals (see Table 2). Insufficient knowledge will affect difficulty in decision-making (Widjanarko et al., 2023). This has been reported as a barrier for adolescents to make healthy decisions (Hagan & Buxton, 2012).

Table 1. The Category of Children's Knowledge and Attitudes about Puberty and Reproductive Health Matters

Variables	n	%
Knowledge		
Bad	85	48.9
Good	89	51.1
Attitudes		
Permissive	12	6.9
Not permissive	162	93.1

Source: Primary Data

Table 2. The Distribution of Frequency of Children's Knowledge and Attitudes about Puberty and Reproductive Health Matters

Variables	n	%
Knowledge		
Puberty is a period of transition from childhood to adolescence	171	98.3
Signs of puberty in males		
Wet dreams	124	71.3
Acne-prone face	73	42.0
Muscles begin to dilate	62	35.6
Grows hair in the armpits, around the genitals,	88	50.6
chin, and mustache	68	39.1
Begin to be interested in the opposite sex	93	53.4
Growing Adam's apple	107	61.5
Sound changes heavier	60	34.5
Enlarged genitals		
Signs of puberty in females		
Menstruation	158	90.8
Acne-prone face	88	50.6
Enlarged hips	74	42.5
Growing hair in the armpits, around the genitals	81	46.6
Begin to be interested in the opposite sex	75	43.2
Enlarged breasts	101	58.0
What is known about menstruation		
Bloody discharge from the vagina	157	90.2
Begins to occur at the age of 11-15 years	68	39.1
The effect of hormonal changes	66	37.9
The normal cycle is one month (21-35 days)	53	30.5
Occurs for 5-7 days	80	46.0
Sometimes accompanied by abdominal pain	78	44.8
Girls who have never menstruated cannot get pregnant	110	63.2
The vagina is the female genitals	150	86.2
The penis is the male genitalia	146	83.9
Attitudes		
It's okay if children at my age have a boy/girlfriend	4	2.3
I feel okay for doing this with friends of the opposite sex	71	40.8
Sitting next to each other	109	62.6
Play together	75	43.1
Shaking hands	2	1.1
Alone	4	2.3
Hand in hand	1	0.6
Hugging/cuddling	0	100
Touching the cheek	0	100
Touching the lips	0	100
Touching the buttocks	0	100
Kissing cheeks	0	100
Kissing lips	1	0.6
Seeing/showing body parts that are normally covered by clothes	52	29.9
Not at all		
I feel it's okay for a child my age to watch porn stuff (e.g. kisses, people in mini clothes/naked, and so on)	0	100
In my opinion, it is okay for middle/high school teenagers to get pregnant	3	1.7

Source: Primary Data

Almost all children in this study had a good attitude. They were not permissive with risky behaviors for unwanted pregnancy (93.1%). Table 2 shows that few children consider that having a boy/girlfriend at their age is normal. Children know the limits of interacting with sex. None thinks that accessing pornography is allowed. Most children have a non-permissive attitude toward unwanted pregnancy in adolescence. It means that some children consider that pregnancy experienced in adolescence (11-18 years) is permissible (1.7%). Although this figure is small, permissiveness in adolescent pregnancy deserves special attention. Previous research has found that sexual permissiveness is associated with a lower probability of having more than one sexual partner. Sexual permissiveness can be disagreement with casual sex or having sex with multiple partners. A stricter attitude about sex and sexuality, greater religiosity, and less openness to experience are associated with less sexual activity (Shapiro et al., 2017).

This risky sexual behavior is usually associated with a sexually permissive attitude. Sexually permissive attitudes have been measured as a person's acceptance of various sexual behaviors ranging from kissing to sexual intercourse, with a large part of the emphasis on sexual intercourse, when the behavior is accompanied by less or no affection, love, or relational commitment. Greater support of permissive behavior is thus associated with greater exposure to sexual content, as well as greater accessibility of sex in implicit memory. The role of sexual permissiveness as a mediator between exposure to sexual content in media and the ease of accessibility of sexual concepts in implicit memory. Linking sexual permissiveness with the accessibility of concepts is based on the function of structuring attitudinal knowledge. Sexual content may be more prominent, or perhaps more appealing, to viewers who have a permissive attitude, so the consumption of sexual content reinforces permissiveness for those who already have that attitude (Dillman Carpentier & Stevens, 2018). Factors such as the government's lack of attention to reproductive health education for middle-aged children, inadequate or improper information and knowledge, weakness of religious beliefs, desire to be modern, poor family communication, and inappropriate influence of some media explain why teenage girls engage in risky sexual behavior that exposes them to dangerous and unintended consequences such as sexually transmitted infections (STIs) include HIV/AIDS and unwanted pregnancy. If this problem is ignored, a time will come when the injuries will become so serious, then it will be too late to remove them (Mosavi et al., 2014).

Table 3. Cross-tabulation between Children's Knowledge and Attitudes about Puberty and Reproductive Health Matters

Variable	Attitudes		Total n (%)	p-value
	Not permissive n (%)	Permissive n (%)		
Knowledge				
Bad	80 (94.1)	5 (5.9)	85 (100)	0.606
Good	82 (92.1)	7 (7.9)	89 (100)	

Source:

Table 4. Cross-tabulation between Puberty Status, Children's Knowledge and Attitudes about Puberty and Reproductive Health Matters

	Puber	Not Puber yet	p-value
Knowledge			
Bad	16 (45.7)	69 (49.6)	0.678
Good	19 (54.3)	70 (50.4)	
Attitude			
Not permissive	34 (97.1)	128 (92.1)	0.291
Permissive	1 (2.9)	11 (7.9)	

Source: Primary Data

A previous study reported that a perceived negative cultural attitude towards sexual activity before marriage was especially felt by children. This is influenced by children's access to reproductive health education from their surroundings (Thongmixay et al., 2019). Parents actively discouraged relationships among youth, and topics like relationships and sex were taboo to discuss between parents and children (Indraswari et al., 2021). Knowledge and attitudes can influence a person's behavior. Both can support or hinder the achievement of children's reproductive health status (Thongmixay et al., 2019). Knowledge influences the practices carried out as well as the individual's perception of their practice, with a lack of clarity about what is required for puberty causing concern. The knowledge deficit creates confusion around the accuracy of cultural restrictions and taboos, creates distress, and affects self-confidence (Hennegan et al., 2019). Efforts should be increased to provide knowledge and communication skills to teenagers so that they can take more control in decision-making (Sychareun et al., 2018).

This study showed that there was no significant relationship between knowledge and attitudes about puberty and reproductive health (p-value=0.606). Thus, one cannot expect that good knowledge will form a good attitude anyway. The reproductive health education content designed must be tailored to its respective objectives, whether to increase knowledge about reproductive health or strengthen children's non-permissive attitudes. Previous research found that negative attitudes were internalized and manifested in keeping pubertal status hidden, shame, and distress at the potential of having it exposed (Hennegan et al., 2019). However, table 4 shows no significant association between puberty status towards the children's knowledge and attitudes. That is, reproductive health education designed to improve children's knowledge and attitudes does not need to separate groups of children who are pubescent from those who are not yet pubescent. The limitation of this study is that data collection was not carried out with in-person interviews due to restrictions during the pandemic situation. This study also did not investigate the relationship between knowledge and attitudes with practical behavior. Future research is suggested to explore risky behavior among middle-aged children in Java. However, research on the reproductive health of Javanese children aged 9-11 years is still very rare, except for the subject of personal hygiene and menstrual readiness in girls.

Conclusion

Some children have negative attitudes about reproductive health, especially the perspective on adolescent pregnancy. There is no significant relationship between knowledge and attitudes. Puberty status segregation is not necessarily being applied in designing the reproductive health educational model, since it is not related to children's knowledge and attitudes. The Ministry of Health and Education needs to improve children's knowledge and attitudes by considering the character of Javanese society, which is still taboo to discuss puberty and reproductive health.

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