THE COMPARISON OF REPRODUCTIVE HEALTH KNOWLEDGE BETWEEN MALE AND FEMALE ADOLESCENTS IN JAKARTA

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ABSTRACT

The main problem of adolescent reproductive health in Indonesia is the lack of reproductive health information. It occurred due to poor of their knowledge. This study aimed to compare reproductive health knowledge between female and male adolescents. This cross-sectional study was conducted by online-based survey in Jakarta, Indonesia. The 438 samples of this study consisted of 244 female and 194 male adolescents. Data was collected with Google Forms. Logistic regression was used to analyze the data of this study. A proportion of male adolescents have more poor knowledge (21.1%) than female adolescents (13.9%). The odds of male adolescents were 1.66 times more likely (95% CI 1.00-2.73) to have poor reproductive health knowledge than female adolescents. In separate analyzes between females and males, the role of education institutions has a significant relationship with reproductive health knowledge in females (P-value = 0.039). However, in male adolescents, it was not. Health promotion from educational institutions is needed to increase adolescent reproductive health knowledge, especially for male adolescents.

Keywords: Adolescents, female, knowledge, male, reproductive health

INTRODUCTION

Demographic bonuses will be experienced by Indonesia from 2020 to 2030. This condition occurs when the proportion of the productive age ratio is more significant than that of the elderly, where one part of the productive age group is the youth (Kusumaryani, 2017). At that age, there is a life transition between children and adults (WHO, 2021). Reproductive health is defined as a condition that is not solely disease-free but is physically, mentally, and socially healthy (Ministry of Health, 2017). Matters closely related to reproductive health include environmental conditions, culture, and economic level. Aspects of age, gender, school level, and place of residence also influence adolescent reproductive health. Access to health care, information, and support from various lines impacts adolescent reproductive health (Morris and Rushwan, 2015).

The issue of adolescent reproductive health was a global challenge (Morris and Rushwan, 2015). The arising problems also become increasingly complex (Kartikasari, Ariwinanti and Hapsari, 2019). One of the problems that occurs in adolescents is the lack of knowledge of reproductive health. The reason included poor reproductive health services and a lack of information about reproductive health (Irawan, 2016). Based on the 2017 Indonesian Demographic and Health Survey (IDHS) on Adolescent Reproductive Health (KRR), adolescents' knowledge of reproductive health is still low. Only half of the adolescents in Indonesia, both males (48.6%) and females (50.5%), know that having sexual intercourse once can result in a woman getting pregnant (National Population and Family Planning Board, Statistics Indonesia and Ministry of Health of The Republic of Indonesia, 2018).

Several studies show that the knowledge of adolescent reproductive health could be better in Jakarta (Purbono *et al.*, 2015, Desiana, 2020, Nurzaman *et al.*, 2018). It shows that there is still a lack of knowledge about adolescent reproductive health in Jakarta. Nurzaman's study (2018) in a high school in Jakarta also shows

differences in the level of reproductive health knowledge of males and females. The urgency and novelty of this research was to reveal in-depth knowledge about reproductive health according to sex as material for studying the management of what causes these differences. Therefore, this study aimed to compare knowledge about reproductive health between male and female adolescents.

METHODS

This quantitative research with a cross-sectional study design was conducted in 2021 using an online-based survey. The research location is in Jakarta, Indonesia, which includes five regions: West Jakarta, East Jakarta, Central Jakarta, South Jakarta, and North Jakarta. The study population includes all adolescents who have an age range of 18 to 24 years. The reason for selecting this age group was because it is a group of late adolescents, where the level of thinking maturity is highest compared to the early and middle adolescent groups. Besides that, this age group also does not require trustee consent when collecting respondent data. The sample was selected using a convenience sampling technique with inclusion criteria including single, able to use an Android mobile phone, residing in Jakarta, and willing to complete a questionnaire. A total of 438 adolescents were selected as samples calculated using the Lemeshow formula to test the two proportions hypothesis.

The research questionnaire is part of the Demographic and Health Survey Questionnaire Adolescent Reproductive Health (BPS, BKKBN and Ministry of Health, 2017). It is modified by reducing or adding question items according to the conditions. The questionnaire was made in a *Google form* because this study was conducted during pandemic era and to reducing the spread of Covid-19. This Google form was distributed via social media, including *WhatsApp Group, Instagram, Facebook*, and *Twitter*. *Data collection was carried out for about a month.*

The dependent variable was reproductive health knowledge obtained from six questions regarding reproductive health: wet

dreams, menstruation, fertile period, HIV/AIDS, causes of pregnancy, and unwanted pregnancies. Independent variables include the role of educational institutions (yes, no), age (18-19 years, 20-24 years), education (no education, senior high school, diploma, bachelor/graduate), peer influence (yes, no), information exposure (always, often, rarely, never), and economic status (above RMW, below RMW). The education in question is the level of education taken when the survey was conducted. Economic status is seen based on parental income for a month, divided into two by the Jakarta Regional Minimum Wage (RMW) cutoff of 4.4 million rupiahs. Data analysis was using logistic regression. This research has received ethical approval from the Health Research Ethics Committee Universitas Muhammadiyah Prof. DR. Hamka with no. 03/21/07/01196.

RESULTS AND DISCUSSION

Most adolescents in Jakarta in this study had good knowledge of reproductive health. Based on sex, the proportion of male adolescents who had poor reproductive health knowledge (21.1%) was higher than that of female adolescents (13.9%) (Figure 1). In line with Ernawati's study (2018) most adolescents have good knowledge about reproductive health, but male adolescents have poorer knowledge than female adolescents. However, this study differs from the previous study by Kartikasari, *et al.* (2019) that male adolescents have higher average knowledge than female adolescents. It is due to differences in the characteristics of the respondents where the research was conducted on only high school students in Malang City.

In contrast, this research was conducted on adolescents with various levels of education. The different locations between Malang and Jakarta lead to a difference in the distribution of reproductive health knowledge by sex in adolescents. Jakarta is one of the areas with reproductive health conditions that are at risk compared to other regions in Indonesia (Desiana, 2020).

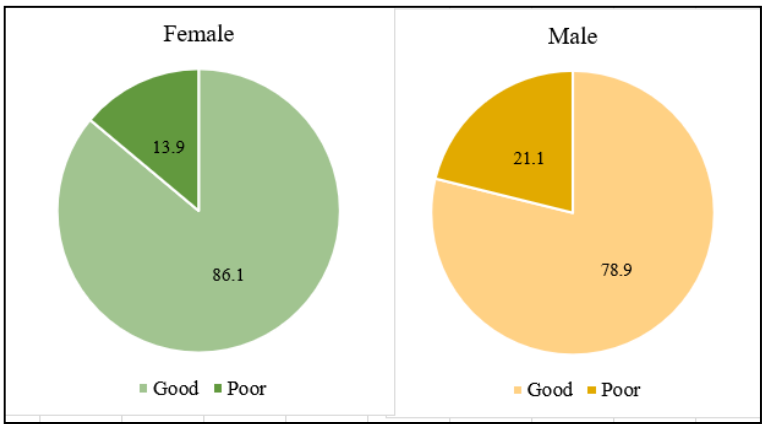

Figure 1. Distribution of Reproductive Health Knowledge among Male and Female Adolescents in Jakarta

The results of this study also show that sex is significantly related to knowledge of reproductive health (P-value = 0.048). The odds of male adolescents having poor reproductive health knowledge are 1.66 times higher than female adolescents (POR = 1.66, 95% CI 1.00-2.73) (Table 1). Male adolescents know less about their reproductive health, maybe because they are more interested in knowledge related to other topics. So, information about reproductive health is more limited. This results aligns with previous studies that knowledge of reproductive health significantly differs between male and female adolescents (Ernawati, 2018). Males are at a higher risk for poor knowledge than females (Nurzaman *et al.*, 2018). Males have looser norms than women. Therefore, with low knowledge of reproductive health, male adolescents have a more significant opportunity to engage in risky behavior than female adolescents (Mahmudah, Yaunin and Lestari, 2016).

Table 1. Knowledge of Reproductive Health by Sex

Sex	**Reproductive Health Knowledge**				**Total n=438**	**β**	**SE**	**POR**	**95% CI**	***P-value***
	Good		**Poor**							
	n	**%**	**n**	**%**						
Female	210	86.1	34	13.9	244	Ref				
Male	153	78.9	41	21.1	194	1.97	0.42	1.66	1.00-2.73	0.048

Note: n = total sample, SE = standard error, POR = prevalence odds ratio, CI = confidence interval, Ref = reference

In more detail, table 2 compares the reproductive health knowledge factors for male and female adolescents. These factors include the role of educational institutions, age, education, peer influence, exposure to information, and economic status.

Table 2. The Comparison of Reproductive Health Knowledge between Male and Female Adolescents in Jakarta

Variables	Female (n=244)								Male (n=194)							
	Reproductive Health Knowledge				Total	POR	95% CI	*P-value*	Reproductive Health Knowledge				Total	POR	95% CI	*P-value*
	Good		Poor						Good		Poor					
	n	%	n	%					n	%	n	%				
Role education institution																
Yes	149	89.2	18	10.8	167	Ref			50	79.4	13	20.6	63	Ref		
No	61	79.2	16	20.8	77	2.17	1.04-4.53	0.039*	103	78.6	28	21.4	131	1.05	0.50-2.19	0.906
Age																
18-19 years	35	85.4	6	14.6	41	1.07	0.41-2.78	0.887	27	79.4	7	20.6	34	0.96	0.39-2.40	0.932
20-24 years	175	86.2	28	13.8	203	Ref			126	78.8	34	21.3	160	Ref		
Education																
No education	56	88.9	7	11.1	63	Ref			21	87.5	3	12.5	24	Ref		
Senior high school	9	75.0	3	25.0	12	2.67	0.58-12.25	0.207	20	71.4	8	28.6	28	2.80	0.65-12.07	0.167
Diploma	14	77.8	4	22.2	18	2.29	0.59-8.91	0.234	32	76.2	10	23.8	42	2.19	0.54-8.89	0.274

Bachelor/graduate	131	86.8	20	13.3	151	1.22	0.49-3.05	0.669	80	80.0	20	20.0	100	1.75	0.47-6.45	0.401
Peer influence																
No	107	84.3	20	15.8	127	1.38	0.66-2.87	0.395	73	76.0	23	24.0	96	1.40	0.70-2.80	0.341
Yes	103	88.0	14	12.0	117	Ref			80	81.6	18	18.4	98	Ref		
Information exposure																
Always	96	84.2	18	15.8	114	Ref			56	74.7	19	25.3	75	Ref		
Often	84	89.4	10	10.6	94	0.63	0.28-1.45	0.281	49	76.6	15	23.4	64	0.90	0.41-1.96	0.796
Rarely	25	86.2	4	13.8	29	0.85	0.27-2.75	0.790	37	90.2	4	9.8	41	0.32	0.10-1.01	0.052
Never	5	71.4	2	28.6	7	2.13	0.38-11.86	0.387	11	78.6	3	21.4	14	0.80	0.20-3.19	0.756
Economic status																
upper RMW	116	87.2	17	12.8	133	Ref			97	78.9	26	21.1	123	Ref		
lower RMW	94	84.7	17	15.3	111	1.23	0.60-2.55	0.570	56	78.9	15	21.1	71	1.00	0.49-2.04	0.998

*Note: n = total sample, SE = standard error, POR = prevalence odds ratio, CI = confidence interval, Ref = reference, RMW = regional minimum wage, *significant*

In this study, the only factor significantly related to female adolescent reproductive health knowledge was the role of educational institutions (P-value = 0.039). The proportion of female adolescents with poor reproductive health knowledge is more common in adolescents who do not have a role from an educational institution (20.8%) than in adolescents who have an educational institution role (10.8%). The odds of female adolescents with no role from their educational institution having poor reproductive health knowledge is 2.17 times higher than female adolescents with a role from their educational institution (POR = 2.17, 95% CI 1.04-4.53). In male adolescents, the role of educational institutions is not significantly related to reproductive health knowledge (Table 2).

Most adolescents do not have accurate knowledge or access to reproductive health information and services (Djama, 2017). Therefore, educational institutions play a role in strengthening the services and outreach of programs needed to meet the neglected needs of adolescent reproductive health knowledge (Sharma *et al.*, 2022). Another role of educational institutions is to prevent and protect adolescents from risky sexual behavior and prepare adolescents for a healthy reproductive life in the future (BPS *et al.*, 2008). In line with research conducted by Alimoradi, *et al.* (2017) in Iran, the role of educational institutions, which is strengthened through the collaboration of young women, will increase reproductive health knowledge. Female adolescents who can maintain their reproductive health, all forms of threats from outside and from male adolescents will avoid all kinds of risky behavior. Although the results of this study show that there is no relationship between the role of educational institutions and the knowledge of male adolescents, it is necessary to provide reproductive health services for men through educational institutions to increase their reproductive health knowledge because the results of this study show poor reproductive health more in male than female adolescents.

The role of educational institutions in increasing knowledge and understanding of reproductive

health in adolescents can take the form of health promotion and communication (Kartikasari, Ariwinanti and Hapsari, 2019). Through health promotion, sexual deviations that can harm themselves and their families can be prevented (Yarza, Maesaroh and Kartikawati, 2019). Counselling provided by educational institutions can increase adolescents' knowledge about reproductive health (Johariyah and Mariati, 2018). A quasi-experimental study on adolescents, especially high school students in Sintang, also stated that providing education through lectures and case discussions increased students' knowledge about adolescent reproductive health (Panjaitan, Widagdo and Prabamurti, 2019).

In both male and female adolescents, apart from the role of educational institutions consisting of age, education, peer influence, information exposure, and economic status, this study did not show a significant relationship with adolescent reproductive health knowledge. The time of research conducted during a pandemic caused these factors to become unrelated. The results of this study are not in line with Purba and Rahayu's research (2021) that peer influence is related to knowledge of adolescent reproductive health. According to Forrest (2004), changes in knowledge and behavior of adolescent reproductive health are influenced by the role of peers with closeness in age, social status, and education. Peers influence increasing adolescent knowledge of reproductive health (Juariah, 2021). For adolescents who have completed their basic education and/or who have not gone to college, the role of the educational institutional institution is from informal educational institutions which can be accessed easily by internet and joined with them.

The limitations of this study are that the first data collection was carried out only through online questionnaires so that it can only trust the results of the answers filled in by adolescents. Second, deeper information from adolescents also cannot be dug deeper. The expressions cannot be known to find out the truth of the adolescent's answer. Therefore, qualitative research is needed to be able to dig deeper into the answers of adolescents

and the study was conducted by direct interviews with adolescents.

CONCLUSION

Male adolescents have poor reproductive health knowledge higher than female adolescents. The difference in reproductive health knowledge between male and female adolescents lies in the influence of the role of the educational institution acquired. Health promotion from educational institutions is needed to increase adolescent reproductive health knowledge, especially for male adolescents, so they are exposed to more information about reproductive health.

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