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Information-seeking behavior of reproductive health based on socio-demographic among adolescents in Jakarta, Indonesia

Ulya Q. Karima, Terry Y. R. Pristya, Chahya K. Herbawani

Abstract:

BACKGROUND: The main characteristic of today's adolescents in seeking information is through online media. The pattern of their information-seeking behavior is diversified based on socio-demographic factors. The objective of this study is to describe the information-seeking behavior of reproductive health based on socio-demographics among adolescents.

MATERIALS AND METHODS: This online-based survey was conducted with a cross-sectional study in 2021 among 438 adolescents 18–24 years of age in Jakarta, Indonesia, by purposive sampling technique. Data were collected by distributing Google forms and analyzed using the Chi-square test.

RESULTS: The main source of information media used by adolescents in their daily lives was online media (97.3%), with Instagram being the highest proportion (66.0%). Based on education, there were significant differences in preference topics on Human Immunodeficiency Virus-Acquired Immuno Deficiency Syndrome (HIV-AIDS) and other sexually transmitted diseases ($P = 0.012$), reproductive system and puberty ($P = 0.045$), source of information from Facebook ($P = 0.034$), and source of information from mother ($P = 0.045$). Based on parents' income, there was a significant difference in preference topics on child marriage, prevention of pregnancy, and abortion ($P = 0.015$).

CONCLUSION: There is a need to improve reproductive health promotion by maximizing online media and certain figures along with promotion target mapping based on socio-demographic characteristics.

Keywords:

Adolescents, reproductive health, socio-media

Introduction

Adolescence is the phase of life stretching between childhood and adulthood.^[1]

It is a period of many critical transitions: physical, psychological, economic, and social, so in facing it, they need to find the right information on the changes that occur to themselves in various aspects, especially information on reproductive health. Sexual and reproductive health implies that all people can receive comprehensive education and information that involves the provision of accurate, age-appropriate,

and up-to-date information on physical, psychological, and social aspects of sexuality and reproduction.^[2]

Information-seeking behavior is the purpose of seeking information as a consequence of a need to satisfy some goal.^[3] Nowadays, adolescents are surrounded by many sources of information including family, online media, figures, or printed media. However, very few of them know how to select proper information from reliable sources.^[4] One of the efforts that can be done to achieve this is to ensure that they can provide accurate information about

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Program Study of Public Health, Faculty of Health Science, Universitas Pembangunan Nasional Veteran Jakarta, Depok, Indonesia

Address for correspondence:

Terry Y. R. Pristya, Program Study of Public Health, Faculty of Health Science, Universitas Pembangunan Nasional Veteran Jakarta, Limo Street, Depok, 16514, Indonesia.

E-mail: terry.yuliana@upnvj.ac.id

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reproductive health. The lack of valid information can increase risky health behaviors in adolescence.^[5] A survey in a selected educational district in Isfahan, Iran, showed that the internet and virtual social media were the most important sources to obtain health information related to high-risk behaviors.^[6] Health workers were the highest proportion (43.8%) as a source of reproductive health information in rural areas of Indonesia, while in urban areas were parents (35.4%).^[7]

The ability of young people to safely and successfully pass their transition to adulthood is diversified by age, sex, marital status, schooling levels, residence, living arrangements, migration, and social-economic status.^[8] Appropriate information-seeking behavior is one of the factors to get this transition successful. The important data on various sources of information and patterns for reproductive health topics based on socio-demographics will support the strategy of health promotion programs. The objective of this study was to describe information-seeking behavior of reproductive health based on socio-demographics among adolescents in Jakarta.

Materials and Methods

Study design and setting

This quantitative research used an online-based survey with a cross-sectional design. This study was conducted in 2021 among adolescents in Jakarta, Indonesia.

Study participants and sampling

The population of this study was adolescents of 18–24 years of age in Jakarta. The minimum sample was counted using the hypothesis test for the difference of proportion ($\alpha = 0.05$, $\text{power} = 0.80$). The minimum total sample required was 388 adolescents. Inclusion criteria were as follows: not married yet, able to use any digital devices, domiciled in Jakarta for a minimum of 1 year, and willing to participate in this survey. Exclusion criterion was not filling out the questionnaire completely. A total of 438 adolescents were analyzed after sample recruitment by purposive sampling.

Data collection tool and technique

Data were collected by distributing Google forms via WhatsApp group, WhatsApp status, Twitter, Instagram, and Line for 2 weeks. The questionnaire consists of 10 questions: one question each about interesting topics, source of information from online media, and the source of information from the figure that has several answer choices and answered them with “Yes” or “No”, and seven other questions about social-demographics. In the beginning part of the questionnaire, respondents were asked for informed consent after a written explanation. If the respondents

agree to participate in this study, then they continued to fill out the self-administered questionnaire. The instrument was a questionnaire developed by reviewing previous related studies.^[9,10] A trial of the questionnaire was previously conducted on 60 adolescents in Depok, West Java, which has similar characteristics as an urban area.^[11]

The respondent's age is based on the last birthday. Domicile is addressed at the time of the data collection. Current education is education being undertaken at the time of data collection, but when respondents were not undergoing education, they will answer the last education that has been completed. A parent's income is defined as the average income in a month and categorized as more than equal to and below Rp 4,400,000 based on the Regional Minimum Wage (RMW) in Jakarta. Current activities were categorized as undertaking an education, working, and unemployed. For the source of information media, respondents were able to select more than one option. The descriptive analysis showed the distribution and frequencies of each variable. The significance of the proportion difference was analyzed using a statistical Chi-square test.

Ethical consideration

Data were collected taking into consideration ethical principles during human research. This research was conducted following The Belmont Report: respect for the person, benefit, and justice.^[12] Ethical approval was obtained from The Ethics Committee of Health Research, Universitas Muhammadiyah Prof. DR. HAMKA (Ref No. 03/21/07/01196).

Results

Characteristics of social-demographics

The proportion of female respondents was slightly higher (55.7%) compared with males. East Jakarta was the highest proportion of respondent domicile (30.4%). There, 57.3% of respondents were undergoing education at the bachelor and 41.3% of those parents' income was < RMW. Predominantly, the current activities of respondents were undergoing an education (80.1%). The most preferred source of information was online media (97.3%) [Table 1].

Among total respondents, the highest preference topics were family and marriage (51.8%), Instagram from online media (66.0%), physician/health workers from the figure (65.5%), and the book from printed media (78.3%). There were no significant differences in the four main parts of information-seeking behavior in both male and female adolescents. But from the proportion, the male showed a higher proportion of most variables of it.

Table 1: Characteristics of socio-demographics (n=438)

Variable	Categories	n (%)
Age	18 years	31 (7.1)
	19 years	44 (10.0)
	20 years	51 (11.6)
	21 years	121 (27.6)
	22 years	121 (27.6)
	23 years	62 (14.2)
	24 years	8 (1.8)
	Gender	Male
Female		244 (55.7)
Domicile	East Jakarta	133 (30.4)
	South Jakarta	128 (29.2)
	West Jakarta	104 (23.7)
	North Jakarta	40 (9.1)
	Central Jakarta	33 (7.5)
Current Education	No education	14 (3.2)
	Senior high school	40 (9.1)
	Diploma	60 (13.7)
	Bachelor	251 (57.3)
	Graduated from college	73 (16.7)
Parent's Income	≥RMW	257 (58.7)
	<RMW	181 (41.3)
Current Activities	Undertaken an education	351 (80.1)
	Working	58 (13.2)
	Unemployed	29 (6.6)
Source of Information Media*	Online	426 (97.3)
	Television/radio	72 (16.4)
	Printed	40 (9.1)

*Able to select more than one option, n=Total respondents, RMW=Regional Minimum Wage

Based on education, there were significant differences in the four variables. First, the respondents from the college/graduated from college who were interested in the topic of HIV-AIDS and other sexually transmitted diseases were 49.5% compared with the senior high school who were only 27.5% ($P = 0.012$). Second, the respondents from college/graduated from college who were interested in the topic of the reproductive system and puberty were 47.4% compared with the senior high school who were only 30.0% ($P = 0.045$). Third, the respondents from the college/graduated from college who used Facebook as a source of information from online media were 13.8% compared with the senior high school who were 27.5% ($P = 0.034$). Fourth, the respondents from the college/graduated from college who preferred their mothers as the source of information from the figure were 44.3% compared with the senior high school who were 27.5% ($P = 0.045$). Based on parents' income, respondents <RMW who were interested in the topic of child marriage, prevention of pregnancy, and abortion were 57.5% compared with ≥RMW who were 45.5% ($P = 0.015$) [Table 2].

Discussion

The purpose of this study was to describe information-seeking behavior of reproductive health based on socio-demographics among adolescents in Jakarta. The distribution of adolescents in this study was undergoing bachelors degree, which means that the highest education completed was a senior high school. Jakarta has undergone many transformations, and access to information is easier with the development of the internet and smartphone.^[10] Only several adolescents refer to books or other reading sources.^[13] The most searched topic was smoking, reproductive systems, processes and functions, reproductive rights, sexually transmitted disease, sexuality and drugs, and family planning.^[7,14] The different classification of the reproductive topic in some studies makes the comparison a bit difficult.

This study is similar to some studies in which the highest proportions of social media that adolescents used to access reproductive health were Instagram, YouTube, and Twitter.^[14,15] Textbooks and scientific books are also effective media to convey reproductive health information to adolescents because they are considered a complement to the curriculum.^[16] Parents, the internet, teacher, health worker, and magazine become the highest proportion of source information preference.^[7] More attention should be paid to female adolescents because there were several barriers to their information access.^[17] But, among male adolescents also were extra and interpersonal barriers to sexual health education.^[16] A qualitative study prefers to seek reproductive health information through their significant others, such as mothers for female adolescents and friends for male adolescents.^[13] These results are also seen in this study. The analysis of a national survey in Indonesia among young and unmarried men (15–24 years old) found that the teacher was the highest proportion as a source of information.^[18]

A study of Indonesian adolescents found that access to information on the reproductive health of girls is higher than in boys.^[7,19] In Iran, there was a significant relationship between gender (especially girls) and the need for health information related to high-risk behaviors in adolescents.^[6] Although providers are aware that unmarried young people are exposed to risky sexual behavior, they still face a range of obstacles to acquiring appropriate information and services.^[20] Hatami *et al.*^[21] found that using peer education in schools informally could enhance the knowledge and attitude toward sexual health. Education is the factor that influences individuals in knowledge, attitudes, and behavior. Through good literacy, someone will obtain the proper information. Facebook groups become facilities for

Table 2: Information-seeking behavior of reproductive health based on gender, education, and parent's income

Variable	Gender (n=438)				Education (n=424)***				Parent's income (n=438)				
	Total (%)		Male Yes (%)	Female Yes (%)	Total (%)		College/Graduated from College Yes (%)	Senior High School Yes (%)	Total (%)		< RMW Yes (%)	≥ RMW Yes (%)	P
Interested Topics*													
Family and marriage	51.8	55.7	48.8	0.178	50.9	51.8	42.5	0.319	51.8	52.5	51.4	0.846	
Child marriage, prevention of pregnancy, and abortion	50.5	51.0	50.0	0.848	50.5	51.6	40.0	0.186	50.5	57.5	45.5	0.015*	
HIV-AIDS and other sexually transmitted diseases	47.5	46.9	48.0	0.848	47.4	49.5	27.5	0.012*	47.5	50.8	45.1	0.245	
Relation, romance, and dating	47.0	51.0	43.9	0.149	46.7	46.9	45.0	0.869	47.0	43.6	49.4	0.245	
Reproductive system and puberty	45.7	50.0	42.2	0.122	45.8	47.4	30.0	0.045*	45.7	41.4	48.6	0.145	
Gender issue	33.1	36.1	30.7	0.261	32.8	33.1	30.0	0.860	33.1	33.7	32.7	0.837	
Cigarettes, alcohol, and drugs	29.9	34.0	26.6	0.115	29.2	29.4	27.5	0.857	29.9	29.8	30.0	1.000	
Source of Information from Online Media*													
Instagram	66.0	68.6	63.9	0.361	66.0	67.4	52.5	0.078	66.0	61.3	69.3	0.101	
YouTube	58.7	59.3	58.2	0.845	58.3	59.1	50.0	0.313	58.7	63.5	55.3	0.094	
Twitter	40.0	43.8	36.9	0.169	41.0	41.9	32.5	0.311	40.0	40.3	39.7	0.921	
Government sites/related NGO	36.8	37.6	36.1	0.765	36.3	37.5	25.0	0.124	36.8	39.8	34.6	0.314	
TikTok	35.4	33.5	36.9	0.483	36.3	36.2	37.5	0.864	35.4	31.5	38.1	0.157	
Blog	23.5	21.1	25.4	0.309	23.6	23.4	25.0	0.845	23.5	24.3	23.0	0.819	
WhatsApp	22.1	20.6	23.4	0.563	22.2	22.7	17.5	0.552	22.1	20.4	23.3	0.486	
Facebook	14.8	14.9	14.8	1.000	15.1	13.8	27.5	0.034*	14.8	13.8	15.6	0.683	
Line	11.9	14.9	9.4	0.101	12.0	12.5	7.5	0.452	11.9	9.9	13.2	0.368	
Telegram	7.5	8.2	7.0	0.716	7.8	7.8	7.5	1.000	7.5	6.6	8.2	0.586	
Source of Information from Figure*													
Physician/health workers	65.5	67.0	64.3	0.613	65.8	67.2	52.5	0.079	65.5	68.0	63.8	0.414	
Friends	60.7	63.9	58.2	0.238	61.1	60.4	67.5	0.496	60.7	60.2	61.1	0.921	
Mother	42.0	41.2	42.6	0.846	42.7	44.3	27.5	0.045*	42.0	40.9	42.8	0.696	
Teachers	39.5	38.1	40.6	0.624	38.9	39.6	32.5	0.496	39.5	37.6	40.9	0.552	
Celebrity/influencer	32.6	33.5	32.0	0.759	32.8	34.1	20.0	0.078	32.6	35.4	30.7	0.352	
Sister/brother	24.2	23.7	24.6	0.911	24.1	24.5	20.0	0.698	24.2	26.0	23.0	0.498	
Father	23.3	22.7	23.8	0.821	23.6	23.7	22.5	1.000	23.3	21.5	24.5	0.493	
Source of Information from Printed Media*													
Book	78.3	78.9	77.0	0.817	78.5	78.9	75.0	0.548	78.3	77.9	78.6	0.906	
Magazine	41.3	40.2	42.2	0.697	41.5	42.4	32.5	0.243	41.3	40.3	42.0	0.768	
Newspaper	21.2	21.6	20.9	0.906	21.2	20.8	25.0	0.544	21.2	21.5	21.0	0.906	

*Statistically significant difference (P<0.05); **Able to select more than one option; ***Missing data=14; RMW=Regional Minimum Wage; n=Total respondents

sharing information and discussing specific topics that have something in common.^[19] Adolescents who are college/graduated from college tend to not live with their parents. Their socializing is even wider and freer in accessing the reproductive health information they want.

Parents who have good knowledge of reproductive health are more willing to communicate with their children and be supportive of programs that provide services and information to young people. A study in China suggested that differences between fathers and mothers for three types of knowledge were not significant. However, the mean score of knowledge was all lower for mothers as compared to fathers.^[22] This indicates that parents-oriented programs, especially for mothers, are needed to provide accurate information for adolescents who were at the level of college/graduated from college because this level of education significantly prefers mothers as their source of information.^[23] Although online media is the most preferred source of information, conventional media is still needed especially by parents, as well as adolescents who are not accessible to social media and the internet.^[15]

Although other variables did not show a significant difference, respondents from the college/who graduated from college showed a higher proportion of most variables in information-seeking behavior. The result of a qualitative study by Kurniasih (2016)^[13] shows that the difference in information-seeking behavior with different educational, social, and economic backgrounds lies in the selection of information sources. Adolescents from middle-up education and socio-economic family levels are more open to fulfilling their reproductive health information needs. They do not mind whether the source of information will be sought through the closest person or from the media. Usually, the search for information starts from the closest people (parents, teachers, and friends), then proceeds to media searches.

A survey on adolescent health information-seeking behavior related to high-risk behaviors in Iran showed that there was no significant relationship between income levels and the mean scores of the attitudes toward the importance of health information, the curiosity and tendency to search for health information, and barriers to seeking health information among adolescents.^[6] The result of this study, indicated the importance to provide accurate information for the low socio-economic group. This study takes an approach to interesting reproductive health topics and sources of information with consideration to being able to compare the difference in proportions between each answer based on socio-demographic factors.

Limitations and recommendations

There are two limitations to this study. First, data were collected by distributing Google forms and spreading it through social media so the opportunity to include this research is not the same for every adolescent. Second, we cannot get the description of early and middle adolescents (10–17 years old) because ethically in health research, we need to get informed consent from the parents. The recommendation for future studies can be planned by offline survey with an in-depth interview by including early and middle adolescents.

Conclusions

The main source of information media used by adolescents in their daily lives was online media with the highest proportion being Instagram. Based on education, there were significant differences in the preferred topics on HIV-AIDS and other sexually transmitted diseases, reproductive system and puberty, source of information from Facebook, and source of information from mother. Based on parents' income, there was a significant difference in preference topics on child marriage, prevention of pregnancy, and abortion. There is a need to improve reproductive health promotion by maximizing online media and certain figures along with promotion target mapping based on socio-demographic characteristics.

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Conflicts of interest

There are no conflicts of interest.

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