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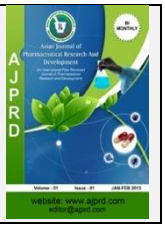

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Research Article

Comparative Study of Knowledge Level with HIV/AIDS Transmission Prevention Behavior in Junior High School Adolescents in 2022

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A B S T R A C T

The problem of HIV/AIDS is still a global health problem, including in Indonesia, which is a country with a high prevalence of HIV/AIDS. Adolescents are one of the groups at risk of contracting HIV/AIDS. The provinces of West Java and DKI Jakarta were provinces that contributed the most cases of HIV/AIDS in recent years. It is necessary to study the level of knowledge and behavior of junior high school youth groups in Depok and Jakarta regarding the prevention of HIV/AIDS transmission. The comparative study method with a cross sectional approach is the research design carried out in this study. by comparing two different groups. The characteristics of the 2 different groups of respondents in this study consisting of age, gender and parental education are the same. The level of knowledge of the respondents in this study had a low level of knowledge equality. The low level of knowledge among junior high school adolescents in Jakarta dominates (64%) compared to junior high school adolescents in Depok (50%) as evidenced by high risk behavior more in junior high school adolescents in Jakarta. The results of the Chi-Square test show that there is a relationship between the level of knowledge and the behavior of preventing HIV/AIDS transmission, because the p value = 0.000 (p value 0.05. In order to increase knowledge about adolescent health, especially HIV/AIDS, which is one of the phenomena prioritized diseases in the world and in Indonesia Health education needs to be included in the education curriculum in schools so that adolescents have good health information and are expected to influence good behavior for adolescents in the future.

Keywords: HIV/AIDS, Adolescents, Knowledge, Behavior

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INTRODUCTION

HIV/AIDS (Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome) is not only a biological or medical problem, but also a social problem in society. Since the discovery of HIV/AIDS in 1987, people's reactions have been different, for example, fear, rejection, stigma and prejudice have grown over the course of the pandemic. The lack of public information regarding the prevention and transmission of HIV/AIDS, and the increasing stigma and prejudice that spreads rapidly throughout society, has caused worry and anxiety for people living with HIV/AIDS.[1]

Basedon data from UN AIDS there are 35,000 boys and 97,000 girls in the world who are infected with HIV at the age of 15 to 19 years. Between the ages of 10 and 19 there are 450,000 boys and 580 girlswho are HIV positive. According to the Indonesian Ministry of Health (2020) the number of HIV cases in Indonesia was found during the period January - June 2020 as many as 21,220 people. The province that contributd the highest number of HIV/AIDS cases consecutively East Java was the first province with a total of 3,241 cases, West Java was in second place with 2,959 cases, Central Java was in third place with 2,940 cases people, and DKI Jakarta is in fourth place with a total of 2,541 cases. The latest number of HIV/AIDS cases in 2020 were recorded in adolescents (8.7%). Men were found to have 67.6% of HIV cases, while women were found to be 32.4%, with a ratio of women and men of 1: 2.

According to the World Health Organization there are several reasons why adolescents are the focus of preventive action, including the number of adolescents, a portion of the

world's population (1.8 billion people), namely those aged 15-24 years and almost 90% of this number are in In developing countries, adolescents are the 4th most recent contribut or to HIV transmission, adolescents have low knowledge of accurate and comprehensive information related to the transmission and prevention of HIV/AIDS, this adolescent population is at risk of being infected with HIV/AIDS due to a lack of knowledge that they do needle-type drug abuse, sex workers, and LGBT. Adolescents are an age group that is a thigh risk of contracting HIV/AIDS because adolescents are trying to find identity by trying new activities at this age.2

PERDA of West Java Province No. 12 concerning Prevention of HIV/AIDS Control issued in 2012 article 9 paragraph 1 states that the government's efforts in tackling HIV/AIDS are through Communication, Information and Education (IEC), reproductive health education and the dangers of drugs, prevention of sexual transmission, prevention of mother to child transmission , counseling and testing for HIV, minimizing the side effects of using drugs with needles and implementing general prevention.[3]

PERDA Depok City No. 17 of 2017 concerning the Regional Health System, section ten, article 37 states that efforts to control HIV/AIDS begin with the School Health Effort (UKS) with health education services including promotive and preventive efforts including control of Communicable Diseases (including HIV/AIDS), Non-communicable Diseases (PTM), environmental health, nutrition and reproductive health.[4]

The increasing incidence of HIV/AIDS among adolescents cannot be separated from the times, technology and globalization which have brought changes in behavior and social life among adolescents today, especially in metropolitan areas. Adolescents in metropolitan locations are more likely to participate in harmful behaviors such as having multiple partners, having sex before marriage, and drug use.[5,6] Behavior with this lifestyle will be a trigger for disruption of their reproductive health and the risk of sexually transmitted infections and HIV/AIDS for themselves and their partners.

One of the government's priority efforts is youth development; Ministry of Health of the Republic of Indonesia Since 2003, the Adolescent Health Program in Indonesia has been developed by applying the paradigm of Adolescent Care Health Services (PKPR). Adolescents who are at risk of being infected with HIV, adolescents who have been exposed to HIV, and adolescents who do not have parents because they die from AIDS are included in the target category of the PKPR program. This program provides promotive, preventive, curative and rehabilitative services, as well as adolescent reproductive health services.[7]

Research by Rahayu etal. shows that there is still a lack of adolescent information about HIV/AIDS which affects the attitudes and behavior of adolescents closely related to premarital sex so that it increases the risk of contracting HIV/AIDS. The better a person'sknowledge, the less likely a person is to act in transmitting HIV/AIDS. Some one considered to understand can be seen from implementing the material correctly and being able to applyit, in this case it means that this research states that there is a relation ship between knowledge of HIV/AIDS and premarital sex acts.[8]

Most of the previous studies used the same 1 population at 1 school and the age of the respondents, namely high school teenagers. Using [2] different populations, namely between junior high school youth in Jakarta and junior high school youth in Depok city. The researcher wanted to find out whether there is a difference between the level of knowledge and the behavior of preventing the transmission of HIV/AIDS in junior high school youth in Depok and junior high school youth in Jakarta. Based on research results from Riany et al. parents in metropolitan areas are heavily influenced by western culture which individualism which results in parenting patterns for children in daily life that tend to be autonomy, namely parents emphasize independence and individualism to children.[9]

METHODS AND MATERIALS

The comparative study method with a cross-sectional approach is a research design carried out in this study which is carried out by comparing similarities and differences as a phenomenon to find out what factors and what kind of situations cause a certain event to arise. [10] the aim of this study namely in junior high school adolescents aged 12-15 years.

The population to be taken by the researchers is SMPN 14 Depok with a total of 897 students & SMPN 166 Jakarta with a total of 742 students with a total population of 1,639 students. The sample size in this study, the researcher will use a non-probability sample technique (non-random sampling), namely consecutive sampling. Sampling was carried out by consecutive sampling which was carried out by selecting samples that could meet predetermined criteria (age 11-15 years, attending SMPN 14 Depok or SMPN 166 Jakarta, male or female) in the study for a certain period of time until the number of samples can be met. The confidence level used is 95%, the margin of error is 5%. From a total of 1638 student population taken by consecutive sampling of 321 samples calculated using the slovin formula, it will be divided into 2 schools with an even number, so each school gets 161 students who are the sample in this study, with sample size based on estimation and the addition of a minimum drop out to 357 respondents.

This research was conducted to collect data and data processing in March - April 2022 at SMPN 166 Jakarta and SMPN 14 Depok. The question naire method was used to collect data from two variables in this study, namelythe level of knowledge and behavior of junior high school youth. To prevent transmission of HIV/AIDS, a question naire was used to filter data fromrespondents in theformof level ofknowledgeandbehavior. The procedureforcollecting data ateachschoolisdifferent, at SMPN Jakarta data collection is carried out for 2 weeks because eat that school only 50% of students come directly to school and the rest study from home, the distribution of questionnaires is carried out assisted by the teacher concerned during the counseling subject. Data collection at SMPN Depok was carried out for 1 week, at this school 50% of the students who came to school entered school in the morning and the remaining 50% entered at noon. Data collection at SMPN

Depok was carried out by distributing questionnaires through the head of each class during recess.

RESULTS

Table 1: Distribution based on the age characteristics of the respondents

Studentcharacteristics	n	Mean	Median	Min	Max
Jakarta	161	13.22	13	12	15
Depok	161	13.39	13	12	15

Table 1 explains the characteristics of respondents based on age, obtained the same results between the two schools, namely the lowest age in both schools was 12 years and the highest age was 15 years.

Table 2: Distribution of respondents based on gender and parents' education

Studentcharacteristics	Junior high school students in Jakarta		Junior high school students in Depok		p-value
	n	%	n	%	
Gender					0.903
Female	88	54.7	90	55,9	
Male	73	45.3	71	44,1	
Parents' education					
College	43	26.7	64	39.8	0.249
Non College	118	73.3	97	60.2	

Table 2 explains the characteristics of the respondents in this study. The values above show the results of the homogeneity (equality) of the characteristics of the respondents between groups of junior high school students in Jakarta and junior high school students in Depok because the p-value is ≥ 0.05.

Table 3: Distribution based on level of knowledge about HIV/AIDS among junior high school students in Jakarta and Depok

Level of knowledge	Junior high school students in Jakarta		Junior high school students in Depok		p-value
	n	%	n	%	
Good	88	54.7	90	55.9	0.903
Low	73	45.3	71	44.1	
Good	43	26.7	64	39.8	0.249
Low	118	73.3	97	60.2	

Table 3 explains that the level of knowledge of students in junior high schools in Jakarta about HIV/AIDS is still low, 64.6% of HIV/AIDS. Meanwhile, the comparison ratio of the level of knowledge of students in junior high schools in Depok is not significant to HIV/AIDS.

Table 4: Distribution based on HIV/AIDS prevention behavior among junior high school students in Jakarta and Depok

Behavior	Junior high school students in Jakarta		Junior high school students in Depok		p-value
	n	%	n	%	
Highrisk	110	68.3	105	65.2	0.002
Low risk	51	31.7	56	34.8	
Total	146	100.0	175	100.0	

Table 4 explains that there is no equality/homogeneity of behavior related to HIV/AIDS prevention in Depok and Jakarta because the p-value is 0.002 ≤ 0.05, which means that the data distribution is not homogeneous.

Table 5: Comparative study of knowledge level and HIV/AIDS prevention behavior in junior high school adolescents

Knowledge	Behaviorhighrisk		Behaviorlowrisk		OR	p-value	CI 95%	
	n	%	n	%			Lower	Upper
Good	136	73.1	50	26.9	15.77	0.00	8.88	28.02
Low	20	14.7	116	85.3				
Total	156	48.4	166	51.6				

Table 5 explains from the results of the Chi-Square test that there is a relationship between the level of knowledge and the behavior to prevent HIV/AIDS transmission, because a p value = 0.000 (p value ≤ 0.05) is the result of the OR (Odds Ratio) value where the level of knowledge low level in adolescents have behavior that is 15.77 times more risk than adolescents who have high knowledge.

Table 6: City Comparative Study with HIV/AIDS knowledge level in junior high school adolescents

City	Knowledgelow		Knowledgegood		OR	p-value	CI 95%	
	n	%	n	%			Lower	Upper
Jakarta	104	64	57	35	1.75	0.01	1.12	2.74
Depok	82	50	79	49				
Total	186	57.8	136	42.2				

Table 6 explains that there is a significant relationship between city (p-value <0.05) on the level of HIV/AIDS knowledge in junior high school adolescents, where a low level of knowledge predominates among adolescents in the Jakarta area (64%) compared to adolescents in the Depok area (50%).

Table 7: City Comparative Study with HIV/AIDS transmission prevention behavior in junior high school adolescents

City	Behaviorhighrisk		Behaviorlowrisk		OR	p-value	CI 95%	
	n	%	n	%			Lower	Upper
Jakarta	105	65	56	34	4.04	0.00	2.54	6.43
Depok	51	31	110	68				
Total	156	48	166	51				

Table 7 explains that there is a significant relationship between city (p-value<0.05) on HIV/AIDS transmission prevention behavior in junior high school adolescents, the results show that high-risk behaviors are moredominant in the Jakarta area (65%).

DISCUSSION

The results of this study indicate changes in balance before the intervention as measured by the Timed Up and Go Test (TUGT) with the lowest value of 14 seconds and the highest value of 24 seconds. The average value before the intervention was 17.82 seconds and a standard deviation of 2.926 seconds, indicating that the respondent experienced a dynamic balance disorder. This is in accordance with research, which stated that several causes of dynamic balance disorders are lack of physical activity, fear of falling which causes the elderly to limit physical and social activities resulting in muscle weakness and imbalance.[11–13]

Respondent characteristics discussed in this study include age, gender, and parental education. From the results of the analysis it was found that the average respondent was 13 years old, this was because the respondents in this study were junior high school students. The age of the respondents in this study in terms of growth and development was early adolescenceat the age of 12-15 years[14]. Basedon Piaget'scognitive theory) in Santrock, early adolescence is a stage where adolescents are aware of good and bad traits. Their assessment of the setraitsis in accordance with their peers.[14]

Characteristics based on gender explained that female respondents dominated in this study compared to the number of male respondents who participated in this study. Characteristics based on parents' education explained that the majority of respondents' parents with non-college education dominated, and parents with university education only reached 26% of the respondents' parents in Jakarta and 39% of the respondents' parents in the city of Depok.

From the results of data analys is the knowledge level of adolescents in both schools regarding HIV/AIDS was still very low, in terms of students' under standing of HIV/AIDS, it was found that the number of students with lowknowledge was more common in boths chools. The majority of respondents answered correctly to the question People with HIV/AIDS can transmit it through cough in gands neezing, and sharing clothes with HIV/AIDS survivors can causeome one to get HIV/AIDS. The results of this study are in line with research conducted by Neemaetal. Most participants believe that HIV can be transmitted by blood transfusions, touching, kissing, shaking hands, hugging, sharing swimming pools, changing clothes, using public toilets and HIV. can be killed by cleaning the affected area with plain water, the HIV virus cannotbetransmittedthroughsneezing, coughingandexchangingclotheswith HIV/AIDS survivors. Neema *et al*., (2017)

Sneezing and coughing cannot transmit the HIV virus. However, through bodily fluids such as blood, semen, genital fluids, the HIV virus can be transmitted, and it can be transmitted through changing needles and syringes. Mothers with HIV are at risk of transmitting HIV to their babies. If a person has unprotected sex, either vaginally or rectally, withan HIV positive person, they can be come infected with HIV. According to the Centers for Disease Control and Prevention (CDC) Blood, sperm, pre-ejaculate fluid, rectalfluid, vaginal fluid, and breast milk are body fluids that can transmit HIV Respondents who still do not under stand about the transmission of the HIV/AIDS virus predominate and think that the virus HIV can be contract edif they are close to each other and accidentally touch, and exchange clothes.[16]

According to Lestari, the lower percentage of respondents' knowledge level about HIV/AIDS does not always smean that respondents are atriskof HIV/AIDS, butcanalsobeinfluencedby a lackofinformationabout HIV/AIDS. The higherthe level of one's knowledge, the easier it will be for a person to receive information about objects or those related to or contrary to knowledge and technology. Educationis one of the basic human needs that is indispensable for self-development. Essieetal., explained that the level of education will affect one'sknowledge of HIV/AIDS[17,18]

It is very important for adolescents to have a strong understanding of HIV/AIDS because a lack of knowledge has a negative impact on adolescent behavior regarding disease prevention. This is because knowledge is influenced by many factors besides education, there are other factors that influence knowledge, including poor environmental conditions, teenagers who are classified as lacking in knowledge but still have a positive outlook and can prevent it, because teenagers are easily influenced by the attitudes and behavior of people around them, like his parents and friends. Parents are good role models for their children and will lead them to learn good manners.

The findings of a comparative analysis of the level of knowledge and behavior to prevent the transmission of HIV/AIDS in junior high school youth are the results of a significant analysis between the level of knowledge and behavior. Where the level of knowledge of adolescents in Jakarta dominates (64%) compared to junior high school youth in Depok (50%) as evidenced by the high risk behavior of more junior high school adolescents in Jakarta (65%). This is related to research by Hasliani & Bemey, which states that adolescents who are prone to risky behavior problems in the transmission of HIV/AIDS are adolescents who have a consumptive and hedonic life and life style and are easily influenced by the metropolitan city environment, in separable from the globalization that develop rapidly resulting in risky behavior.[19]

The results of the research data revealed that the total number of female respondents was more dominant than the total number of male respondents in the two schools. This shows that there are psychological differences between menan dwomen based on the theory of evolution and gender psychology. Men are more likely than women to ignore what they are told and to form attitudes that lead to conflict and risky behavior. Adolescence is a stage in life when a person understands socialrules. This statementis in line with Kusumaryani's research, which states that female adolescentstend to be have well (81.8%) compared to male adolescents. Another study conducted by Nasution etal. stated that almosthalf of male and female adolescents had HIV knowledge in the low category, female adolescents had higher HIV/AIDS knowledge than male adolescents.[20,21]

CONCLUSION

The conclusion in this study is that it was identified that a comparison of the level of knowledge with HIV/AIDS transmission prevention behavior can be seen from the results which explain that a low level of knowledge in junior high school youth in Jakarta (64%) has more high-risk behavior (65%) compared to junior high school students in Depok.

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CONFLICTOFINTEREST

The authors declare that they have no conflictinterests.

ETHICALCLEARANCE

This research has received ethical approval from the Research Ethics Committee, Health PolytechnicofJakarta I No.003/KEPK/II/2022.

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