



Analysis of factors related to the incidence of HIV/AIDS in adolescents aged 12-15 years at the Sorong Papua Community Health Center

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ABSTRAK

HIV is a virus that attacks the human immune system and weakens our body's ability to fight all diseases that come. A dangerous disease caused by a virus that is transmitted through bodily fluids, especially due to sexual intercourse and injection drug use. Exposure to biological hazards can be caused by various means including ingestion, inoculation, bites, inhalation, through contact with skin abrasions and through blood splashes. The aim is to determine adolescent behavior and knowledge related to the incidence of HIV/AIDS in adolescents aged 12-15. This research is a quantitative research with a cross-sectional approach. In cross-sectional research, the researcher measures variables at a certain time on each subject who is only observed once and the subject variables are measured at the time of examination. Based on the results of research regarding the relationship between adolescent behavior and the incidence of HIV/AIDS in adolescents aged 12-15 years with objective criteria of being at risk and not being at risk, the result was that. From the results of data analysis using the chi-square statistical test, the value of $p=0.486(\alpha>0)$ was obtained. .05), this means H_a is accepted and H_o is rejected. Thus it can be said that there is a relationship between behavior.

Keywords: Factor Analysis, HIV/AIDS Incidence, Adolescents, Ages 12-15

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1. Introduction





HIV is an abbreviation for Human Immunodeficiency Virus, which is a virus that attacks the human immune system. People who are HIV positive or have HIV. People who have been infected with HIV in the first few years do not show any symptoms, physically they look no different from other people. However, he can already transmit HIV to other people (Noorhidayah, 2015).

AIDS is an abbreviation for Acquired Immunodeficiency Syndrome. Syndrome in Indonesian is a syndrome which means a collection of disease symptoms. Deficiency in Indonesian is lack. Immune means body immunity, while acquired means acquired or obtained. In this case, "acquired" means that AIDS is not a hereditary disease, but because he was infected with the virus that causes AIDS. Thus, AIDS can be interpreted as a collection of disease symptoms resulting from the loss/decreasing of the body's immune system. AIDS is the terminal (final) phase of HIV infection. Human immunodeficiency virus (HIV). This virus initially attacks the human immune system, causing HIV disease and ultimately AIDS. Acquired immunodeficiency syndrome (AIDS) is a dangerous disease caused by a virus that is transmitted through body fluids, especially due to sexual intercourse and injection drug use (Kelly, 2015).

The immune system protects the body against disease. If the body's immune system is damaged by the AIDS virus, attacks of diseases that are usually harmless will cause illness and death. AIDS sufferers who die are not caused solely by the virus, but by other diseases that can actually be prevented (Depkes.RI, 2015).

According to WHO (World Health Organization) (2016), the number of HIV / AIDS deaths among adolescents aged 10-19 years throughout the world increased by 42 percent between 2012 and 2015 and there were 3.1 million adolescents aged 10-19 years in the world with HIV/AIDS in 2016. In approximately 10 years it will become AIDS without effective antiretroviral therapy. The results of the study showed that 70.3% of patients initially diagnosed with HIV developed AIDS within 1 year. Another 3.7% 1 to 3 years after HIV diagnosis. Comprehensive HIV testing programs that include both routine screening of adolescents aged 10-19 years and more frequent testing for people at risk for periodic HIV testing (MMWR, 2017).





The United Nations (United Nations) agency that handles children's issues, UNICEF (United Nations International Children's Emergency Fund), reports that around 289,000 teenagers aged between 10 and 19 years died from the HIV virus in 2015. That number increased to 364,000 in 2016. Compared to 2017 to June, the cumulative number of people living with HIV was 435,078 people and as many people suffering from AIDS. This shows that there is an increase in HIV/AIDS cases every year in Indonesia. (UNICEF, 2017).

Based on the Directorate General of PP & PL, Ministry of Health of the Republic of Indonesia 2017, the prevalence of AIDS cases per 300,000 population by province is 40.56% in Indonesia. The cumulative number of AIDS cases is more than 1,000 people and the cumulative number of HIV cases is 1,090 people. Data obtained from the Directorate General of PP & PL Ministry of Health of the Republic of Indonesia 2014, namely the highest AIDS incidence rate in the 20-29 year age range. This means that HIV positive occurs 5-10 years before AIDS is declared, namely 10-19 years of age (Dinkes, 2017).

Reports in 2016 of a new deadly disease, namely Acquired Immunodeficiency Syndrome (AIDS). The causative agent is human immunodeficiency virus (HIV). Characterizing HIV infections and AIDS in the United States during 1981 - 2017, this report summarizes the results of that analysis, which shows that, in the first 14 years, the number of new AIDS diagnoses and deaths among people aged > 13 years, the highest achievement was antiretroviral therapy highly active AIDS diagnoses and deaths decreased substantially from 2016 to 2018 and remained stable from 2018 to 2019 reaching an average of 38,279 AIDS diagnoses and 17,489 deaths per year. At the end of 2018, 1,178,350 people were estimated to be living with HIV, and 236,400 (20.1%) had undiagnosed infections (Resikdes, 2019).

In 2017, Tufts-New England Medical Center (TNEMC), with the help of Rescue Medicine (RM), formed a health team for clinic construction workers in Takoradi, Ghana. The results obtained were several risky behaviors for these workers, including the use of alcohol, 44% (14) their total alcohol consumption had not changed during their





stay in western Ghana, while 34% (11 of 32) reported increased consumption and 22% (7 of 32) reported reduced alcohol use. Only 38% (15 of 39) received education about how to reduce HIV risk. Nearly a quarter (24%, 10 of 42: nine men and one woman) of expatriates reported having sexual relations with local partners. Half (5 of 10) of those who had sex with local partners did not use condoms (Hamer et al, 2017).

Previous research in Egypt conducted by Sayyed, 2018 was only to compare whether every year HIV/AIDS cases would decrease in teenagers and elderly people. It was found that there was a significant relationship with age, gender, marital status, education, residence with family, knowledge. and attitude, namely ($P < 0.001$) with risk behavior towards HIV/AIDS.

2. Research Method

This research is a quantitative research with a cross-sectional approach. In cross-sectional research, researchers measure variables at a certain time on each subject who is only observed once and the subject variables are measured at the time of examination. The population is subjects (patients) who meet predetermined criteria. Meanwhile, the population in question is all teenagers aged 15-21 years, totaling 39 people who are being treated. A sample is part of an accessible population that can be used as research subjects through sampling. The sample in this study was 36 adolescent patients at risk of HIV/AIDS. The inclusion criteria are patients aged 12-15 years, who are willing to be respondents.

3. Results And Discussions

a. Result

a) Respondent Characteristics

a) Univariate Analysis

In this section, a description of the research data from each variable from the 36 respondents will be explained, namely the respondent characteristic variables, Teenage Behavior, Source of Information, Level of Knowledge, Attitude.





Distribution of Respondents Based on Patient Characteristics

Table 5.1.

 Distribution of Respondents Based on Patient Characteristics in
 Sorong Papua Community Health Center

No	Variabel	Jumlah (n)	Persentase (%)
1	Age		
	1) 15-29	24	66,7
	2) 30-45	12	33,3
	Total	36	100
2	Gender		
	1) Boy	21	58,3
	2) Women	15	41,7
	Total	36	100
3	Education		
	1) High school	16	44,5
	2) D3	12	33,3
	3) S1	8	22,2
	Total	36	100
4	Marital status		
	1) Not Married	14	38,9
	2) Get married	22	61,1
	Total	36	100

Source: Primary Data, 2020

Based on table 5.1, it shows that the highest distribution of respondents is in the age group, namely those aged 15 - 29 years with 24 (66.7%) respondents, while the lowest is the age group 30 - 45 years with 12 (33.3%) respondents. In the gender group, the highest was male with 21 (58.3%) respondents, while the lowest was female with 15 (41.7%) respondents. In the education group, the highest was high school education, namely 16 (44.5%) respondents and the lowest was undergraduate education, namely 14 (22.2%) respondents. In the marital status group, the highest was married status, namely 22 (61.1%) respondents and the lowest was unmarried status, namely 14 (38.9%) respondents.

b) Univariate Analysis





An overview of the characteristics of respondents in univariate analysis can be seen in the following table:

1. Knowledge

Table 5.2.

Distribution of Respondents Based on Patient Knowledge Level

No	Knowledge	Frekuensi	Persentase
1	Low	15	41,7
2	Tall	21	58,3
	Total	36	100

Source: Primary Data, 2020

Based on Table 5.2, it shows that of the 36 respondents, there were 15 respondents with a low level of knowledge (41.7%), this is in accordance with the results of the questionnaire answered by respondents that the level of knowledge regarding the incidence of HIV/AIDS in adolescents aged 12-15 years is an intellectual assessment of the dangers of HIV/AIDS in adolescents aged 12-15 years. However, almost all felt that the level of knowledge of teenagers aged 12-15 years had a high level of knowledge, as many as 21 respondents (58.3%), this was in accordance with the results of the questionnaire answered by respondents with a level of knowledge on the incidence of HIV/AIDS in teenagers aged 12-15. This year the level of knowledge is very high regarding HIV/AIDS.

b) Adolescent Behavior

Table 5.3.

Distribution of Respondents Based on Teenage Patient Behavior

No	Behavior	Frekuensi	Persentase
1	No Risk	20	55,6
2	Risk	16	44,4
	Total	36	100

Source: Primary Data, 2020

Based on Table 5.3, it shows that of the 36 respondents, there were 20 respondents whose behavior was not risky (55.6%), this is in accordance with the results of observations answered by respondents that behavior is a judgment and an ethic that can reflect a good or





bad action. an action. However, 16 respondents (44.4%) had risky adolescent behavior, this is in accordance with the results of the questionnaire answered by respondents that risk behavior in the incidence of HIV/AIDS in adolescents aged 12-15 years does not have a high risk.

c) Information Source

Table 5.4.

Distribution of Respondents Based on Patient Information Source

No	Perilaku	Frekuensi	Persentase
1	Ya	19	52,8
2	Tidak	17	47,2
	Total	36	100

Source: Primary Data, 2020

Based on Table 5.4, it shows that of the 36 respondents, there were 19 respondents (52.8%) who answered yes, there was a risk. This is in accordance with the results of observations answered by respondents that the source of information is an assessment and a medium that plays an important role for someone in determining attitudes and decisions to act. However, there were 17 respondents (47.2%) who had insufficient sources of information or who answered no. This is in accordance with the results of the questionnaire where respondents answered that the source of information could help someone to find out about something or news.

d) Attitude

Table 5.5.

Distribution of Respondents Based on Patient Attitudes

No	Attitude	Frekuensi	Persentase
1	Agree	26	72,2
2	Don't agree	10	27,8
	Total	36	100

Source: Primary Data, 2020

Based on Table 5.5, it shows that of the 36 respondents, there were 26 respondents (72.2%) who agreed, this is in accordance with the results of observations answered by





respondents that attitude is an assessment and all actions and actions are based on existing beliefs and beliefs owned. However, there were 10 respondents (72.2%) who disagreed, this is in accordance with the results of the questionnaire answered by respondents that an attitude reflects a person's feelings towards something.

c) Bivariate Analysis

The variables that will be analyzed for their relationships and percentages are as follows:

1) Teenage Behavior

Based on the research results, it was found that the incidence of HIV/AIDS in adolescents aged 12-15 years can be seen in the following table:

Table 5.6

The relationship between adolescent behavior and the incidence of HIV/AIDS in adolescents aged 12-15 years at the Sorong Papua Community Health Center

Behavior Teenager	The incidence of HIV/AIDS in adolescents aged 12-15				Total		P Value
	Yes		No				
	N	%	N	%			
Risk	11	24,6	8	28,2	19	52,8	0,486
No Risk	14	38,9	3	8,3	17	47,2	
Total	25	67,3	11	32,7	36	100	

Source: 2020 primary data

Based on Table 5.6, it shows that at the level of risky adolescent behavior there were 19 respondents, with the percentage of those experiencing HIV/AIDS incidents in adolescents aged 12-15 years who said yes as many as 11 respondents (24.6%) and those who said no as many as 18 respondents (28.2%). Meanwhile, there were 17 respondents who were not at risk, with a percentage who said yes as many as 14 respondents (38.9%) who answered no as many as 3 (8.3%) who had the most risky behavior. So it can be interpreted that the level of behavior among teenagers regarding HIV/AIDS is very risky.

From the results of data analysis using the chi-square statistical test, the value $p = 0.486$ ($\alpha > 0.05$), this means that H_a is accepted and H_o is rejected. Thus, it can be said





that there is a relationship between adolescent behavior and the incidence of HIV/AIDS in adolescents aged 12-15 years.

2) Information Source

Based on the research results, it was found that the incidence of HIV/AIDS in adolescents aged 12-15 years can be seen in the following table:

Table 5.7

Relationship between sources of information and the incidence of HIV/AIDS in adolescents Ages 12 15 Years

Source Information	The incidence of HIV/AIDS in adolescents aged 12-15				Total		P Value
	Yes		No				
	N	%	N	%			
	17	47,2	8	22,2	25	62,8	
Direct	5	13,9	6	16,7	11	47,2	0,680
Total	25	67,3	16	32,7	36	100	

Source: 2020 primary data

Based on Table 5.7, it shows that from direct sources of information there were 25 respondents, with the percentage who experienced the incidence of HIV/AIDS in adolescents aged 12-15 years who said yes as many as 17 respondents (47.2%) and those who said no as many as 8 respondents (22.2%). Meanwhile, there were 11 respondents who were indirect, with the percentage who said yes being 5 respondents (13.9%) who answered no as many as 6 (16.7%). So it can be interpreted that the source of information for teenagers about HIV/AIDS is direct. From the results of data analysis using the chi-square statistical test, the value $p = 0.680$ ($\alpha > 0.05$), this means that H_a is rejected and H_o is accepted. Thus, it can be said that there is no relationship between the source of information and the incidence of HIV/AIDS in adolescents aged 12-15 years at the Sorong Papua Community Health Center.

3) Knowledge Level

Based on the research results, it was found that the incidence of HIV/AIDS in adolescents aged 12-15 years can be seen in the following table:

Table 5.8

Relationship between level of knowledge and the incidence





of HIV/AIDS in adolescents Ages 12-15 Years

Level Knowledge	The incidence of HIV/AIDS in adolescents aged 12-15				Total		P Value
	Yes		No				
	N	%	N	%			
	20	55,6	11	30,6	31	86,2	
Tall	2	5,6	3	8,3	5	13,8	0,003
Total	22	61,1	14	38,9	36	100	

Source: 2020 primary data

Based on Table 5.8, it shows that at a high level of knowledge there were 31 respondents, with the percentage who experienced the incidence of HIV/AIDS in adolescents aged 12-15 years who said yes as many as 20 respondents (55.6%) and those who said no as many as 11 respondents (30.6%). Meanwhile, the low number was 5 respondents, with the percentage who said yes being 2 respondents (5.6%) who answered no as many as 3 (8.3%). So it can be interpreted that the level of knowledge of teenagers about HIV/AIDS is very high.

From the results of data analysis using the chi-square statistical test, the value $p = 0.003$ ($\alpha > 0.05$), this means that H_a is accepted and H_o is rejected. Thus, it can be said that there is a relationship between the level of knowledge and the incidence of HIV/AIDS in adolescents aged 12-15 years.

4) Attitude

Based on the research results, it was found that the incidence of HIV/AIDS in adolescents aged 12-15 years can be seen in the following table:

Table 5.9
The Relationship between Attitudes and the Incident of HIV/AIDS in Adolescents Ages 12-15 Years

Attitude	The incidence of HIV/AIDS in adolescents aged 12-15				Total		P Value
	Yes		No				
	N	%	N	%			
Agree	17	47,2	7	19,4	24	66,6	
Don't agree	9	5,6	3	8,3	12	33,4	0,589





Total	26	67,3	10	32,7	36	100	
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Source: 2020 primary data

Based on Table 5.9, it shows that 24 respondents said yes, with the percentage of those experiencing the incidence of HIV/AIDS in adolescents aged 12-15 years who said yes as many as 17 respondents (47.2%) and those who said no as many as 7 respondents (19.4%). Meanwhile, 12 respondents said they disagreed, with the percentage saying yes being 9 respondents (5.6%) who answered no as many as 3 (8.3%). So it can be interpreted that the attitude of teenagers regarding HIV/AIDS is very agreeable.

From the results of data analysis using the chi-square statistical test, the value $p = 0.589$, ($\alpha > 0.05$), this means that H_a is rejected and H_o is accepted. Thus, it can be said that there is no relationship between the level of knowledge and the incidence of HIV/AIDS in adolescents aged 12-15 years.

b. Discussion

After the data has been collected, processed and presented, the following will explain the discussion of the research results on the relationship between independent and dependent variables:

1. The relationship between adolescent behavior and the incidence of HIV/AIDS in adolescents aged 12-15 years.

Based on the results of research regarding the relationship between adolescent behavior and the incidence of HIV/AIDS in adolescents aged 12-15 years with objective criteria of being at risk and not being at risk, the result was that. From the results of data analysis using the chi-square statistical test, the value of $p=0.486$ ($\alpha > 0$) was obtained. .05), this means H_a is accepted and H_o is rejected. Thus, it can be said that there is a relationship between adolescent behavior and the incidence of HIV/AIDS in adolescents aged 12-15 years at the Sorong Papua Community Health Center.

According to Muscari (2016), as long as this is in accordance with the theory of adolescent behavior at home and outside Nelson (2016), that is basically the same, they will experience parental support given distress, whether psychological





distress for their children is physical or physical. Children are afraid and anxious, their attitudes, actions and acceptance of separation from parents and towards sick family members interpret separation so that sick children can be helped by their parents as a loss and provide loving support. Separation anxiety or alleviating the disease will further increase with the aim of improving pre-school age children's physical and mental status so that children in the hospital environment can develop into being considered foreign.

Table 5.6 shows that regarding the behavior of teenagers going to the Sorong Papua Community Health Center, this can show that there is a relationship between teenage behavior and the incidence of HIV/AIDS in teenagers aged 12-15 years.

These results are supported by research conducted by Novita (2018) at the Bitung Hospital, Manado, that adolescent behavior can influence the incidence of HIV/AIDS in adolescents aged 12-15 years. Adolescent behavior is the most important thing for teenagers, especially the incidence of HIV/AIDS in determining relationships with other people, especially someone affected by the HIV/AIDS virus.

2. Relationship between sources of information and the incidence of HIV/AIDS in adolescents aged 12-15 years.

Based on the results of research regarding the relationship between sources of information and the incidence of HIV/AIDS in adolescents aged 12-15 years, the value obtained was $p=0.680$ ($\alpha>0.05$), this means that H_a was rejected and H_o was accepted. Thus, it can be said that there is no relationship between the source of information and the incidence of HIV/AIDS in adolescents aged 12-15 years at the Sorong Papua Community Health Center.

The research results in table 5.7 show that this source of information is very important in searching for news, either directly or indirectly, to get accurate and reliable news sources. This can show that there is no relationship between the





source of information and the incidence of HIV/AIDS in adolescents aged 12-15 years at the Sorong Papua Health Center

According to researchers, the sources of information experienced by adolescents aged 12-15 years can develop or increase after conducting research on sources of information, both direct and indirect. So that teenagers can accept a situation where they settle in the atmosphere of the environment where they live so that teenagers can express their emotions about news and make their feelings relax again so that their minds can broaden with this news source. However, the source of information they get can make teenagers have insight into activities and provide opportunities for other teenagers to tell about their experiences and what they feel. Expressing feelings and thoughts to teenagers is expected to cause feelings of relaxation, better emotions and cause an increase in adaptive responses so that teenagers will increase the knowledge they gain. (Suprpto, 2017).

3. Relationship between level of knowledge and the incidence of HIV/AIDS in adolescents aged 12-15 years.

Based on the results of research regarding the relationship between the level of knowledge and the incidence of HIV/AIDS in adolescents aged 12-15. From the results of data analysis using the chi-square statistical test, the value of $p = 0.003$ ($\alpha > 0.05$), this means that H_a is accepted and H_o is rejected. Thus, it can be said that there is a relationship between the level of knowledge and the incidence of HIV/AIDS in adolescents aged 12-15 years at the Sorong Papua Community Health Center.

The research results in table 5.8 show that this level of knowledge is very important in the knowledge they obtain in order to obtain the knowledge they can get from their respective knowledge. This can show that there is a relationship between the level of knowledge and the incidence of HIV/AIDS in adolescents aged 12-15 years at the Sorong Papua Community Health Center. the relationship between knowledge and events.





4. Conclusion

1. Based on the research results and discussion in the previous chapter, researchers can draw the following conclusions:
2. The results of research on the characteristics of respondents show that there is a significant relationship between age, gender, education and marital status with the incidence of HIV/AIDS in adolescents aged 12-15 years. Where the average productive age is 15-29 years, 60% have a high school education and 61% are married. Where this situation generally influences the situation of HIV/AIDS in adolescents, as education is an inseparable part in determining the best way to start the process of HIV/AIDS in adolescents.
3. In the analysis of the relationship between risk behavior towards HIV/AIDS in adolescents aged 12-15 years, the result was $p=0.486$, so it can be concluded that there is no difference between risky and non-risk behavior towards HIV/AIDS (there is a significant relationship between risk behavior towards HIV disease /AIDS). Good behavior is 52%. Where the World Class University Project always carries out regular education about HIV/AIDS every two weeks and puts up posters and distributes leaflets about risk behavior towards HIV/AIDS at the Sorong Papua Community Health Center.
4. Results of analysis of the relationship between sources of information and the incidence of HIV/AIDS in adolescents aged 12-15 years. The statistical test results obtained a value of $p=0.680$, so it can be concluded that there is no direct or indirect proportional relationship to HIV/AIDS in adolescents aged 12-15 years at the Sorong Papua Health Center
5. Results of research analysis regarding the relationship between level of knowledge and the incidence of HIV/AIDS in adolescents aged 12-15. From the results of data analysis using the chi-square statistical test, the value of $p = 0.003$ ($\alpha > 0.05$), this means that H_a is accepted and H_o is rejected. Thus, it can be said that there is a relationship between the level of knowledge and the incidence of HIV/AIDS in adolescents aged 12-15 years at the Sorong Papua Community Health Center.





6. Based on the results of research regarding the relationship between attitudes and the incidence of HIV/AIDS in adolescents aged 12-15. From the results of data analysis using the chi-square statistical test, the value of $p=0.589$, ($\alpha>0.05$), this means that H_a is rejected. and H_o is accepted. Thus, it can be said that there is no relationship between the level of knowledge and the incidence of HIV/AIDS in adolescents aged 12-15 years at the Sorong Papua Community Health Center.

Compliance with ethical standards

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Disclosure of conflict of interest

This research collaboration is a positive thing for all researchers so that conflicts, problems and others are absolutely no problem for all writers.

Statement of informed consent

Every action we take as authors is a mutual agreement or consent.

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