HIV-AIDS Knowledge In Indonesia: Data Analysis of 2017 IDHS Publications

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Abstract

**Background**: HIV/AIDS is still a global public health problem. Based on the number of people living with HIV/AIDS (PLHA) and new cases of infection in the Asia Pacific region, Indonesia ranks third after India and China. The number of HIV cases tends to increase every year, while the number of AIDS cases is relatively stable. A person's infected status can only be known through laboratory tests and can be transmitted to other people. Knowledge of HIV can direct involvement in HIV prevention and transmission.

**Aim**: The purpose of this research is to get an overview of knowledge about HIV/AIDS in Indonesia.

**Method**: This type of research is quantitative with the Cross Sectional method using secondary data from the Indonesian Demographic and Health Survey (IDHS) 2017. This research was conducted in January – June 2020 with Indonesian population respondents aged 15-49 years. Analysis using Chi-Square test using SPSS version 21.

**Results**: The results showed that there was a significant relationship between age (p-value 0.00), area of residence (p-value 0.00), education level (p-value 0.00), wealth status (p-value 0, 00) on knowledge of HIV/AIDS.

**Conclusion**: There is a relationship between age, area of residence, level of education and knowledge. So it is necessary to modify the media and ways of disseminating information about HIV/AIDS in order to increase knowledge of HIV/AIDS in the Indonesian population as an effort to reduce the incidence of HIV/AIDS in Indonesia.

Keywords: HIV/AIDS, Indonesia, IDHS 2017,
Introduction

*Human Immunodeficiency Virus (HIV)* and Acquired Immune Deficiency Syndrome (AIDS) is still a global public health problem. The United Nations Program on AIDS (UNAIDS) states that HIV/AIDS in the world reaches 0.26 per 1000 population. While in Indonesia it reached 0.19 per 1000 population\(^1\). The number of people with HIV/AIDS (PLHA) and new cases of infection in the Asia Pacific region, Indonesia ranks third after India and China\(^2\).

The number of reported HIV infections in Indonesia in 2017 was 48,300 cases, of which East Java province was in the highest position (8,204 cases) and West Sulawesi province was in the lowest position (37 cases). The number of AIDS cases reported in Indonesia in 2017 was 9,280 cases, with the highest cases in Central Java province at 1,719 cases and West Papua province no cases being reported\(^3\).

According to data from the Director General of Disease Prevention and Management (P2P), 2017 report data sourced from Information on HIV/AIDS and STIs (SIHA), most HIV infections occur in men (62%). According to the 2017 report, HIV infection by age group was highest in the age group 20-24 years (8,252 cases) and the lowest in the age group 5-14 years (425 cases)\(^3\).

*Acquired Immune Deficiency Syndrome* (AIDS) is a collection of symptoms due to a decrease in the immune system caused by a retrovirus, namely Human Immunodeficiency Virus (HIV). According to the World Health Organization\(^4\), there are 4 (four) clinical stages of HIV infection. This stage describes clinical changes ranging from asymptomatic at stage 1 (one), and stage 4 (four) which is used as an indicator of Acquired Immune Deficiency Syndrome (AIDS).

According to data from the Director General of Disease Prevention and Management (P2P)\(^3\), 2017 report data sourced from Information on HIV/AIDS and STIs (SIHA), the number of HIV cases tends to increase every year, in 2015 it was 30,935 cases, in 2016 it was 41,250 cases, and in 2017 to 48,300 cases. While the number of AIDS cases is relatively stable, in 2015 it was 9,215 cases, in 2016 it was 10,146 cases and in 2017 it was around 9,280 cases.

Based on the data above, there are more and more people living with HIV whose status is still infected with HIV but have not yet entered the AIDS stage. The natural history of AIDS begins with infection by the HIV retrovirus which can only be identified by laboratory tests, and then ends with death. The HIV virus is transmitted through ordinary household chores or social contact. The HIV virus can enter the body directly in several ways involving the transmission of blood or blood fluids, namely through inoculation during intercourse, transfusion of contaminated blood or blood products, use of contaminated syringes and transplacental transmission from an infected mother to her fetus\(^5,6\). Based on the results of the study of death of HIV patients in Indonesia, identified predictors such as: male HIV patients, with low education,
Knowledge of HIV can guide involvement in HIV prevention and transmission. One of the HIV prevention strategies can be done with a behavioral strategy. Behavioral strategies by increasing knowledge about how to protect yourself from HIV infection; recognition of early symptoms of sexually transmitted infections or HIV; disclosure of HIV status; harm reduction strategies; how to access treatment for HIV; importance of adherence to antiretroviral drugs. The results show that knowledge about HIV/AIDS has a relationship with HIV/AIDS-related behavior among young urban men in Indonesia.

METHOD
This research is quantitative in nature using secondary data from the Indonesian Demographic and Health Survey (IDHS) 2017. The research design is cross sectional. The population of this study is Indonesian citizens in Indonesia in the 2017 IDHS. The sample size in the study which will be analyzed later is adjusted to the sample in the 2017 IDHS and the scope is all IDHS data obtained from all provinces in Indonesia. With the inclusion criteria, namely Indonesian citizens, aged 15-49 years, having complete data on all the variables studied. The data obtained were analyzed using SPSS version 21 univariate, bivariate (Chi Square).

RESULTS
1. Univariate Analysis
The results of the univariate analysis of this study are the characteristics of the respondents which include age, area of residence, education level, wealth status and knowledge of HIV/AIDS. Variable descriptions can be described in the following table

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Age 15 – 24 years</td>
<td>3803</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>b. Age 25 – 49 years</td>
<td>82461</td>
<td>95.6</td>
</tr>
<tr>
<td></td>
<td>Amount</td>
<td>86264</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Residential Area</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. village</td>
<td>44937</td>
<td>52.1</td>
</tr>
<tr>
<td></td>
<td>b. City</td>
<td>41327</td>
<td>47.9</td>
</tr>
<tr>
<td></td>
<td>Amount</td>
<td>86264</td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>Level of education</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. basic education</td>
<td>76838</td>
<td>89.1</td>
</tr>
<tr>
<td></td>
<td>b. Middle education</td>
<td>9426</td>
<td>10.9</td>
</tr>
<tr>
<td></td>
<td>Amount</td>
<td>86264</td>
<td>100</td>
</tr>
</tbody>
</table>
Based on table 1 shows that the age of the dominant respondents is in the age range of 25-49 years (95.6%) , the area of residence is dominant in the village (52.1%), the level of education shows that the majority have basic education (89.1%). wealth shows that most of the lower middle class (65.4%). Based on table 2 shows that the majority of respondents know HIV/AIDS (70.5%).

2. Bivariate Analysis

The following is a bivariate analysis of HIV/AIDS knowledge in Indonesia described in the following table:

Table 2
Bivariate analysis of HIV/AIDS knowledge in Indonesia in 2017

<table>
<thead>
<tr>
<th>Variable</th>
<th>Knowledge of HIV/AIDS</th>
<th>P Value</th>
<th>OR (CI 95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Do not know</td>
<td>Know</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n   %</td>
<td>n   %</td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 – 24 (Teenagers)</td>
<td>988     3.9</td>
<td>2815 4.6</td>
<td>0.000</td>
</tr>
<tr>
<td>25 – 49 (Adult)</td>
<td>24429 96.1</td>
<td>58032 95.4</td>
<td></td>
</tr>
<tr>
<td><strong>Place Region</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay village</td>
<td>18641 73.3</td>
<td>26296 43.2</td>
<td>0.000</td>
</tr>
<tr>
<td>City</td>
<td>6776 26.7</td>
<td>34551 56.9</td>
<td></td>
</tr>
<tr>
<td><strong>Level of education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic education</td>
<td>25102 98.8</td>
<td>51736 85</td>
<td>0.000</td>
</tr>
<tr>
<td>Middle education</td>
<td>315 1.2</td>
<td>9111 15</td>
<td></td>
</tr>
<tr>
<td><strong>Wealth Level</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle down</td>
<td>22393 88.1</td>
<td>34021 55.9</td>
<td>0.000</td>
</tr>
<tr>
<td>Middle and above</td>
<td>3024 11.9</td>
<td>26826 44.1</td>
<td></td>
</tr>
</tbody>
</table>
Based on bivariate analysis using Chi Square test, it shows that age, area of residence, education level, and wealth status have a relationship with knowledge (p-value = 0.000). The results of the analysis in table 2 show that those who are more mature 25-49 years old are more likely to know HIV/AIDS (95%) compared to younger ages 15-24 years (4.6%). Respondents who live in cities are more likely to know about HIV/AIDS (56.9%) than those who live in villages (43.2%).

The results of the analysis of table 2 show that respondents with low education are likely to be less aware of HIV/AIDS (98.8%) compared to respondents with secondary education (1.2%). And respondents with lower-middle wealth are likely to be less aware of HIV/AIDS (88.1%) compared to upper-middle-level respondents (11.9%).

DISCUSSION

1. Relationship between age and knowledge of HIV/AIDS
   The results of the Chi Square test analysis calculation between age and knowledge of HIV/AIDS obtained a p-value of 0.000, which means it is smaller than alpha 0.05. Based on these criteria, it shows that Ha is accepted and statistically there is a relationship between age and knowledge of HIV/AIDS in respondents. This is in line with the results of research that knowledge and awareness about HIV among young adults is better than that of adolescents11. Another study also stated that age and education were significant predictors of high HIV/AIDS knowledge12.

   A person's age affects the perception and mindset of a person. The older they get, the more their grasping power and mindset will develop, so that the knowledge gained is getting better.

2. Relationship between area of residence and knowledge of HIV/AIDS
   The results of the Chi Square test analysis calculation between the respondent's area of residence and knowledge of HIV/AIDS obtained a p-value of 0.000 which means it is smaller than an alpha of 0.05. Based on these criteria, it shows that Ha is accepted and statistically there is a relationship between the area of residence and knowledge of HIV/AIDS in the respondents. This is in line with the results of the study that rural women have a lower probability of having comprehensive HIV knowledge compared to women living in cities (OR 0.42, 95% CI: 0.23-0.74; p-value = 0.003)14. Another study also stated that respondents living in rural areas had less knowledge about HIV/AIDS and were less likely to talk to others about HIV12.

   Limited communication network in some rural areas, so that it can limit information including information about HIV/AIDS. In addition, rural areas are physically difficult to reach which can result in health interventions taking a longer time to achieve15.

3. Relationship between education level and knowledge of HIV/AIDS
   The results of the Chi Square test analysis calculation between education level and knowledge of HIV/AIDS obtained p-value 0.000, which means it is smaller than alpha 0.05.
Based on these criteria, it shows that Ha is accepted and statistically there is a relationship between the level of education and knowledge of HIV/AIDS in the respondents. This is in line with the research that statistically there is a significant relationship between education and the level of knowledge about AIDS\textsuperscript{116}. The results of another study stated that the majority of elementary and junior high school education (78.6\%) and had low knowledge of HIV/AIDS\textsuperscript{17}. And another study found that uneducated women had lower comprehensive HIV knowledge than women who had basic education\textsuperscript{14}.

Education level can influence individual perception and information processing related to health information received\textsuperscript{18}. Other research states that education is very influential on knowledge. The higher a person's education level, the easier that person is to receive information. The more information that is received, the easier and faster it is for someone to update their knowledge and form a complete cognitive foundation about something.

4. **Relationship between wealth status and knowledge of HIV/AIDS**

Calculation results of Chi Squere test analysis between wealth status and knowledge of HIV/AIDS obtained p-value 0.000 which means it is smaller than 0.05 alpha. Based on these criteria, it shows that Ha is accepted and statistically there is a relationship between wealth status and knowledge of HIV/AIDS in respondents. This is in line with the results of the study that based on the Erreygers concentration index it was found that wealth-related inequalities in comprehensive knowledge about HIV were revealed, the poor were less informed and the rich knew more\textsuperscript{15}.

Information about HIV can be accessed from several sources of information. Increasing levels of wealth make it easier to access important information through television, radio and schools\textsuperscript{15}.

**LIMITATIONS OF THE RESEARCH**

This research is limited to data from the 2017 IDHS data processing. The variables chosen are the results of processing the 2017 IDHS data by considering the validity and observations containing missing values are not included in the analysis.

**THANK-YOU NOTE**

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**CONCLUSIONS**

The results of this study indicate that there is a relationship between age, area of residence, level of education and knowledge. So it is necessary to modify the media and ways of disseminating
information about HIV/AIDS in order to increase knowledge of HIV/AIDS in the Indonesian population as an effort to reduce the incidence of HIV/AIDS in Indonesia.

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