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Modeling The Determinants of Stigma Among Women of Childbearing Age (15-49 Years) Toward People Living With HIV in East Kalimantan Province

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Abstrak

Stigma negatif yang melekat pada orang yang hidup dengan HIV/AIDS membuat banyak orang enggan untuk menjalani tes HIV karena takut hasil positif dan takut ditolak oleh pasangan seksual mereka. Stigma ini terjadi karena kurangnya pengetahuan dan kurangnya paparan media massa/informasi tentang HIV/AIDS. Penelitian ini bertujuan untuk memperoleh model prediksi regresi logistik biner dan faktor determinan yang mempengaruhi stigma wanita usia subur (15-49 tahun) terhadap orang yang hidup dengan HIV/AIDS di Provinsi Kalimantan Timur. Penelitian ini menggunakan desain studi potong lintang dan metode analisis data dengan regresi logistik biner. Data penelitian menggunakan Survei Demografi dan Kesehatan Indonesia (SDKI) 2017 dengan jumlah sampel sebanyak 1096 responden. Hasil penelitian menunjukkan bahwa 53% wanita usia subur memiliki stigma yang tinggi. Pengetahuan dan status perkawinan berpengaruh signifikan terhadap stigma terhadap orang yang hidup dengan HIV/AIDS. Hasil model regresi logistik biner menunjukkan g(x) = 0,096 + 0,578 (pengetahuan) – 0,329 (status perkawinan). Model ini sesuai dengan variabel prediktor yang dimasukkan ke dalam model, dapat menjelaskan 3,4 persen keragaman dan memiliki akurasi klasifikasi sebesar 57,2 persen. Oleh karena itu, diperlukan peningkatan pengetahuan dan stigma positif terhadap orang yang hidup dengan HIV/AIDS untuk mengurangi stigma terhadap mereka.

Abstract

The negative stigma attached to people living with HIV/AIDS makes people reluctant to take an HIV test for fear of positive results and fears of rejection by their potential sexual partners. This stigma occurs because of lack of knowledge and mass media/information exposure about HIV/AIDS. The study aimed to obtain a binary logistic regression prediction model and determinant that influence the stigma of eligible women (15-49 years) against people living with HIV/AIDS in East Kalimantan Province. The study used a cross sectional study design and data analysis method with binary logistic regression. This study employed data from the Indonesian Demographic and Health Survey (IDHS) 2017 with 1096 sample. Study result showed 53% eligible woman had a high stigma. Knowledge and marital status has a significant effect on stigma towards people living with HIV/AIDS. The result of Binary Logistic Regression model revealed g(x) = 0.096+ 0.578 (knowledge) – 0.329 (marital status). The model is in accordance with the predictor variables entered into the model, It can explain 3,4 percent diversity and has a 57,2 percent classification accuracy. Therefore are need knowledge improvement and the positive stigma against people living with HIV/AIDS to reduce the stigma towards people living with HIV/AIDS.

INTRODUCTION

The 2017 Indonesian Demographic and Health Survey (SDKI) aims to provide the most recent estimates of fundamental demographic and health indicators. Additionally, SDKI 2017 has been specifically designed to address certain objectives, one of which is to furnish data concerning HIV/AIDS that can be utilized to combat the HIV/AIDS epidemic in Indonesia (SDKI, 2018a). The issues surrounding the HIV (Human Immunodeficiency Virus) and AIDS (Acquired Immune Deficiency Syndrome) epidemics are significant global public health concerns, exacerbated by inequalities, power imbalances, violence, exclusionary behaviors, taboo assumptions, stigma, and discrimination towards individuals living with HIV/AIDS (ODHA). According to UNAIDS (2019), there are 37.9 million people living with HIV globally, including 18.8 million women over the age of 15 and 1.7 million children under the age of 15. In 2018, there were 1.7 million new cases of HIV, resulting in 770,000 deaths due to AIDS (UNAIDS, 2019). In the Asia and Pacific region, approximately 5.9 million people are living with HIV, with an estimated 310,000 new infections occurring in 2018. HIV/AIDS also poses a significant health challenge in Indonesia, which ranks as the fifth most at-risk country for HIV/AIDS in Asia (Ministry of Health, 2018).

The HIV/AIDS Information System (SIHA) reported a substantial increase in cases in 2016 compared to 2015, with 10,315 new cases. In 2017, there were 48,300 cases of HIV and 9,280 cases of AIDS, with proportions of 36.2% of HIV-positive individuals and 32.8% of AIDS cases among women in Indonesia. East Kalimantan Province recorded the highest number of HIV cases on the island of Kalimantan, totaling 1,202 HIV cases and 358 AIDS cases in 2017, with 34% of HIV-positive individuals and 42.8% of AIDS cases among women (Ministry of Health of the Republic of Indonesia, 2019). The increase in HIV/AIDS cases in Indonesia in 2017 was not accompanied by a corresponding rise in the number of individuals getting tested for HIV. SIHA reported a decrease in HIV testing in 2017, with 882,721 individuals tested, of whom 27,975 tested positive for HIV. The proportion of the Indonesian population that has undergone HIV testing remains relatively low. This can be attributed to a lack of awareness regarding the threat posed by HIV/AIDS, leading many individuals to believe they do not need to be tested if they do not perceive themselves as at risk. Additionally, the strong stigma associated with HIV/AIDS discourages many individuals from seeking testing due to feelings of embarrassment, reluctance, and fear (Kapeta Foundation, 2012, in Ministry of Health of the Republic of Indonesia, 2019).

The SDKI (2017) indicated that eight out of ten married individuals hold discriminatory attitudes towards those infected with HIV. Such discrimination is likely rooted in ignorance regarding the mechanisms of HIV transmission. Misunderstandings or a lack of knowledge about HIV/AIDS frequently result in heightened fear and rejection of ODHA. Discriminatory attitudes are also prevalent in East Kalimantan Province, where reports from the Health Office indicate that ODHA are often avoided and excluded from social interactions, even by family members. Many individuals fear close contact with

ODHA, mistakenly believing that the virus can be transmitted through everyday interactions, such as skin contact, sweat, or food (FPLM, 2012).

This stigma and discrimination arise from inadequate knowledge and exposure to information about HIV/AIDS (FPLM, 2012). Various studies indicate a correlation between stigma and knowledge; for instance, research by Bekalu et al. (2014) on individuals aged 15-64 revealed that rural residents and those with low levels of education about HIV exhibited high levels of HIV-related stigma. These findings align with research conducted by Hati et al. (2017) on household heads in Kupang City, which indicated a relationship between high stigma and lack of knowledge, revealing that individuals with less knowledge about HIV/AIDS were twice as likely to harbor stigma compared to those with good knowledge.

Further research by S & Ronoatmodjo (2017) identified several factors associated with stigma against ODHA, including age, education level, area of residence, employment status, and media exposure, which collectively influence attitudes of rejection towards ODHA. Additionally, Dahlui et al. (2015) found that married individuals and those from lower socioeconomic backgrounds are more likely to harbor stigma against ODHA. Maharani's (2017) study indicated that women are twice as likely to experience stigma towards ODHA. This is corroborated by findings from Nanda & Pramanik (2015), which revealed that women often prefer to keep their family members' HIV status confidential. Women's vulnerability to HIV infection is exacerbated by gender inequality, which hampers their ability to influence their partners' sexual behavior, as well as a lack of knowledge and access to information and services related to HIV and AIDS (Ministry of Health, 2018).

The stigma against people with HIV/AIDS in East Kalimantan Province remains severe, highlighting the need for data analysis to mitigate the societal impact of this stigma. The SDKI 2017 has provided relevant data concerning HIV/AIDS in East Kalimantan Province, focusing on women of childbearing age (15-49 years) as respondents. Understanding the determinants of stigma among women of childbearing age is crucial for assisting the provincial government in assessing the current state of knowledge and stigma within the community towards ODHA. Data regarding the determinants of stigma among women of childbearing age can be analyzed using the binary logistic regression method, which is employed to identify stigma determinants and predictive modeling. Through this analysis, the variables that exert the greatest influence on the stigma faced by women of childbearing age towards ODHA can be identified, allowing for the planning of appropriate interventions.

Reducing stigma and discrimination serves as a critical indicator of the success of HIV/AIDS prevention and control programs in Indonesia, particularly in East Kalimantan Province. This study aims to predict the determinants of stigma among women of childbearing age (15-49 years) towards ODHA (People with HIV/AIDS) in East Kalimantan Province through the application of binary logistic regression

METHOD

This study is a quantitative research with a non-reactive research method with a cross sectional design. This research was

conducted from March to September 2020. The data used is secondary data from the 2017 Indonesian Demographic and Health Survey on the Health Component of Women of Childbearing Age (SDKI WUS) in East Kalimantan Province. The population of this study is all women of childbearing age (15-49 years) in East Kalimantan Province, which is 1,305. The inclusion criteria have been mentioned about HIV/AIDS, while the exclusion criteria are missing data. The sample that met the inclusion and exclusion criteria was 1096 respondents.

The dependent variable in this study is the stigma against ODHA. Stigma against ODHA is an individual's negative view of ODHA (People with HIV/AIDS), while the independent variables in this study are knowledge related to HIV/AIDS, and exposure to mass media/information sources. Knowledge related to HIV/AIDS is some of the information that respondents know about HIV/AIDS, such as knowledge of prevention methods, knowledge of transmission methods, and knowledge of transmission from mother to child. Exposure to mass media/information sources is a buffer of exposure to mass media/information sources respondents related to HIV/AIDS through radio, TV, newspapers/magazines, posters, schools/teachers, friends, family, workplaces, and the internet. Another independent variable is social determinants which include information about the area of residence, wealth quintile, education level, employment status, marital status, and age.

The data that has been obtained from the Demographic Health Survey (DHS) is analyzed in stages from the analysis of the frequency distribution of each variable; the analysis of the relationship between independent variables and dependent variables; and the analysis with binary logistic regression. Multivariate analysis was carried out to find modeling with the aim of estimating the relationship between independent variables and dependent variables, until the variables that most influence on the stigma of women of childbearing age towards ODHA are known.

RESULT AND DISCUSSION

Table 1. Distribution of Respondent Characteristics

Variable	Number (n=1096)	Percentage (%)
Age	31.32 ±9,538	
Region of Residence		
Urban	862	78,6
Rural	234	21,4
Wealth Quintessence		
Bottom	116	10,6
Lower Middle	256	23,4
Intermediate	260	23,7
Upper Middle	237	21,6
Top	227	20,7
Education Level		
Tall	714	65,1
Low	382	34,9
Employment Status		
Not Working	522	47,6
Work	574	52,4
Marital Status		
Marriage/Living Together	778	71
Not Married/Living Together	318	29
Knowledge Related to HIV/AIDS		

Variable	Number (n=1096)	Percentage (%)
Tall	482	44
Low	614	56
Exposure Media Mass/Source of Information		
Exposed	315	28,7
Less Exposed	781	71,3
Stigma Against ODHA		
Low	517	47
Tall	579	53

Based on Table 1. It is known that the average age of the respondents is 31.32 years with a data variance of 9.538. The majority of respondents live in urban areas and the average respondent has a quintile of middle wealth. Most of the respondents have a higher education level, more than half of the respondents have a job and the majority have marital/cohabitation status. more than half of the respondents had low knowledge related to HIV/ADIS, most were less exposed to mass media/sources of information related to HIV/ADIS and more than half of the respondents had a high stigma against ODHA (People with HIV/AIDS).

Table 2. The Relationship between Respondent Characteristics and Stigma Against ODHA

Variable	P value
Region of Residence	0,645
Wealth Quintessence	0,471
Education Level	0,020*
Employment Status	0,349
Marital Status	0,020*
Age	0,419
Knowledge	<0.0001*
Mass Media Exposure/Information Sources	0,027*

Based on Table 5, it is known that the variables of knowledge, exposure to mass media/information sources, education level, and marital status are proven to have a significant relationship with the stigma of women of childbearing age (15-49 years) towards ODHA (People with HIV/AIDS).

Table 3. Final Model of Modeling Determinants of Stigma Against ODHA

Variable	B	S.E.	Wald	Pvalue	Exp(B)
Knowledge	0,578	0,124	21,813	0,000	1,783
Marital Status	-0,329	0,136	5,846	0,016	0,720
Constant	**0,096**	**0,126**	**0,579**	**0,447**	**1,101**

The model could explain the diversity by 3.4 percent, while the rest was explained by other variables outside the research model. Fit or fit model for Used. This model can predict that someone who has high knowledge and marital status/cohabitation has a high chance of having a high stigma of 44.2 percent, while respondents who have low knowledge and are not married/live together have a high stigma of 66.2 percent.

Stigma related to HIV/AIDS is all suspicions, insults and discrimination directed at ODHA as well as individuals, groups or communications related to ODHA (Herek et al., 2002). Discrimination is an action or action that comes from the emergence of stigma and directly to the stigmatized person. Stigma and discrimination against ODHA are closely related to the way HIV/AIDS is transmitted

which is synonymous with despicable acts such as the use of illegal drugs, homosexuality, prostitution and so on (UNAIDS, 2019).

The results of this research revealed that more than some respondents have a high stigma against ODHA. Among the respondents' answers regarding the stigma against ODHA, more than half of the respondents had a high stigma against ODHA, and among the respondents' answers, more than half of the respondents would not buy fresh vegetables from farmers or sellers who are known to be infected with HIV/AIDS. As is known, people infected with HIV (vegetable sellers) will experience opportunistic infections related to HIV infection, so respondents are reluctant to buy vegetables because fear of contracting the infection (Situmeang et al., 2017).

Almost some respondents feel embarrassed if one of their family members suffers from HIV/AIDS and will keep it a secret if one of their family members is infected with the HIV/AIDS virus, this may happen because of the assumption that a person with HIV/AIDS is a cursed disease due to deviant deeds, someone who suffers from a dangerous and infectious disease or someone who brings bad disgrace to the family. so they are worried if the HIV positive status of their family members is known to others (Herani, 2012).

The majority of respondents who thought that someone would be hesitant to take an HIV/AIDS test because they were worried about the reaction of others if the result was positive and thought that people would say bad things about people with HIV/AIDS or people suspected of being ODHA. The stigma against ODHA makes people reluctant to take an HIV test because they are afraid of positive results and fear of rejection by their prospective sexual partners, as well as strong negative connotations associated with marginal behaviors such as sex workers, drug users, homosexuals, and deadly diseases (Murni, 2007 in Pradana, 2017).

The variables that are proven to be related to the stigma against ODHA are education level, marital status, knowledge related to HIV/AIDS, and exposure to mass media/information sources. Predictive modeling with binary logistic regression produced two of the most significant variables related to the WUS stigma against ODHA, namely the variables of knowledge and marital status/cohabitation. The results of this study are in accordance with the results of a study by Bekalu et al (2014) in the population aged (15-64 years) with low HIV knowledge showing high HIV-related stigma. Other studies also state that there is a relationship between high stigma and lack of knowledge, resulting in less knowledge about HIV/AIDS 2 times more likely to have stigma compared to those who have good knowledge (Hati et al, 2017). The results of this study indicate that knowledge related to HIV/AIDS greatly affects a person's stigma towards ODHA, because misunderstanding or lack of knowledge related to HIV/AIDS often has an impact on people's fear of ODHA, resulting in rejection of ODHA (SDKI, 2018). Some misunderstandings are also still wrong, such as 35.6 percent of respondents think that HIV can be transmitted through mosquito bites and eating a plate with ODHA, 46.4 percent and only 20.4 percent of respondents know how to tell if someone is infected with the HIV/AIDS Virus with a blood test/VCT. However, the majority of respondents understood very well that HIV can be transmitted because using the same syringe interchangeably, it can be

transmitted by a mother to her child during pregnancy, childbirth and breastfeeding.

Marital status that influences the stigma of respondents is in line with the results of research by Dahlui et al (2015) which states that married people are more likely to have a stigma against ODHA and are more likely to blame ODHA for bringing this disease to society. The results of this study also show that the OR value of marital status is (0.720<1) so that this variable is not a risk factor but a protective factor of social determinants related to the stigma that WUS has against ODHA. WUS who is not married/living together 1,389 times more likely to have a high stigma against ODHA compared to WUS who is married/living together. WUS who is married/living together has a partner/husband and family who have knowledge and is one of the sources of knowledge about HIV/AIDS (Yuliwati, 2012).

Misunderstandings and negative views of ODHA need to be overcome by knowing the most influential determinants so that appropriate interventions can be carried out. The results of predictive modeling with Binary Logistic Regression yield two of the most significant variables related to the stigma of WUS against ODHA, namely the variables of knowledge and marital status. This result was obtained after passing the significance test stage simultaneously and partially. The significance test was simultaneously carried out to determine the influence of the independent variable on the equally bound variable. The result is a significance value (<0.0001<0.05), so it can be concluded that H0 is rejected which means that there is at least one independent variable that together affects the model. This means that variables such as education level, marital status, knowledge related to HIV/AIDS, and exposure to mass media/information sources can have a joint influence on the stigma of WUS against ODHA. After conducting a simultaneous significance test, the next step is to conduct an individual significance test which is carried out to determine the influence of each independent variable (education level, marital status, knowledge related to HIV/AIDS and exposure to mass media/information sources) on the stigma of women of childbearing age (15-49 years) towards ODHA. As a result, the test values of the knowledge variable (17.898) and marital status (4.349) were greater than the chi-square value of the table (3.841), meaning that there were variables of knowledge and marital status that had a significant effect individually on the stigma variable against ODHA.

This prediction modeling also produces a very small Naglekerke R Square goodness test value of 0.037. This value indicates that the independent variable is only able to explain the dependent variable by 3.7 percent or only 3.7 percent of the variation of the dependent variable that can be explained by the model. The small value of the Naglekerke R Square does not make a model considered bad. This is because the Naglekerke R Square value of 0 to 1 is not a natural interpretation but an imitation to replace the R-Square OLS value in the logit model (Greene, 2000). This opinion is supported by Gujarati (2012) who argues that the main thing that must be considered in the Binary Logistic Regression model is the indicator of the significance of the model, significance of independent variables, and the direction of the coefficient of the variable while the value of Naglekerke R Square is not prioritized. The results of the Hosmer and Lameshow tests

have proven that the final model of this study is fit and feasible to use. The resulting model is able to predict the classification of response variables quite well, which is 57.2 percent. These results can lead to the conclusion that the proposed model is good enough and appropriate to be used in the 2017 SDKI data.

The results of the modeling that have been carried out indicate that health workers still need to increase positive stigma promotion activities, so that ODHA can be accepted in the community. Stigma and discrimination from the community against people with HIV will make people reluctant to take HIV tests, reluctant to know their test results, and not trying to get proper treatment and tend to hide their disease status. KPA (AIDS Control Commission) in East Kalimantan Province has implemented some

HIV/AIDS control programs such as conducting special advocacy in government agencies, holding training for adolescents in providing counseling, holding media development activities in order to introduce and understand more about HIV/AIDS. KPA programs are also through direct communication or dialogue, reaching out or approaching individuals or groups that are difficult to provide counseling (e.g. drug users and prisoners), lectures, seminars and talkshow (Agistin, 2017). In addition to increasing knowledge related to HIV/AIDS, it is hoped that in the future KPA will add materials and programs to reduce stigma negative in order to achieve one of the Three Zero targets, namely no more stigma and discrimination against ODHA in 2030 in East Kalimantan Province. Stigma and discrimination against ODHA is a challenge that, if not overcome, has the potential to hinder HIV/AIDS prevention and control programs. Support and empowerment of peer support groups (KDS) as effective partners and students as potential groups to help reduce stigma and discrimination against ODHA (Anggina et al., 2019). The role of KDS is able to reduce stigma both from the ODHA themselves and from the ODHA environment (Mufarika, 2019). In addition, support from various community leaders is also able to overcome the negative stigma against ODHA.

CONCLUSION

The results of modeling with binary logistic regression prove that lack of knowledge related to HIV/AIDS and non-marital status/cohabitation are the most influential factors on the stigma against ODHA. This modeling proved to be fit or feasible to use and was able to predict the classification of response variables quite well, which was 57.2 percent.

Health promotion activities related to stigma against ODHA are urgently needed because stigma against ODHA continues to be a hidden factor that acts as a barrier to effective prevention programs. It is hoped that relevant parties can facilitate a forum with civil society to support efforts to reduce stigma and discrimination against ODHA in East Kalimantan Province.

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