



## HIV-related stigma, knowledge about HIV, HIV risk behavior and HIV testing motivation among women in Lampung, Indonesia<sup>☆</sup>



Noverita Irmayati<sup>a,b</sup>, Sri Yona<sup>a,\*</sup>, Agung Waluyo<sup>a</sup>

<sup>a</sup> Faculty of Nursing Universitas Indonesia, Depok, West Java, Indonesia

<sup>b</sup> Bengkayang General Hospital, Bengkayang, West Borneo, Indonesia

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### KEYWORDS

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### Abstract

**Objective:** This study aims to identify factors that influence HIV testing motivation among women at the Dr. H. Abdul Moeloek General Hospital in Lampung, Indonesia.

**Method:** A cross-sectional method was used in this study that employed a consecutive sampling technique involving 120 women with HIV. The participants were outpatients at the Voluntary Counseling and Testing (VCT) Dr. H. Abdul Moeloek General Hospital. This study utilized three instruments: the Berger HIV Stigma Scale, HIV Knowledge Questionnaire (HIV-KQ-18) and Safe Sex Behavior Questionnaire (SSBQ).

**Results:** The study examined factors that influence HIV testing motivation among women: HIV-related stigma, knowledge about HIV and HIV risk behavior. The results of the analysis showed that there is a significant relationship among the HIV-related stigma variable ( $p=0.019$ ,  $OR=2.727$ ), knowledge about HIV variable ( $p=0.011$ ,  $OR=3.750$ ) and HIV risk behavior variable ( $p=0.041$ ,  $OR=2.381$ ). The most dominant factor influencing HIV testing motivation is HIV risk behavior ( $p=0.016$ ,  $\alpha=0.05$  at 95% CI and  $OR=3.217$ ). This indicates that Women Living With HIV (WLWH) who engage in risk HIV behavior demonstrate 3.2 times to HIV testing motivation.

**Conclusion:** HIV-related stigma, knowledge about HIV and HIV risk behavior influence HIV testing motivation for women.

**Recommendation:** Our findings have implications for nursing and healthcare practice as well as research, especially in supporting HIV testing for women who are at risk for HIV. Nurses should focus their attention on motivating women with a high risk of HIV to undergo early HIV testing.

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\* Corresponding author.

E-mail address: [sriyona@ui.ac.id](mailto:sriyona@ui.ac.id) (S. Yona).

## Introduction

Data from the Joint United Nations Program on HIV and AIDS (UNAIDS) shows that there are 36.7 million people infected with HIV worldwide; 51% of them, and 17.8 million WLWH.<sup>1</sup> In Indonesia, based on Ministry of Health data, approximately 10,376 persons were found to be living with HIV/AIDS (PLWHA) in Indonesia from January to March 2017, an increase of almost 45% since 2016 (7146 persons).<sup>2</sup> The causes of HIV infection in women were unsafe sexual relations, such as not using a condom and contracting the virus from infected sexual partners who often use the services of commercial sex workers.<sup>3</sup> WLWH in Indonesia indeed numbers less than men, 34% and 66% respectively. However, women have a higher risk of transmitting the disease to children through pregnancy<sup>4</sup> and their sexual partners<sup>5</sup> if they do not get early treatment.

One of the ways to reduce the risk of HIV transmission for women is to conduct HIV testing. HIV testing is an important screening method for preventing the transmission, caring for and treating of HIV.<sup>6</sup> The problem encountered in the field is a lack of motivation from the community to undergo HIV testing. According to some studies, factors that inhibit and encourage HIV testing include HIV-related stigma, knowledge about HIV, and risky sexual behavior.

The desire to treat HIV is influenced by HIV-related stigma which originates in both self-perception<sup>7,8</sup> and community norms.<sup>9</sup> Communities often place the full blame on WLWH for their HIV status. Therefore, others hesitate to be tested for HIV. Knowledge about HIV is related to motivation for HIV testing,<sup>10,11</sup> while risk behavior is associated with a willingness to be tested for HIV; those who engage in risky sexual behaviors get tested for HIV more often.<sup>12,13</sup>

Lampung is a province located in the southeastern part of Sumatera. Lampung residents are susceptible to HIV transmission because it is a transit area where there is a high amount of movement of people from inside and outside the city. This vulnerability to HIV is seen by the number of new HIV cases; the increase from 2012 to 2017 was about 1587 cases.<sup>2</sup> The number of reported cases in Lampung increased from 335 to 1252 in 5 years, a four-fold increase. Various attempts have been made by the government of Lampung to encourage residents to practice early detection with HIV testing, but HIV testing motivation still low. Research on HIV testing, especially for women in Lampung, is still scarce, and the issue has not been explored well, such as the reasons why women conduct HIV self-examinations and the difficulties women encounter in making such decisions.<sup>14</sup> Motivated by those facts, the researchers aim to identify the factors that influence HIV testing motivation for women at Dr. H. Abdul Moeloek General Hospital (RSUD) in Lampung.

## Method

This study used a cross-sectional method. The sample was 120 women who were diagnosed with HIV. This study was conducted at the KancaSehati VCT clinic in Lampung. This service is a part of the Dr. H. Abdul Moeloek General Hospital in Lampung and offers ART and HIV testing and comprehensive care for HIV/AIDS patients.

The eligibility criteria for this study were: (1) 18 years old or above and (2) able to read and write in the Indonesian language. Excluded were patients with mental disorders/mental retardation and those with impairments in verbal communication.

**Measures.** Stigma was measured using a self-reporting instrument, the Berger HIV Stigma Scale, using a 4-point scale (1: strongly disagree, 2: disagree, 3: agree, and 4: strongly agree) with a total score of 160. This instrument assesses the HIV-related stigma. Higher scores reflect higher stigma. The stigma score is categorized high if it is  $\geq 113.63$  of the Berger HIV Stigma Scale. Knowledge about HIV was used to assess the level of knowledge about HIV. HIV-KQ-18 is an 18-item, where participants were asked to mark a statement or question true, false or do not know. Knowledge is stated to be good if participants scored  $\geq 75\%$  of the correct answers. We also used a single-item scale from the Safe Sex Behavior Questionnaire (SSBQ) to measure HIV risk behavior. This scale uses 4 points: (1: never, 2: sometimes, 3: often, and 4: always) with a total score of 92. All instruments have been modified and tested for validity and reliability. Stigma has reliability with Cronbach's alpha (0.944), HIV-KQ-18 (0.679) and SSBQ (0.873), and sexual behavior is considered safe if the total score is  $\geq 61.03$  on the SSBQ.

This research was conducted from April to May 2018. This study was begun after obtaining permission from the research ethics committee, Faculty of Nursing, University of Indonesia, No. 145/UN2.F12.D/HKP.02.04/2018. Research analysis was conducted using a chi-square test and multivariate logistic regression. At the end of the study, the researchers gave a souvenir to participants for their willingness to participate in this research.

## Results

The socio-demographic characteristics of the majority of participants were 18–40 years of age (81.7%), had completed a secondary education (52.5%), had an income below the minimum wage of less than \$15,504 USD per month (80%), and were unemployed (68.3%), married (66.7%) and housewives (64.2%).

**Table 1** shows that most participants showed high HIV testing motivation (65%), high HIV-related stigma (50.8%), possessed insufficient knowledge about HIV/AIDS (70%), and engaged in unsafe sex behaviors (56.7%). In the bivariate analysis, a significant relationship was found among HIV-related stigma, knowledge about HIV, and HIV risk behavior toward HIV testing motivation. By using multivariate modeling, it was found that the most dominant factor influencing HIV testing motivation is HIV risk behavior.

## Discussion

The majority of participants came to the hospital for HIV testing of their own volition (65%). This implies that women in Lampung have high motivation to receive HIV testing. One reason for that behavior has a family member, or sexual partner who was diagnosed with HIV makes them realize that they are prone to infection. This is consistent with research conducted by Rahmalia that found that women test more

**Table 1** Variables of HIV testing motivation, HIV-related stigma, knowledge about HIV and risky sexual behavior among women in Dr. H. Abdul Moeloek Lampung General Hospital (N = 120).

Variable	HIV testing motivation		Total n (%)	OR	p value
	High n (%)	Low n (%)			
<i>HIV-related stigma</i>					
High	33 (27.5)	28 (23.33)	61 (50.8)	2727 (1246–5968)	0.019*
Low	45 (37.5)	14 (11.66)	59 (49.2)		
<i>Knowledge about HIV</i>					
Bad	48 (40)	36 (30)	84 (70)	3750 (1411–9964)	0.011*
Good	30 (25)	6 (5)	36 (30)		
<i>HIV risk behavior</i>					
Safe sex behavior	28 (23.33)	24 (20)	52 (43.3)	2381 (1106–5124)	0.041*
Unsafe sex behavior	50 (41.66)	18 (15)	68 (56.7)		

\* Significant  $\alpha$  0.05.

for HIV when they have a partner who has tested positive for HIV, are of reproductive age, have children, and do not use contraception.<sup>15</sup> The same research also suggests that the dominant factor for HIV testing is the death of a spouse or child and deteriorating health condition.<sup>16</sup> It is also in line with a study conducted in Goa, India, that found that the death of a husband encouraged women there to receive HIV testing.<sup>17</sup> In this case, we found that women's motivation for HIV testing is based more on the condition of family members who had been diagnosed with HIV; women decide to visit the VCT because they feel at risk of contracting HIV from their partners.

The majority (50.8%) of HIV sufferers reported they experience HIV-related stigma. Data from UNAIDS show that the stigma is felt by 62.8% of PLWHIVA.<sup>1</sup> This is in line with research in Lampung reporting that single mothers positive for HIV experience internal and external HIV-related stigma and discrimination.<sup>18</sup> The internal stigma in the form of fear of test results can be an obstacle to HIV testing.<sup>19</sup>

One of the studies about HIV stigma among housewives women in Indonesia was conducted by Ismail, Voss, Woods, John-stewart G, Lowe, Nurachmah, Yona et al (2017). Their study aimed to explore the experience of women who were infected with HIV by husbands who used intravenous drugs. They did interview twelve housewives with HIV. They found three main concerns were described by the women. First, the women described how they managed their anger and caretaking of their ill husbands and children. Second, women were concerned that the only place they had to go after the husband's death was to their parents' home. Third, women focused on being financially strong and staying alive for their children.<sup>20</sup> The external stigma can also decrease interest in HIV testing.<sup>21</sup> Furthermore, the disclosure of women's HIV status is difficult, even though they eventually receive their HIV status.<sup>22</sup>

WLWH also felt HIV-related stigma from health workers. Another study was conducted by Agung et al. (2015) identified understanding HIV-related Stigma among Indonesian Nurses. They did cross-sectional study involve 225 nurses in Jakarta, Indonesia. They found stigmatizing attitudes were high despite generally low levels of perceived workplace

stigma. Indicating stigmatizing attitudes were items that included: Nurses need to know the HIV antibody status of patients they are caring for and nurses feel disgusted when I consider the state of the sinfulness of male homosexuality.<sup>23</sup> The stigma that exists in Lampung is also related to the public's perception that HIV/AIDS is a curse-related disease, a perception that has become an obstacle to reducing HIV infections and transmission in Lampung.

Women's knowledge about HIV/AIDS in Lampung is still poor (70%). It was found that they had bad understanding of the concept of HIV/AIDS and its transmission. Based on the results of the HIV-KQ-18 questionnaire, it was found that most participants knew about HIV transmission. A question about whether using the same glass as someone else would transmit HIV was answered correctly by 81.7% of participants, and one about whether toilet seats, bathtubs or swimming pools were transmission media for HIV was answered correctly by 80%. However, for critical questions, such as about a vaccine to prevent adults from contracting HIV, only a small proportion of participants answered correctly (32.5%). Similarly, concerning whether test results would be ready one week after intercourse, only 25.8% of participants answered correctly, while the majority answered that they did not know (48.3%). About whether using lubricant on condoms could minimize the possibility of HIV transmission, a small number of participants answered correctly (36.7%), while the majority of them had less knowledge about that (63.3%).

Furthermore, women with bad knowledge about HIV in Lampung in this study had good motivation for HIV testing because they understood that by following VCT they would get more knowledge on HIV. The study results also prove that these women are greatly assisted by VCT services because through them they can learn how to prevent HIV from being transmitted to their children and can socialize with other HIV/AIDS sufferers.<sup>24,25</sup> In addition, it was in line with the pretest that found that one of the counseling activities in VCT is clarifying knowledge about HIV/AIDS.<sup>26</sup>

The majority of women in this research engaged in unsafe sex behavior (56.7%). It was found that some of the participants said they had never used a condom (30%)

during intercourse, even though they knew that using condoms could prevent the transmission of HIV/AIDS. Another participant answered they used them sometimes (30%), often (13.3%) and always (26.7%). This is in line with the research conducted by Rahmalia that explained that most women never used condoms (67.8%), while the percentage of those who used condoms consistently was only 14.3%.<sup>26</sup> Moreover, people with risky sexual behaviors tend to have higher HIV testing motivation because they realize that they are at risk of contracting HIV.<sup>6</sup> Using a condom is also associated with low bargaining power in women.<sup>27,28</sup> Women tend to have difficulty discussing their sexual problems,<sup>29</sup> especially in terms of using condoms.<sup>30</sup> The low use of condoms in Lampung is also associated with high motivation for HIV testing because they feel at risk from engaging in unsafe sexual behavior.

There are some limitations to this research. First, the sample size was small, and it is expected that further studies could increase the research sample. Second, participants with low education tend to have difficulty in filling out questionnaires, even though the questions were written in easy to understand language. Furthermore, researchers accompany the participants while they were filling out the questionnaires and were sometimes asked for explanations of poorly understood questions. It is expected that further research could modify the questions to make them easier to understand for respondents. Last, the subjects in this study were women who visited the Kanca Sehati VCT at the Dr. H. Abdul Moeloek General Hospital in Lampung, which caused the sample to be homogeneous in terms of age and marital status. Implications for nursing are that nurses are expected to reduce the stigma of PLWHA by increasing knowledge through health education and encouraging turn in safe sex behavior.

## Conclusion

HIV-related stigma, knowledge about HIV and HIV risk behavior influence HIV testing motivation for women. HIV risk behavior is the most dominant factor influencing HIV testing motivation.

## Conflict of interests

The authors declare no conflict of interest.

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