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## Research Article

### Lower Perceived-Stigmatization by Health Workers Among HIV-AIDS Patients of Key Population Backgrounds

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#### ABSTRACT

The stigma of people living with HIV-AIDS (PLWHA) by health workers may have a broad impact, so it is necessary to identify the factors that influence the occurrence of stigma. Identification of factors that cause a decrease in stigmatization by health workers will have an impact on improving the quality of life of people with HIV, increasing compliance with medication, and ultimately reducing the incidence of HIV infection itself. The purpose of this study was to analyze factors related to PLWHA's perception of stigma among health workers in the community health center. This research applied a cross-sectional design using interviews. Ninety-four patients from the Infectious Disease Intermediate Care of Dr. Soetomo Hospital Surabaya, a tertiary level hospital, were interviewed. The stigma perception was assessed using a questionnaire modified from the Standardized Brief Questionnaire by Health Policy Project with Cronbach's Alpha of 0.786. The data were simultaneously analyzed with binary multiple regressions on IBM SPSS Statistics 22.0 for Windows software. There were 30 out of 94 patients with key population backgrounds, and most population was injecting drug users (IDUs) and female sex workers (FSWs). PLWHA perceived most stigmatized community health workers when they drew blood, provided care, and considered they were involved in irresponsible behavior. There were relationships between age ( $p=0.008$ ), marital status ( $p=0.013$ ), and the history of key population ( $p=0.006$ ) to people living with HIV-AIDS (PLWHA)'s perception of stigma among health workers in East Java community health center. Future research on factors influencing HIV-related stigma is needed to improve patients' quality of life.

**Keywords:** Health workers, HIV-AIDS, key population, stigma

#### ABSTRAK

Stigma terhadap orang dengan HIV-AIDS (ODHA) oleh tenaga kesehatan dapat berdampak luas, maka perlu dilakukan identifikasi faktor-faktor yang memengaruhi terjadinya stigma. Identifikasi faktor-faktor yang menyebabkan penurunan stigmatisasi oleh tenaga kesehatan akan berdampak terhadap peningkatan quality of life orang dengan HIV, meningkatnya kepatuhan minum obat, dan akhirnya akan mengurangi angka kejadian infeksi HIV itu sendiri. Tujuan dari penelitian ini yaitu untuk menganalisis faktor-faktor yang berhubungan terhadap persepsi orang dengan HIV-AIDS (ODHA) atas stigma oleh tenaga kesehatan puskesmas. Penelitian ini menggunakan rancangan penelitian cross-sectional dengan metode wawancara. Sembilan puluh empat pasien dari Poli Rawat Jalan Instalasi PIPI RSUD Dr. Soetomo, yang merupakan rumah sakit tersier diwawancarai. Persepsi stigma pasien dinilai menggunakan kuesioner standar oleh Health Policy Project dengan nilai Cronbachs Alpha 0,786. Data dianalisis dengan uji regresi logistic berganda dengan perangkat lunak IBM SPSS Statistics 22.0 for Windows. Didapatkan 30 dari 94 pasien yang memiliki riwayat kelompok risiko, dengan kelompok risiko terbanyak adalah Penasun dan WPS. Gambaran stigmatisasi oleh tenaga kesehatan terhadap ODHA yaitu khawatir ketika mengambil darah,

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memberikan perawatan berkualitas rendah, dan menganggap seseorang terinfeksi HIV karena mereka terlibat perilaku yang tidak bertanggung jawab. Terdapat hubungan antara usia ( $p=0,008$ ), status perkawinan ( $p=0,013$ ), dan ODHA ber riwayat kelompok risiko ( $p=0,006$ ) dengan persepsi ODHA atas stigma oleh tenaga kesehatan puskesmas. Usia yang muda, menikah, dan memiliki riwayat kelompok risiko merupakan faktor-faktor yang signifikan terhadap rendahnya persepsi ODHA atas stigma oleh tenaga kesehatan puskesmas Jawa Timur. Penelitian terkait faktor-faktor yang berhubungan dengan stigma HIV dibutuhkan untuk meningkatkan kualitas hidup ODHA.

**Kata kunci:** Tenaga kesehatan, HIV-AIDS, kelompok risiko, stigma

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## INTRODUCTION

The stigma against PLWHA, which arises from the mind of an individual or society who believes that AIDS is a result of immoral behavior that cannot be accepted by society, is reflected in cynical attitudes, feelings of excessive fear, and negative experiences to PLWHA<sup>1</sup>. Stigma and discrimination are not only carried out by commoners who do not have enough knowledge about HIV and AIDS but can also be carried out by health workers<sup>2</sup>. The opinion that states AIDS is a curse because of immoral behavior also greatly affects how people comport themselves and behave towards PLWHA<sup>3</sup>. In 2014, UNAIDS established a program in accordance with Millennial Developmental Goals (MDGs) namely 3 Zeros, which includes Zero new infections, Zero AIDS-related deaths, and Zero stigma and discrimination<sup>4</sup>. This program is a human-centered HIV prevention and treatment service to end the AIDS epidemic by 2030<sup>5</sup>. However, this has not been in contrary to the reality in the field.

Research by Stringer involving 651 health workers found that almost 90% of health workers gave at least one stigma to PLWHA. 18.9% of health workers agreed that PLWHA had a large number of sexual partners, 33.3% agreed that PLWHA could avoid HIV infection if they wanted to, and 35.3% thought that sufferers could become infected with HIV due to irresponsible sexual behavior<sup>6</sup>. Research in Indonesia in 2014 also found stigma by health workers, including landfills that are differentiated and labeled HIV, feeding under the door, not changing patient's

bedsheets, excessive use of protective equipment, isolation, and taking action without informed consent<sup>7</sup>.

Stigma by health workers towards people with HIV certainly still has a strong impact. Eventually, this will impact how others perceive a person, social rejection, decreased acceptance of social interaction, increased discrimination, and adding family burden<sup>8</sup>. The impact of this stigma is not good and can be fatal for HIV patients, as mentioned in the study conducted by Ardani<sup>9</sup>. Drug-addict-PLWHA who feel stigmatized will reduce the possibility of seeking treatment, for those who have undergone treatment may choose to end the treatment. Furthermore, stigma affects the lives of PLWHA by causing depression and anxiety, sadness, guilt, and feelings of worthlessness. Besides, stigma can reduce the quality of life and limit access and use of health services<sup>9</sup>. Labeling and discrimination against people living with HIV-AIDS are the foremost effective barriers in preventing HIV and also in providing drugs, care, and support<sup>10</sup>.

Because of the stigma of people with HIV can have a wide-ranging impact, it is necessary to identify the factors that influence stigma to PLWHA by health workers. Identification of factors that cause a decrease in stigmatization by primary health center workers will have an impact on improving the quality of life of people with HIV, improving medication adherence, so the incidence rate of HIV itself will be reduced.

Therefore, this study was aimed to identify the correlating factors between PLWHA and stigmatization by community health center's workers using subjects of people with HIV

in the Outpatient Care Clinic of Intermediate and Infectious Disease Care Unit (Perawatan Intermediet Penyakit Infeksi - PIPI) Dr. Soetomo Hospital Surabaya. It is hoped that the results of this study can provide input to policymakers to initiate a stigma reduction program for people with HIV that can be started from PLWHA who has the highest stigma, to make it easier for PLWHA to disclose their status and treatment. Also, it is hoped that the prevention of HIV transmission to the community will be more controlled and help improve the quality of life with HIV-AIDS (PLWHA).

## MATERIALS AND METHODS

This study used an observational analytic study with cross-sectional study design. The sample of this study was 94 HIV positive patients in the Outpatient Care Clinic of Intermediate and Infectious Disease Care Unit Dr. Soetomo Hospital Surabaya from October to December 2018 who were referral patients from a community health center or had received health services at a community health center in East Java after being diagnosed with HIV. The sampling technique used was consecutive. Respondents were interviewed using a modified questionnaire by the Health Policy Project available at [www.stigmaindex.com](http://www.stigmaindex.com), which has been tested for reliability and validity with a Cronbach's Alpha coefficient of 0.786. The Standardized Brief Questionnaire by the Health Policy Project was developed and verified through a calculated collaborative process that involved experts from various countries. There are four areas which are pertinent to stigma and discrimination in health care environment that the experts are complied to focus on: 1) fear of HIV infection among health facility staff; 2) stereotypes and prejudice related to people living with or thought to be living with HIV; 3) observed and secondary stigma and discrimination; and 4) policy and work environment<sup>11</sup>.

In the questionnaire by the Health Policy Project, the health workers' point of view is used as the object. What is new in this study is using the perspective of people living with HIV-AIDS.

The questionnaire was about socio-demographic data and HIV-related questions that illustrate the understanding, awareness, and experience of attitudes by health center workers towards PLWHA. This questionnaire was divided into four sections. The first section was background information containing questions about sex, age, marital status, duration of HIV diagnosis, the origin of residence, occupation, and history of key population. The second section, infection control, contained questions about the stigma that has been experienced related to HIV infection control at the time of examination. The third section, Health Facilities' Environment, contained questions related to stigma in the health facility environment. The fourth section, Opinion about People Living with HIV, contained statements related to the opinion of health workers towards people living with HIV-AIDS. The choice of answers to each question was how often the stigma occurred so that it would describe which stigma is most often obtained.

## RESULTS AND DISCUSSION

### Sociodemographic Characteristics

The sample in this study was varies based on the gender, age, marital status, occupation, duration of patient diagnosed with HIV, HIV control/check-up, residence, and history of key population as described in Table 1.

Patients from Surabaya were grouped according to the sub-district of residence. The distribution of patients from Surabaya is shown in Table 2.

The number of females infected with HIV-AIDS was higher than males, in contrast to data released by the Ministry of Health in 2017. The higher number of infected females is because females are vulnerable to HIV due to biological factors, reduced sexual autonomy, and it is explained that women want to prevent HIV but do not have enough strength to against<sup>12</sup>. Prospective studies of serodiscordant couples and male contact with FSW show that women are twice as likely to be infected if exposed to HIV<sup>13</sup>. The age classification in Table 1 is based on the Indonesian Ministry of Health in the annual HIV-AIDS disease progress

**Table 1.** Sociodemographic Characteristics

Sociodemographic Characteristics	Frequency	Percentage (%)
<b>Gender</b>		
Male	45	47.9
Female	49	52.1
<b>Age</b>		
20-24 years old	2	2.1
25-49 years old	84	89.3
≥50 years old	8	8.6
<b>Marital Status</b>		
Married	58	61.7
Single	23	24.5
Widowed	13	13.8
<b>Occupation</b>		
Housewife	25	26.6
Female Sex Worker	45	47.9
Health Worker	1	1.1
Others	23	24.6
<b>Duration of patient diagnosed with HIV</b>		
1 year	26	27.7
2 years	7	7.4
3 years	17	18.1
4 years	9	9.6
5 years	8	8.5
6 years	8	8.5
7 years	4	4.3
8 years	2	2.1
9 years	3	3.2
≥10 years	10	10.7
<b>HIV Control/Check-up</b>		
Twice or more in a month	11	11.7
Once in a month	79	84
Once in three months	2	2.1
Once in 4-6 months	2	2.1
<b>Residence</b>		
Blitar	2	2.1
Bondowoso	1	1.1
Gresik	3	3.2
Jombang	1	1.1
Mojokerto	1	1.1
Ngawi	1	1.1
Pasuruan	3	3.2
Sidoarjo	9	9.6
Sumenep	2	2.1
Surabaya	71	74.3
Trenggalek	1	1.1
<b>History of Key Population</b>		
Yes	30	33.9
No	64	68.1

**Table 2.** Distributions of patients from Surabaya

Sub-districts	Frequency	Percentage (%)
Benowo	2	2.9
Bubutan	1	1.4
Genteng	1	1.4
Gubeng	6	8.6
Karang Pilang	1	1.4
Kenjeran	1	1.4
Krembangan	7	10
Mulyorejo	3	4.3
Pabean Cantian	2	2.9
Rungkut	2	2.9
Sawahan	10	14.3
Semampir	2	2.9
Sukolilo	3	4.3
Sukomanunggal	1	1.4
Simokerto	1	1.4
Tambaksari	12	17.1
Tegalsari	7	10
Wiyung	3	4.3
Wonocolo	1	1.4
Wonokromo	4	5.7

report, which used the same age classification so that the comparison of results is appropriate. The age of most PLWHA obtained from this study was 25-49 years because it is the age of sexually active. The same data is issued by the Indonesian Ministry of Health in the Report on the Development of HIV-AIDS & Sexually Transmitted Infectious Diseases for the First Quarter 2017, that is 69.6% is the 25-49 years age group, 17.6% is the 20-24 years age group and 6.7% is the age group of >50 years<sup>14</sup>. Most marital status was marriage, which could be a clue that sexual contact was the most cause. The longest HIV diagnosis was one year or less, which could be understood because Dr. Soetomo Hospital Surabaya is a third-level health facility that accepts referral cases and cannot be resolved at a first or second level health facility. ARVs were taken at the Dr. Soetomo so that many new patients immediately went to the Dr. Soetomo Hospital Surabaya to get treatment. The most times of having HIV control to health services was once in a month at Dr. Soetomo Hospital Surabaya due to the rules of taking antiretroviral drugs.

Most patients lived in Surabaya, precisely in Tambaksari District. This can be understood because it is located near to Dr. Soetomo Hospital Surabaya, which is about 2 km measured using the Google Maps application. There are four community health centers in this district, namely Pacarkeling Health Center, TambakRejo Health Center, Rangkah Health Center, and Gading Health Center. The second most was from Sawahan District. This is consistent with data from the Ministry of Health of the Republic of Indonesia, which is as many as 139 patients tested positive for HIV in the first quarter of 2017, the most after Health Center of Putat Jaya Surabaya<sup>14</sup>. The number of patients who did not have a history of key population was greater than those who had a history of key population, which is as much as 68.1%.

### The Distribution of Key Population Background of People Living with HIV-AIDS (PLWHA)

History of key population was obtained through interviewing the patients using questionnaires. The data obtained is displayed in Table 3.

The results have been obtained that patients with the most history of key population are injected-type drug users (IDUs) and prostitute (FSW) as many as nine people. The same data issued by the Ministry of Health of the Republic of Indonesia shows the data of IDU has the highest prevalence of 41% compared to other key populations<sup>15</sup>. HIV prevalence in the IDU group is high because they inject drugs more than once a day and more than 60% of them using needles that are not sterilized. While risky sexual behavior that causes HIV prevalence among FSWs remains high, because of unprotected sex. MSM groups of 7 people followed this. It was reported that condom use in MSM consistently lower than FSW, despite the higher level of HIV prevention knowledge<sup>16</sup>.

### Description of PLWHA's Perceived Stigmatization by Health Center Workers

The description of stigmatization by health workers at the community health center perceived by PLWHA was obtained from interviewing the

**Table 3.** Distribution of key population background of PLWHA

Category	Frequency	Percentage (%)
<b>Patient with History of Key Population</b>		
Female Sex Workers (FSW)	9	9.6
Injecting Drug User	9	9.6
FSW sex partner	4	4.3
Men Who Have Sex With Men (MSM)	7	7.4
Transvestite Homosexual	1	1.1
<b>Patient without History of Key Population</b>		
Housewife	28	29.8
Private Sector Worker	20	21.3
Others	16	17.0

patients using questionnaires. The data obtained is displayed in Table 4, 5, 6, and 7.

In section 2: Infection Control, was divided into two parts. Part 1 was health center workers' concern when examining people living with HIV-AIDS since part 2 was exclusive protection in treating people living with HIV-AIDS.

From 13 questions on the questionnaire that describe stigmatization by health workers at the health center, the stigmatization of health workers was taken which was often obtained from the number of subjects who have been stigmatized, the answers to that are least worried, worried, very worried in section Infection Control. Also, the answer once or twice, several times, and almost every time in section health Facilities' Environment and Health Workers Opinion about People Living with HIV-AIDS.

In section infection Control, the most stigmatization was obtained when health workers were worried when they did blood sampling. A study by Sismulyanto<sup>17</sup> conducted at a hospital in Banyuwangi shows that from 96 nurses, as many as 7.5% of the nurses were afraid to take laboratory samples, such as blood and urine. According to Sismulyanto<sup>17</sup>, this is because they were afraid of contracting HIV when in direct contact with the patient's blood.

In section Health Facility's Environment, the most stigmatization was obtained when health care workers provide low-quality care to HIV

**Table 4.** Description of PLWHA’s Perceived Stigmatization on Infection Control: Part 1

Form of Stigma	Not worried		A little worried		Worried		Very worried		Never experienced	
	n	%	n	%	N	%	n	%	n	%
Worried when touching the clothes	82	87.2	3	3.2	1	1.1	0	0	8	8.5
Worried when dressing wounds	47	50.0	21	22.3	3	3.2	1	1.1	22	23.4
Worried when drawing blood	66	70.2	19	20.2	7	7.4	0	0	2	2.1
Worried when taking the temperature	81	86.2	7	7.4	1	1.1	0	0	5	5.3

**Table 5.** Description of PLWHA’s Perceived Stigmatization on Infection Control: Part 2

Form of Stigma	Never		Rarely		Often		Always	
	n	%	N	%	n	%	n	%
Avoid physical contact	83	88.3	9	9.6	2	2.1	0	0
Wear double gloves	87	92.6	3	3.2	2	2.1	2	2.1
Wear gloves during all treatments	78	83.0	4	4.3	4	4.3	8	8.5
Use any special infection-control that are not used while examining other patients	78	83.0	4	4.3	4	4.3	8	8.5

**Table 6.** Description of PLWHA’s Perceived Stigmatizationon-Health Facilities’ Environment

Form of Stigma	Never		Once or twice		Several times		Almost every time	
	n	%	n	%	n	%	n	%
Health workers unwilling to care for you	91	96.8	2	2.1	1	1.1	0	0
Health workers providing poorer quality of care to relative to other patients	87	92.6	4	4.3	2	2.1	1	1.1
Health workers talking badly about you	87	92.6	6	6.4	1	1.1	0	0
Health workers do not want to do blood sampling	92	97.9	1	1.1	1	1.1	0	0
Health workers treat in a place that is not closed	91	96.8	3	3.2	0	0	0	0
Disclose the status of HIV patients to others without consent	93	98.9	0	0	1	1.1	0	0
Using an HIV-related name when calling you when waiting in sequence number	93	98.9	0	0	1	1.1	0	0
During the examination, health workers call improperly	93	98.9	0	0	0	0	1	1.1
During examinations or other activities at the health center, health workers say that you are HIV patient with a loud tone	93	98.9	0	0	1	1.1	0	0

patients compared to other patients, including rejecting patients with HIV-AIDS because they consider HIV-AIDS patients are people who have a great risk if direct contact with patients<sup>7</sup>. A study in Aceh, Indonesia, shows that some doctors treat PLWHA with disrespect, push other patients away from them, and keep them away from care services<sup>18</sup>. It was also found that most stigmatization was obtained when health workers talk badly about HIV patients. This was due to the high stigma in the community and

health workers which causes health workers to stay away from them, so they tended to provide low-quality care.

In section Health Workers’ Opinions of People Living with HIV-AIDS, the most stigmatization was obtained when health care workers assume that someone who is infected with HIV because of irresponsible behavior. This was because the community thinks that “bad” behavior is seen from free sex and blames PLWHA as a source of AIDS transmission<sup>7</sup>.

### Relationship Analysis

Relationships between variables were tested using IBM SPSS Statistics 22.0. All data about age, sex, marital status, occupation, place of residence, history of risk groups, and duration of HIV diagnosis were transformed into binomial

forms for analysis. The statistical test used is the binary logistic multiple regression test.

Relationship of stigmatization data by health center's workers with age, sex, marital status, occupation, residence, history of risk groups, and duration of HIV diagnosis are shown in Table 8

**Table 7.** Description of PLWHA's Perception of health Workers' Opinions of People Living with HIV-AIDS

Form of Stigma	Never		Once or twice		Several times		Almost every time		Not know	
	n	%	n	%	n	%	n	%	n	%
Hearing health workers say most of PLWHA do not care if they infect other people	88	93.6	2	2.1	1	1.1	1	1.1	2	2.1
Hearing health workers say HIV patients should feel ashamed of themselves	88	93.6	4	4.3	0	0	0	0	2	2.1
Hearing health workers say most HIV patients have multiple sexual partners	81	86.2	6	6.4	2	2.1	0	0	5	5.3
Hearing health workers say someone infected with HIV because they engage in irresponsible behavior	78	83.0	12	12.8	1	1.1	0	0	3	3.2
Hearing health workers say HIV is punishment for bad behavior	85	90.4	6	6.4	2	2.1	0	0	1	1.1

**Table 8.** Bivariate analysis of stigmatization variables on independent variables

Dependent Variables	Stigma				Significance (Chi-square test)
	Low Stigma		Greater Stigma		
	n	%	N	%	
<b>Age</b>					
≤37	25	52,1	23	47,9	P = 0.019
>37	13	28,3	33	71,7	
<b>Gender</b>					
Male	14	31,1	13	68,9	P = 0.078
Female	24	49	25	51	
<b>Marital status</b>					
Married	29	50	29	50	P = 0.016
Single	9	25	27	75	
<b>Occupation</b>					
Low risk	36	40	54	60	P = 0.690
High risk	2	50	2	50	
<b>Duration of HIV diagnosis</b>					
≥5 years	15	42,9	20	57,1	P = 0.711
< 5 years	23	39	36	61	
<b>Residence</b>					
Surabaya	8	34,8	15	65,2	P = 0.526
Outside of Surabaya	30	42,3	41	57,7	
<b>History of key population</b>					
Do not have any history	32	50	32	50	P = 0.006
Have history	6	20	24	80	

**Table 9.** Multivariate logistic regression analysis of stigmatization variables against independent variables

Dependent Variables	Independent Variables	P	Exp (B)	Significance
Stigma perception	Age	0.008	0.249	Significant
	Gender	0.950	1.033	Not significant
	Marital status	0.013	0.251	Significant
	Occupation	0.339	3.174	Not significant
	Duration of HIV diagnosis	0.140	0.444	Not significant
	Residence	0.092	2.713	Not significant
	History of key population	0.006	0.180	Significant

using the chi-square test and again tested using the binary logistic multiple regressions test in Table 9. The binary logistic multiple regressions test was carried out to eliminate confounding variables, find out which groups received greater stigma, and get an exponential rate of PLWHA perceptions of stigma by health center workers.

The history of key population was divided into two groups. Having a history of key population was one of the FSWs, FSW’s sex partners, MSMs, transvestites, and injecting drug users (IDUs). Choices other than FSWs, FSW’s sex partners, MSMs, transvestites, and IDUs were included as do not have a history of key population. The chosen cut-off for the stigma was 24. It was a high stigma if greater or equal to 24, while smaller than 24 was a low stigma. The score of 24 indicates that the respondent answered *never* or *not worried*, which is score 1, in all of the 24 questions, which means that the respondent never got any form of stigma from the health center workers. *Once* or *twice*, got 2 on the score. Score 3 for *worried*, *often*, and *several times*. If the answer was *very worried*, *always*, and *almost every time* got score 4. The score of each respondent was obtained from the sum of each question. The cut-off for age was the mean of them, which was 37.46 rounded to 37. If greater or equal to 37 years old, it was said to be old age. While it was said to be young if smaller than 37 years old. Jobs were categorized into 2, high and low-risk jobs. High-risk jobs were health workers, doctors, nurses, security, ward attendants, sex workers, and flight attendants. Meanwhile, choices other than those mentioned were low-risk jobs. The cut-off chosen residence was Surabaya, where patients from

the city of Surabaya were said to live near and outside Surabaya said to be distant. The cut-off time for HIV diagnosis was its mean, which was 4.29. If greater or equal to 4.29 years, it was old patients. While it is new patients if smaller than 4.29 years.

Analysis of the relationship between age, sex, marital status, occupation, residence, history of key population, and duration of HIV diagnosis with stigmatization by health workers in East Java community health centers on patients in Outpatient Care Clinic of Intermediate and Infectious Disease Care Unit (Perawatan Intermediet Penyakit Infeksi - PIPI) provided significant results on the variables of age, marital status, and key population history. Whereas sex, occupation, residence, and duration of HIV diagnosis variables provided insignificant results.

The history of key population had Exp (B) of 0.18, which means PLWHA who have the history of key population get a stigma 0.18 times compared to those without a history of key population. So, it showed a protective factor of stigmatization by health workers. PLWHA who have the history of key population got a lower stigma than PLWHA who did not have. This was because PLWHA who have the history of key population have a psychological mentality that is accustomed to being stigmatized in the community. Pala, Villano, and Clinton<sup>19</sup> explained that HIV stigma is not because someone is HIV-positive but also because of other conditions of social stigmatization, such as having same-sex partners with other people, female sex workers, and her partner/s, and Injecting drug users

(IDUs). Both female sex workers (prostitute) and PLWHA face the same type of stigma, which is seen as “unclean”, a danger to public health, and making decisions that are detrimental to their families and communities. For FSW living with HIV, they get these two stigmas. Sex workers living with HIV are regularly exposed to negative stereotypes about themselves and consider them ‘worthy’ to become HIV positive<sup>20</sup>. Due to the frequent exposure to negative stereotypes from the community, PLWHA’s psychological state who have a history of key population is more vulnerable to stigma.

PLWHA who do not have a history of key population, have a different mentality than PLWHA who have a history of key population because they are not accustomed to experiencing stigma from the community. HIV-AIDS brings an unprecedented problem for that person, regardless of background. A person suffering from HIV-AIDS experiences severe psychological distress and feels hopeless about the future, including work, family life, health, and self-esteem<sup>21</sup>. Old age, above 37 years old, gets a higher stigma compared to the age below 37 years old. This is because older adults are at a significant risk of experiencing HIV stigma<sup>22</sup>. Research has shown that older PLWHA may experience greater stigma due to the double stigma of being HIV positive plus age discrimination, which is usually referred to as layering<sup>23</sup>. Emlet has stated that layering or co-occurring stigmas of ageism and HIV stigma had been experienced by about 68% of older HIV positive adults in Washington DC. Internalized stigma has a negative impact on the self-esteem and psychological well-being of older adults living with HIV<sup>24</sup>.

PLWHA who were married got lower stigma compared to PLWHA who were not currently married, which was 0.251 times. In this case, the factor of being married is associated with social support. PLWHA who are married has higher social support compared to PLWHA who are single. Research conducted by Emlet explains that social support is associated with lower levels of HIV stigma<sup>25</sup>. A significant relationship had been proven found between the participation of peer groups and the improvement of the quality

of life of PLWHA<sup>26,27</sup>. Reducing the impact of stigma and perceived behavior of PLWHA can be done by changing individual and community perceptions about HIV-AIDS by using peer support and counseling approaches<sup>28</sup>. It was also explained that social support affects lower levels of depression and anger<sup>29</sup>.

Sex, occupation, residence, and duration of HIV diagnosis variables gave insignificant results related to stigmatization by health workers. Some factors that are thought to cause this result include the research method in the form of interviews so that there could be biased information. The cut-off values that do not have standard rules yet in categorizing continuous variables can affect the relationship and interpretations of the research results. Also, it will randomize the research findings<sup>30,31</sup>. Categorizing variable will make some information loss, so the statistical power to know the relation between variables will be lower<sup>32</sup>. This is well understood because if the threshold for the definition of “exposure” changes, the magnitude of the estimated effect such as the odd ratio (OR), will vary too<sup>30</sup>.

## CONCLUSIONS

Stigma against people living with HIV-AIDS (PLWHA) by health workers is still often found in the community health center in East Java. The stigma could have a wide impact, so it is necessary to identify the factors that influence the occurrence of stigma, which is expected to reduce stigmatization by health workers. Factors related to PLWHA’s perception of stigma among health workers found in this research were the history of key population, age, and marital status. PLWHA who have a history of key population, got a lower stigma than PLWHA who do not have because PLWHA who have a history of key population have a psychological mentality that The score to being stigmatized in the community. Old age got higher stigma compared to the young age, because of having the double stigma of being HIV positive and age discrimination. PLWHA who were married, got lower stigma compared to PLWHA who were not currently married because they have higher social support compared to PLWHA

who are single. It is hoped that the results of this study can provide input to policymakers to initiate a stigma reduction program for people with HIV that can be started from PLWHA who has the highest stigma, to make it easier for PLWHA to disclose their status and treatment. Besides, it is hoped that the prevention of HIV transmission to the community will be more controlled and to help improve the quality of life people living with HIV-AIDS (PLWHA).

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## CONFLICT OF INTEREST

There is no conflict of interest of this study.

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