p-ISSN: 2477-3328
e-ISSN: 2615-1588

Treatment-Seeking Behaviour of The Homeless in Madiun City, East Java, Indonesia

Riska Ratnawati[1], Erwin Kurniasih[2]
[1] Prodi of Public Health, Stikes Bhakti Husada Mulia Madiun, East Java, Indonesia
[2] Academy of Nursing, Pemkab Ngawi, East Java, Indonesia
Corresponding author: riskaratnawati@yahoo.com

ABSTRACT

Background: The health services can be utilized for all the people who need them. But for certain community like homeless can't get a good health services because they don't have to access them. The problems for homeless are knowledge, attitudes, affordability of health services, peer group support, health personnel support, and income. The objective of research is to know the factors affected health seeking behaviour of homeless in Madiun City.

Method: The method used was analytic survey with a cross-sectional study design. The sample was the homeless in Madiun City totalling53 respondents, both male and female with accidental sampling. The data were collected by using questionnaire and analysed by using bivariate analysis with Chi-Square statistical test (X^2).

Results: The results showed that variables which affected the homeless' health seeking behaviour were knowledge, (ρ-value = 0.001 < α = 0.05), attitude (ρ-value = 0.000 < α = 0.05), and health service affordability (ρ-value = 0,000 < α = 0.05). Meanwhile, the variables which did not affect the homeless' health seeking behaviour was the provision of health service (ρ-value = 0.561 > α = 0.05). It conclude that knowledge, attitudes, affordability of health services, peer group support, health personnel support, and income were proved to be factors that increased the search for assistance to the homeless people in Madiun City.

Keywords: Behaviour, The Homeless, Treatment-Seeking

Introduction

One of the obstacles of health development in Indonesia is an uneven distribution of the population explosion. Rahvita (2016) explained that the uneven distribution of the population explosion leads to increasingly competitive aspects of the job and impacts on the large number of unemployed. People who are unable to compete become unemployed so that in meeting the needs, they turn to be street singers or beggars (Irawan, 2018; Garofalo & et all, 2006; Silva & et all, 2012).

According to the data of Social Services throughout Indonesia, compiled by the Ministry of Social Affairs, the numbers of people with social welfare problems (*Penyandang Masalah Kesejahteraan Sosial/ PMKS)* in 2017 were 23.595 beggars and 30.019homeless people. Based on the census conducted by the Central Bureau of Statistics of East Java Province, in East Java in 2017, there were 6.055 homeless. Especially, in Madiun City, there weremore less 60 homeless people in 2018 (Province Social Services, 2018). As long as these social welfare problems have not been resolved, then the number of the homeless will not decrease and will actually increase from year to year (Suwandani, 2015).

In relation to health development, the existing level of poverty has resulted in many people experiencing social welfare problems, including homelessness and not getting equal access to health services. Garofalo & et all (2006) as long as this condition persists, the homeless require high costs to be able to obtain health services, which are increasingly burdening their financial condition. Meanwhile, the goal of health development to achieve, is to increase the willingness, ability, and awareness to live healthy so that the finest degree of public health can be realized. Silva & et all (2015) a study conducted by Singga in 2016 in Kupang City showed that out of all respondents, 100 scavengers experienced symptoms of health problems, including coughing, watery and itchy eyes, irritated and itchy nose, shortness of breath, sore throat, dry and hot airways, tiredness, sore skin, headache/ dizziness, and loss of appetite. This research proved that groups such as scavengers, the homeless, and people with other social welfare problems are groups that are prone to disease and other health problems. Kemenkes (2019) the establishment of the Indonesian society as expected is indicated by the large number of

people who are eager to live with healthy behaviour in a healthy environment, and have the ability to reach health services that are evenly distributed and have the finest degree of health throughout Indonesia. Utilization of health services itself, is the behaviour of a healthy or sick people to stay healthy in order to get his recovery and to solve his health problems (Kemenkes, 2018).

Public Health Centre as one of the basic means of health service are expected to give good and qualified health services based on the established standards. Up to 2017, in Madiun City, there are six Public Health Centres; they are Patihan, Tawangrejo, Demangan, Mangunharjo, Banjarejo, and Oro-Oro Ombo Public Health Centres. Besides the Public Health Centres there are other health services, namely hospital. The hospital is an agency that provides complete individual health services, as well as providing emergency, inpatient and outpatient services. Up to 2018, there are eight hospitals; they are Regional Public Hospital (*Rumah Sakit Umum Daerah/ RSUD*) of Madiun City, Dr. Soedono Regional Public Hospital (*Rumah Sakit Umum Daerah/ RSUD*), Mangunharjo Pulmonary Hospital, Hospital Level 4 or Army Health Service Hospital (*Rumah Sakit Dinas Kesehatan Tentara/ DKT*), Santa Clara Hospital, Siti Aisyah Islamic Hospital, Griya Husada Hospital, and Al Hasanah Mother and Child Hospital.

The government is currently responsible for the implementation of the health insurance program through the National Social Assurance System (*Sistem Jaminan Sosial Nasional/ SJSN*) which is implemented in accordance with Law number 40 in 2004 concerning National Social Assurance System. Bauer et all (2012) however, in its implementation, this program has not been able to reach all society levels so it is considered uneven. Unfortunate people or the poor often feel pity if their money is used to pay for high health care costs, which causes them not eager to visit health service. Even though government hospitals receive subsidies from the government, the increasing number of the poor makes the subsidies provided not enough to cover everything. The fact that the poor still have to pay rates for treatment rooms, medical procedures and medicines, as well as medical equipment makes it an obstacle for them to get health services according to standard (Bauer et all, 2012; Baral et all, 2013) some obstacles are still found during the application of Community Social Assurance (*Jaminan Sosial Masyarakat/ Jamkesmas*) at the previous year so that the benefit is not maximum. Indoensia KKR (2013) on the other hand, there are many people that received health insurance but have not used it properly, so that health problems, especially among the poor, such as the homeless, are still high. There are still many factors that encourage the poor, such as homelessness, to be reluctant to visit and take advantage of the available health services, when they are sick (Mukarromah, 2013; Arisdiani, 2015).

Health services are held to be used by the people who needed it. However, in fact, people will seek treatment to health services after the disease is getting serious. Therefore, to develop health services in Public Health Centres, it needs to conduct social research related to people's culture, perception, and behaviour in using the health services provided. In addition, the absence of data showing the exact number of the homeless coming to health services, both in public health centres and hospitals, further hampers the monitoring of equal distribution of health to all society levels. Based from the background, the researcher interested to study *the factors affected health seeking behaviour of homeless in Madiun City.*

Method

In this research, it is analysed some factors influencing treatment-seeking behaviour in make use of health services in Madiun City. The research design used is cross sectional. The independent variables in this research are the homeless' knowledge, behaviour, and availability and affordability of health services, peer group support, medical personnel's supports, and the homeless' income. While dependent variable is the homeless treatment-seeking behaviour. It meansthe behavior of people or communities who are experiencing illness or other health problems, to get treatment so that their health problems are cured or resolved.

The sample in this research is the homeless in Madiun City. The total sample are 60 homeless in Madiun City. There are53 respondents, both male and female with purposive sampling. In order that the sample characteristics do not deviate from population, and become appropriate, it is specified by the inclusion criteria. The criteria cover the homeless that are more than or equal to 18 years old in Madiun city, the respondents are healthy, conscious and willing to be respondent. While the exclusion criteria are psychotic and refusing-

p-ISSN: 2477-3328
e-ISSN: 2615-1588

to-communicate homeless people. The data gathering method used was questionnaire. The analysis uses Chi-Square (x^2) in SPSS (Statistic Product Service) 16.0 for Windows.

This research has gotan ethical approval from Commission on Health Research Ethics, Institute of Health Sciences of STRADA Indonesia Number 2000/KEPK/I/2020. The patients' identity was not mentioned to keep the confidentiality.

Results and Discussions

The respondents' characteristics of this research are ≥ 18-65 years old, more than half are female and unschooled, more than half are beggars and the income of all of them is under the minimum regional wage (*Upah Minimum Regional/ UMR*). Completely, the characteristics of these respondents are shown in Table 1.Based on the bivariate analysis, it is obtained that the homeless treatment-seeking behaviour are influenced by good knowledge, positive attitudes, affordable health services, peer group support, and supportive health personnel, and income. On the other hand, the availability of health services was not proven to influence the homeless treatment-seeking behaviour. In detail, the factors that influence the homeless treatment-seeking behaviour in this study are shown in Table 2.

Table 1. Frequency Distribution Based on Homeless Characteristics in Madiun City, Year 2020

Characteristics	Quantity	
	n	**%**
Age		
≥ 18 – 64 years old	51	96.2
≥ 65 years old	2	3.8
Sex		
Male	24	45.3
Female	29	54.7
Education		
Unschooled	29	54.7
Elementary School (Elementary School, Junior High School)	24	45.3
Job		
Unemployed	4	7.5
Beggars	33	62.3
Scavengers	9	17.0
Others	7	13.2
Income		
< regional minimum wage (*UMR*)	53	100.0
≥regional minimum wage (*UMR*)	0	0

Table 2. Factors Influencing Homeless Treatment-Seeking Behaviour in Madiun City, Year 2020

Variables	Treatment-Seeking Behaviour				Total		ρ-value	RP	95%CI	
	No		Treatment-Seeking to Health Services							
	n	%	n	%	n	%			Lower	Upper
Knowledge										
Inadequate	33	89.2	4	10.8	37	100.0	0.001	2.039	1.157	3.593
Adequate	7	43.8	9	56.2	16	100.0				

Variables	Treatment-Seeking Behaviour				Total		ρ-value	RP	95%CI	
	No		Treatment-Seeking to Health Services							
	n	%	n	%	n	%			Lower	Upper
Attitude										
Negative Attitude	35	92.1	3	7.9	38	100.0	0.000	2.763	1.343	5.686
Positive Attitude	5	33.3	10	66.7	15	100.0				
Availability of Health Services										
Unavailable	4	100.0	0	0.0	4	100.0	0.561	1.361	1.150	1.611
Available	36	73.5	13	26.5	49	100.0				
Affordability of Health Services										
Unaffordable	40	87.0	6	13.0	46	100.0	0.000	0.130	0.062	0.275
Affordable	0	0.0	7	100.0	7	100.0				
Peer group support										
Unsupportive	38	84.4	7	15.6	45	100.0	0.002	3.378	1.011	11.291
Supportive	2	25.0	6	75.0	8	100.0				
Health Personnel support										
Unsupportive	33	97.1	1	2.9	34	100.0	0.000	2.634	1.458	4.760
Supportive	7	36.8	12	63.2	19	100.0				
Income										
Not set aside	40	85.1	7	14.9	47	100.0	0.000	0.149	0.075	0.295
Set aside	0	0	6	100.0	6	100.0				

Knowledge Influences Treatment-Seeking Behaviour

The research results showed that most the homeless with poor knowledge did not seek treatment to health services, as much as 89.2%. Based on the results of the *Chi-Square* test, the ρ-value = 0.001, with $\alpha = 0.05$, so it is known that ρ-value < α, which means that there is a significant effect between knowledge and treatment-seeking behaviour in homeless. It is known that the value of RP = 2.0, it means that the homeless with poor knowledge have a 2.0 times greater risk of not engaging in treatment-seeking behaviour to health services than the homeless with adequate knowledge. The influence of knowledge towards the treatment-seeking behaviour is suitable with the theory delivered by Notoatmodjo (2010) where knowledge is the results of human sensing and human knowing to the objects around him through their senses (eyes, nose, ears, tongue, etc.) influenced by the intensity of attention and perception towards an object. In addition, knowledge is one of the predispositions that can influence a person's behaviour. The stimulus received by individuals in the form of knowledge is able to form a belief in the individual to carry out certain behaviours. Bidara (2015) Knowledge of the homeless about illness and treatment-seeking behaviour is only limited to what has been experienced and information gained from friends, so that they do not understand how to seek appropriate treatment when they are sick.

The results showed that the homeless with poor knowledge tend not to do seeking-treatment behaviour to health services. This can be seen from the homeless who only go to elementary school so that the lack of education about how to seek appropriate treatment when they are sick affects their treatment-seeking behaviour. This lack of education also causes the homeless to prefer to buy drugs independently or self-medicated and even letting their illnesses because they think that the illness has often occurred and will go away on their own if they just let the illnesses. They generally get health information from fellow homeless friends. Very little information is obtained from health personnel whereas it is important to educate the homeless about the diseases that attack them so that they know how to prevent and treat them.

p-ISSN: 2477-3328
e-ISSN: 2615-1588

Attitude Influences Treatment-Seeking Behaviour

The results showed that the majority of the homeless with negative attitude categories did not do treatment-seeking behaviour to health services, as many as 35 people or 92.1%.Based on the results of the Chi-Square test obtained the ρ-value = 0.000, with α = 0.05,so it is known that ρ-value < α, which means that there is a significant influence between attitude and treatment-seeking behaviour in homeless. The value of RP = 2.8, it means that the homeless with negative attitude categories have a 2.8 times greater risk of not doing treatment-seeking behaviour to health services compared to homeless people with positive attitude categories. Attitude is a reaction or response that is still closed from someone to a stimulus or object. Attitude will determine behaviour towards something if it is formed in a person. In order to make a real change, it is necessary to have certain conditions that allow it to happen, including the presence of facilities and support (Bidara, 2013).

The results of this study indicate that the majority of homeless with negative attitudes will tend not to do treatment-seeking behaviour to health services. This can be affected by environmental habits and available facilities. The habits of homeless who let their illness because of their perception of illness will heal or disappear by themselves allow them to have negative attitude by not seeking treatment when they are sick. This is also in line with research conducted by Rae and Rees (2015) which explained the attitude shown from drug search is the impact of attitudes towards homeless, previous bad experiences, difficulties in registering, difficulties in going to health services, thus raise the prejudice of the homeless that they are treated with sub-standard treatment. Murwanto (2016) in addition, the unsupportive environment increasingly encourages them to act negatively. The majority of homeless do not have family or close friends to support them to seek medical treatment to medical services.

The Affordability of Health Services Influences Treatment-Seeking Behaviour

The results showed that most of the homeless who could not reach health services did not do seeking-treatment behaviour to health services, as much as 40 people or 89.2%.Based on the chi-square test results, it is obtained ρ-value = 0.000 with α = 0.05, so it is known that ρ-value < α, which means that there is a significant influence between the affordability of health services and treatment-seeking behaviour for the homeless, the value of RP = 0.130.In other words, the value of RP < 1, which means that the affordability of health services as variable is not a risk factor of treatment-seeking to the homeless. The accessibility of health services can be seen from the ease of being able to access the distance of a health service. According to Rae and Rees (2015), the homeless are basically aware of health problems but the need for intervention is not always prioritized. For those who experience difficulties in accessing health services, it can be a negative impact on treatment-seeking behaviour. Murwanto (2016) other than that, access is an opportunity to identify health needs to seek health services to achieve, obtain or use health services and to actually have a need for health services that can be met.

The results of this study indicate that the majority of the homeless cannot reach health services so that they do not do treatment-seeking behaviour to health services. The inability to reach health services here is not caused by unavailability of health services around the homeless, but due to the lack of facilities to access these health services. Most of the homeless think that going to health services is very burdensome for them in terms of costs, both for transportation these health services and for medical treatment, because there is no health insurance. This shows that certain groups of people such as the homeless get less attention in terms of health. The existing health services cannot be said to reach all society levels, because the homeless cannot access or use health facilities easily and cheaply yet.

Peer Group Support Influences Treatment-Seeking Behaviour

The results show that the majority of the homeless who did not receive support from peer group did not do treatment-seeking behaviour to health services, as much as 38 people or 84.4%.Based on the Chi-Square test results, it is obtained ρ-value = 0.002 with α = 0.05, so it is known that the ρ-value< α, which means that there is a significant influence between peer group support and treatment-seeking behaviour on the homeless. The value of RP = 3.4 means that the homeless who do not get support from the peer group have a risk of 3.4 times greater for not to do treatment-seeking behaviour at health services than the homeless with peer group support.

Peer group support is the provision of a motivational boost or enthusiasm by peers by providing assistance in the form of information or advice, real assistance or actions that have emotional benefits or affect the behaviour of the recipient. In addition, Peer group support is also one of the driving factors that encourage one's behaviour. This can be in the form of support from certain groups, one of which is a peer group, which is a reference group of community behaviour. Bidara (2015) this is reinforced by Hwang and Burns (2014) which states that peer groups have a strong influence on homeless due to similar life experiences so they have a very strong relationship, that can raise positive impact in influencing the homeless in treatment-seeking (Fonner et all, 2012).

The results of this study indicate that the majority of the homeless do not receive support from the group for treatment so that they do not do treatment-seeking behaviour to health services. This is because there are very few homeless having peers or fellow, whereas the support from the peer groups or fellows greatly influences treatment-seeking behaviour because a friend is one of the closest people after family. Therefore, it can create a high sense of trust in what peers say or do because almost all homeless having no family should have friends so that they can replace the role of the family to support homeless to get treatment when they are sick. Usually, the support given is in the form of emotional support such as a sense of empathy and caring and cognitive support such as providing information, advice or guidance.

Health Personnel Support Influences Treatment-Seeking Behaviour

The results show that most of the homeless who did not receive support from health personnel did not do treatment-seeking behaviour to health services, as many as 33 people or 97.1%.Based on the results of the Chi-Square test, the ρ-value = 0.000 with α = 0.05 so it is revealed that the ρ-value < α, which means that there is a significant influence between the support of health personnel and the homeless treatment-seeking behaviour. The value of RP = 2.6, it means that homeless people who do not receive support from health personnel have a risk of 2.6 times greater to avoid treatment-seeking behaviour to health services than the homeless who receive support from health personnel. Health personnel support is the provision of support, motivation or enthusiasm by health personnel by providing assistance in the form of information or advice, real assistance or actions that have emotional benefits or affect the behaviour of the recipient. Health personnel are also one to reinforce or undermine the change of the behaviour (Higgins et all, 1991).

The results of this study indicate that almost all the homeless do not receive support from health personnel so that they do not do treatment-seeking behaviour to health services. Most of them said that they have never received a visit for a health examination or health information from local health personnel even though one of the roles of health personnel is to provide education related to the treatment of a disease. The absence of health information can affect the homeless not to do treatment-seeking to health services because of the lack of knowledge gained from health personnel regarding the importance of treatment in health services. This fact was reinforced by Hwang and Burns (2014) that explained that the role of health personnel is very important. The need for a positive relationship between health personnel and homeless with a respectful attitude upholding the dignity of that person, building mutual trust showing warmth and caring, are able to support homeless seeking-treatment behaviour. Fonner (2012) on the other hand, the homeless group who has received health information and health checks from health personnel is the homeless who have been accommodated in a social rehabilitation conducted by the Social Services. Good support of health personnel can be felt through the friendliness of the health personnel when they seek treatment, as well as the health personnel that are willing to listen to their complaint on their health.

IncomeInfluencesTreatment-Seeking Behaviour

The results show that most of the homeless, who did not adjust or set aside for their income, did not do treatment-seeking behaviour to health services, as many as 40 people or 85.1%.Based on the results of the Chi-Square test obtained ρ-value = 0.000 with α = 0.05. So it is known that the ρ-value < α, which means that there is a significant influence between income and treatment-seeking behaviour on homeless. The value of RP = 0.149, it can be said that the value of RP <1, which means that this treatment variable is not a risk factor for the homeless treatment-seeking. Income is the amount of money a person earns as a result of carrying out an activity or work that is collected at a certain time. Income can show the degree of community welfare. In relation to health, the

higher the level of one's income the higher the level of utilization of health facilities those are better and more complete in terms of means and infrastructure (Kemenkes, 2018).

The results of this study are not in line with research conducted by Logen (2015) which states that income does not affect treatment-seeking behaviour in certain groups such as homeless and scavengers. Most respondents think that going to health services is cheap so they want to take advantage of the available health services. The results of this study indicate that there is no a homeless person who has an equal to or more than regional minimum wage (*Upah Minimum Regional/ UMR*) of Madiun City if it is calculated in every month. The uncertain income every day makes the majority of the homeless are reluctant to set aside their income to seek treatment for health services. The homeless do not have health insurance to help them to go to health services. They admit that it is hard to set aside some of their income for medical expenses because what they get not much and always runs out every day just to buy food, even though going to health services, especially primary health care facilities, does not require a lot of money and it can be said that the medical costs are relatively affordable. However, there also a small proportion of the homeless who do set aside a little of their income for medical expenses because they think that health is the main thing.

The Availability of Health Services Does Not Influence Treatment-Seeking Behaviour

The results of this study indicate that the availability of health services is not a factor influencing treatment-seeking behaviour for the homeless. Based on the results of the Chi-Square test obtained ρ-value = 0.561 with α = 0.05 so that it is known that the ρ-value > α, which means that the availability of health services does not influence the homeless treatment-seeking behaviour. The availability of health services is the readiness of a health service to be utilized by the community. The provision of health facilities is one of the government's efforts to improve the quality of public health and it is the government's obligation to provide proper health facilities for every citizen (Wolitski, 1997).

The results of this study indicate that the majority of the homeless know that health services are available around them with adequate facilities but they do not take advantage by seeking treatment to health services. Health service provision is an obligation as well as a form of government support so that all people get equal health services so as to increase the degree of public health. Health facilities continue to develop and are sufficiently complete to be able to deal with various diseases. The community with no exception; the homeless should also be able to take advantage of the health services that are already available. In addition, to the relatively affordable medical costs, the homeless are also able to seek the cause of their illness and the appropriate medication so that the risk of getting sick again is reduced.

We thank the staff. KPAD Madiun Regency: Leny Dwi Ambarsari, Yuce Rahmawati, Yazid Menan and Wahyu Chandrasari who have assisted researchers in collecting research data in the field. We thank Miss Dholik as the head of the waria in Madiun Regency, who has contributed a lot in this research

Conclusion

Knowledge, attitudes, affordability of health services, peer group support, health personnel support, and income are proven to be factors influencing treatment-seeking behaviour among the homeless in Madiun City, while the availability of health services does not affect treatment-seeking behaviour. It is hoped that the health agencies are able to cooperate with Madiun City Social Service to make visits of health checks for the homeless who are not willing to be accommodated in social rehabilitation places or the homeless who have been given training but still want to live on the streets. In addition, socialization is carried out related to the importance of medical treatment or medical check to the local health services to certain community groups such as the homeless or others who are considered as having no knowledge yet about it.

References

Addis, Z., Yalew, A., Shiferaw, Y., Alemu, A., Birhan, W., Mathewose, B., et al. (2013). Knowledge, attitude and practice towards voluntary counseling and testing among university students in North West Ethiopia: A cross sectional study. *BMC Public Health*. 13(1), p.714.

Arisdiani, T., Waluyo, A., & Yona, S. (2015). Studi fenomenologi pengalaman hidup waria dengan HIV/AIDS. *Keperawatan*. 7(2), p.6–14.

Baral, SD., Poteat, T., Strömdahl, S., Wirtz, AL., Guadamuz, TE., Beyrer, C. (2013). Worldwide burden of HIV in transgender women: a systematic review and meta-analysis. *Lancet Infection Disease*. 13(3), p.214.

Bauer, GR., Travers, R., Scanlon, K., Coleman, TA. (2012). High heterogeneity of HIV-related sexual risk among transgender people in Ontario, Canada: A province-wide respondent-driven sampling survey. *BMC Public Health*. 12(1), p.292.

Bidara, P.I. (2015). Keberadaan kelompok waria mojosari (perwamos) dalam mempertahankan identitas di kecamatan Mojosari kabupaten Mojokerto. *Paradigma*. 3(2).

Fonner, VA., Denison, J., Kennedy, CE., O'Reilly, K., Sweat, M. (2012). Voluntary counseling and testing (VCT) for changing HIV-related risk behavior in developing countries. *Cochrane database System Rev*. (9).

Gadegbeku, C., Legon, A-G., Saka, R., Mensah, B. (2013). Attitude of the youth towards voluntary counselling and testing (VCT) of HIV/AIDS in Accra, Ghana. *Drugs*. 3(11).

Garofalo, R., Deleon, J., Osmer, E., Doll, M., Harper, GW. (2006). Overlooked, misunderstood and at-risk: Exploring the lives and HIV risk of ethnic minority male-to-female transgender youth. *J Adolesc Heal*. 38(3), 6-230.

Higgins, DL., Galavotti, C., O'Reilly, KR., Schnell, DJ., Moore, M., Rugg, DL., et al. (1991). Evidence for the effects of HIV antibody counseling and testing on risk behaviors. *Jama*. 266(17), p.2419.

Inciardi, JA., & Surratt, HL. (1997). Male transvestite sex workers and HIV in Rio De Janeiro, Brazil. *Drug Issues*. 27(1), p.135.

Irawan, L. (2018). An analysis of "antilanguage" in shemale community.

Kementrian Kesehatan Republik Indonesia. (2018). Profil kesehatan indonesia. Diakses dari: http://www.depkes.go.id/resources/download/pusdatin/profil-kesehatan-indonesia/Data-dan-Informasi_Profil-Kesehatan-Indonesia-2018.pdf

Kementrian Kesehatan Republik Indonesia. (2013). Estimasi dan proyeksi HIV/AIDS di Indonesia tahun 2011-2016. Jakarta: Kemenkes RI.

Kumta, S., Lurie, M., Weitzen, S., Jerajani, H., Gogate, A., Row-kavi, A., et al. (2010). Bisexuality, sexual risk taking, and HIV prevalence among men who have sex with men accessing voluntary counseling and testing services in Mumbai, India. *Acquir Immune Defic Syndrom*. 53(2), p.227.

Maimunah, M., & Aribowo, A. (2015). Empowerment of waria ludruk artists in AIDS/HIV prevention program. *Indonesia Social Culture*. 7(1), p.79–92.

Mukarromah, D. (2013). Persatuan waria kota Surabaya dalam bingkai "konstruksi" HIV-AIDS. *Paradigma*. 1(2).

Murwanto, B. (2016). Perilaku pencegahan HIV/AIDS pada kelompok wanita pekerja seks dan waria. *Kesehatan*. 5(1).

Olusola, IA., Nkiruka, ER., Obasohan, MO., Olanrewaju, AK., & Titilayo, O. (2015). Sexual behaviour, HIV/STI prevention knowledge, and utilization of VCT among the residents in sagamu metropolis of Ogun State, Nigeria. *Prev Treat Sientific Aca*demic. 4(1), p.8–13.

Silva-Santisteban, A., Raymond, HF., Salazar, X., Villayzan, J., & et al. (2012). Understanding the HIV/AIDS epidemic in transgender women of Lima, Peru. results from a sero-epidemiologic study using respondent driven sampling. *AIDS Behav*. 16(4), 81-872.

Suwandani R. (2015). Pengetahuan dan sikap berisiko waria dengan kejadian infeksi menular seksual (IMS) pada waria di Sidoarjo. *J Berk Epidemiol.* 3(1), 35–44.

Widiyananda, MA. (2016). Peran organisasi himpunan waria solo dalam mencegah dan menanggulangi penyakit HIV/AIDS pada anggotanya. *Dilema*. 31(2).

Wolitski, RJ., Macgowan, RJ., Higgins, DL., Jorgensen, CM. (1997). The effects of HIV counseling and testing on risk-related practices and help-seeking behavior. *AIDS Education Preview*. 9(3), p.52–67.