The Behavior of Using Condom by MSM or Men Who Have Sex with Men in Sukoharjo

Yutti Anggelia¹, Tanjung Anitasari Indah Kusumaningrum¹ ¹Public Health Department, Universitas Muhammadiyah Surakarta

Keywords: Behavior, condom use, Man Who Have Sex with Men.

Abstract: The amount of MSM who suffer from HIV in Sukoharjo Regency reached 30.95% in 2017. HIV prevention in MSM was attempted by consistent use of condoms every time they have sexual intercourse. The purpose of this research is to describe MSM's behavior of using condoms based on Health Belief Model in Sukoharjo. The research belongs to qualitative type with a case study approach. Informants of this research were five MSMs as the main informant, as well as one peer educator and one field coordinator as triangulation informants. The data were collected through in-depth interviews and then they were analyzed through content analysis. The results showed that most MSMs realized that they were susceptible to HIV and had the perception that condoms are beneficial to prevent HIV transmission. However, only two MSMs consistently use condoms. Most MSMs did not use condoms consistently because they were not sure of the effect and they found it to cause discomfort. They felt uncomfortable when the sex partner was using condom, yet they felt safe when having sex with a regular partner. Therefore, the barriers and self efficacy of the MSMs are related to the success of using condoms consistently. Hence, it is necessary to educate MSMs and their regular partner on using condom.

SCIENCE AND TECHNOLOGY PUBLICATIONS

1 INTRODUCTION

HIV/AIDS is a public health problem that requires serious attention. HIV / AIDS continue to grow and become the global problem. The prevalence of HIV / AIDS worldwide continues to increase. The United Nations Program on HIV / AIDS (UNAIDS) Global AIDS Update (2016) stated that the prevalence of HIV / AIDS in the world reaches 36,7 million sufferers. In 2013 there were 12,9 million sufferers of HIV / AIDS, 15 million in 2014, and 17 million in 2015. Most of them are from the eastern and southern Africa region, with 19 million sufferers, while in Asia the number reached 5.1 million. Asia is estimated to have the highest rate of HIV infection in the world. According to WHO and UNAIDS reports (2016), three countries with the highest rates of HIV infection included China, India, and Indonesia.

The number of HIV infections reported in Indonesia from January to March 2016 was 7.146 people. The highest risk factor for HIV / AIDS included risky sex in heterosexuals (47%), MSM (Men Who Have Sex with Men) (25%), others (25%) and the use of unsterile needles in IDUs (3%), while the number of AIDS reported on the first quarter of 2016 were 305. The highest percentage of AIDS risk factors were risky sex in heterosexuals (73,8%), MSM (10,5%), use of unsterile needles in IDU (5,2%), and perinatal (2,6%) (Ministry of Health of the Republic of Indonesia, 2016).

In 2015, HIV / AIDS cases in Central Java were ranked 5th in Indonesia, with 747 new cases of HIV and 637 new cases of AIDS spread in 35 districts/cities. The number of HIV / AIDS sufferers in MSM in Central Java is 3,4%, but in 2016 Central

Anggelia, Y. and Kusumaningrum, T. The Behavior of Using Condom by MSM or Men Who Have Sex with Men in Sukoharjo. DOI: 10.5220/0008371600330039 In Proceedings of the 1st International Conference on Social Determinants of Health (ICSDH 2018), pages 33-39 ISBN: 978-989-758-362-9 Copyright © 2019 by SCITEPRESS – Science and Technology Publications, Lda. All rights reserved Java was in fourth place in Indonesia with the number of new HIV cases, as many as 4.032, following East Java with 6.513 cases, DKI Jakarta with 6.019 cases and West Java with 5.466 cases (Ministry of Health of the Republic of Indonesia, 2016).

Based on the data of Sukoharjo District Health Office in Sukoharjo District Health Profile there was an increase in new HIV cases, that was from 27 cases in 2014 to 62 cases in 2015. According to the Sukoharjo AIDS Commission (2017) 84 cases of new HIV positive were found from January to October 2017, with the highest risk factor percentage in MSM (30,95%), Heterosexual (9,52%), HRM (9,52%), TB (8,33%), Pair of PLWHA (4,76%), Pregnant women (3,57%) STI (2,38%), IDU (1,19%), transgender (1,19%) and others amounted to (28,57%). The high number of HIV / AIDS cases in MSM groups requires prevention efforts. One effective prevention measure is the consistent use of condoms (National AIDS Commission, 2015). The results of a study by Firdaus (2013) showed that the frequency of condom use in the case groups (HIVinfected MSM) was lower (41,3%) than in the control group (HIV non-infected MSM) (58,6%). There is significant relation between condom use behavior in risk groups and the incidence of HIV. In line with the research, Nirmala (2016) stated that MSM couples never use condoms during sexual intercourse. This is because these MSM couples feel healthy, even though their health is not fully guaranteed.

In general, MSM belong to a population that sells sex. MSM also do sex buying behavior. Sex selling behavior of MSM in 2011 based on Integrated Biological Behavior was 49%, and sex buying behavior in MSM was 19%. The data showed that the percentage of sex selling was higher than sex buying of MSM. The same thing was also indicated by other research showing that MSM tend to sell sex to male. MSMs doing sex selling can cause couple at risk of HIV. MSM who have anal sex was highly at risk of HIV because it tends to injure the anus (Firdaus & Agustin, 2013). Based on the data from the Ministry of Health of the Republic of Indonesia (2011), it was revealed that within the population, MSMs is the group who perform sexual intercourse even if they were not paid (84%). However, the consistency of condom use by MSM in the last commercial sex was only 61%. MSM was also included in the population with the lowest percentage of condom use in, namely sex with an irregular sex partner and without paying/paid (54%). Ministry of Health of the Republic of Indonesia

(2011) also stated that as many as 31% of MSM had experienced one of the symptoms of STIs in the past year and HIV prevalence in MSM was 8%. Using condom is one of HIV / AIDS prevention measures. Based on the Health Belief Model (HBM) theory, a person will take precautionary measures influenced directly by the results of a belief or health assessment, namely the perceived threat of illness or injury, advantages and disadvantages, and behavioral instructions (Maryam, 2015). There was a relation between perceptions of vulnerability, barriers as well as initiator of actions and the practice of using condom by male sex workers. Meanwhile, there was no relation between perceptions of seriousness as well as benefits and the practice of using condom by male sex workers (Mukhsinin, 2016).

The practice of using condom by MSMs in Sukoharjo is supported by the SPEKHAM data on condom distribution to MSMs (2017), which were as many as 7.120 pieces in June and 7.765 in December, respectively. In 2015 the distribution of condoms to MSMs per June was 7.770. In 2016 in the same month were 1.224 pieces and as of December were 2.715 pieces (SPEKHAM, 2017). Based on a preliminary survey conducted on January 24, 2017, 4 MSMs did not use condoms consistently. Inconsistent use of condom results from several things, one of them is forgetting to bring a condom. MSM also feels that condoms make them uncomfortable when used during sexual intercourse. Therefore, it is necessary to study more deeply how HBM-based of MSMs' perceptions make them use condoms consistently or inconsistently.

Based on preliminary survey data from the Sukoharjo Health Office in the field of P2P (Disease Prevention and Control), knowledge of MSMs about the use of condom is still lacking. Many MSMs do not use condoms consistently when having sexual intercourse, even though some of them know that it functions to prevent the transmission of HIV/AIDS to HIV/AIDS risk group. Hence, the researchers are interested in examining the behavior of MSMs in using condom in Sukoharjo according to the Health Belief Model theory.

2 SUBJECTS AND METHODS

The research belongs to qualitative type that produces descriptive data in the form of written and oral words obtained through the process of observing human behavior and the environment. This study used a case study approach in which the case is the behavior of using condom by MSMs (Men Who Have Sex with Men) in Sukoharjo. Taken using purposive sampling, the subjects of this study consisted of 5 main informants (MSM), who were either consistent or inconsistent in using condoms. Triangulation informants in this study were 1 Peer Educator and 1 field Coordinator. The data were analyzed using content analysis.

All key informants in this study ranged between 23-47 years of age from several levels of education: 2 people graduated from high school, 2 people from Diploma-III of graduated Accounting Management, and 1 person graduated from Undergraduate degree of Law. All of them work in Meanwhile, all private sector. triangulation informants are male and have an age range of 34-39 years old. In terms of education, one informant graduated from a master's degree and another was from vocational school. They are social worker (Field Coordinator) and Private Employee (Peer Educator).

3 RESULTS

3.1 Perception of Vulnerability

In the aspect of knowledge about HIV/AIDS, all key informants and triangulation informants understand that HIV/AIDS is a disease caused by a virus that attacks the human immune system. HIV is a virus while AIDS is a disease. All informants also added that HIV / AIDS is a deadly disease if people do not know how to prevent and overcome it. "HIV / AIDS is an infection of a disease caused by a virus, which the virus attacks the human immune system, between HIV and AIDS is different that needs to be underlined here. HIV is the virus while AIDS is the syndrome, a group of diseases that attack the human body."(MSM 5)

All key informants can also explain the way HIV/AIDS is transmitted: HIV/AIDS can be transmitted through parenteral (blood transfusion), sexual, perinatal (pregnancy, childbirth, breastfeeding), and open wounds contaminated with blood containing the HIV virus. This is in accordance with what was conveyed by triangulation informants (IT1, IT2) that HIV/AIDS transmission "Through sex, breast milk, syringes, syringes like drugs, syringe turns" (MSM 2)

MSM's views on HIV/AIDS and modes of transmission were consistent with the perception of MSM vulnerability to HIV/AIDS, where most of the main informants explained that they were very vulnerable to HIV/AIDS. They felt vulnerable because of frequent change of partners and unprotected sexual behavior. However, one MSM feels that he was not susceptible to HIV/AIDS because he has a permanent partner and never has sexual intercourse with any other. "What is certain is that for the community at risk and have more than one partner, basically people who have had sex or have been sexually active are all at risk of HIV/AIDS. So everyone who has been sexually active is vulnerable to HIV/AIDS. "(MSM 3) "I have a regular partner, I don't change partners, so I feel not vulnerable" (MSM 2)

The MSMs also stated that those who are susceptible to HIV/AIDS are people who frequently change sex partners and have anal sex without using condoms. Yet, other key informants (MSM 3 and MSM 5) argued that people who are vulnerable to HIV/AIDS are all people who have had sex. People who have had sexual intercourse are prone to HIV/AIDS. Indeed, housewives are also vulnerable because they do not know what their husbands are doing when they are outside "One yourself, two customers, if I think so. We will deal directly. If the syringe is mostly changing partners, if that is every day through sex. "(MSM 1) "You could say that all vulnerable people, there are no people who are not vulnerable and there are no people who are not at risk, and not only from the key population, housewives are also very vulnerable because housewives do not know what their husbands are like, children in the womb is actually also vulnerable, so all those people are vulnerable to contracting HIV, not just the key population. "(MSM 5)

3.2 Perception of Seriousness

Based on the research, most of the main informants have a perception that HIV/AIDS is not a severe disease because when HIV/AIDS is detected, it can be treated with ARVs. "*Not really because if it is known that HIV can be treated with drugs called ARV*" (MSM 2)

All key informants have different opinions about the impact of HIV/AIDS; one of which is physical impact. The main informants (MSM 4, MSM 5) explained that the impact of HIV/AIDS is the decrease of immune system due to virus attack to the human body. Different from this opinion, the main informant 3 (MSM 3) stated that HIV can have an impact on an individual's psychology. The psychological impact can cause stress and depression. In addition, MSM 1 and 2 also argued that HIV can have a social impact, in that they may feel discriminated from the environment, such as being ostracized. HIV sufferers can also die if the disease is not addressed. "The impact of health is if HIV attacks antibodies, when a person's antibodies are weak he does not take ARV therapy, he will be susceptible to diseases, a mild disease will kill if they are not immediately on ARV therapy" (MSM 5). "If the psychic person has been convicted, he will experience various effects such as stress, depression." (MSM 3)

3.3 Perception of Benefits

Most of the main informants explained that condoms are very useful, which is to prevent the transmission of HIV/AIDS, provided that the method is correct. Unlike the opinion of other key informants, MSM 5 explained that condoms were not only to prevent transmission of HIV/AIDS but could also be used as contraceptives. "It is very useful, because condoms can function a lot for contraception and can also prevent HIV transmission as well." (MSM 5)

3.4 Perception of Barriers

All the main informants and triangulation informants explained that the barrier in using condoms was the presence of discomfort and unpleasant feeling (similar to when someone was blocking their way). Besides, they feel embarrassed about buying condoms. These barriers resulted in the MSMs' reluctant use condoms consistently. Even so, the MSMs tried to reduce the barriers by building awareness of their partners about the risk of HIV, using lubricants, as well as negotiating with their partners to use condom. "*There are so many barriers even though now condoms are given free of charge but many communities think that using condoms is uncomfortable.*" (MSM 3)

3.5 Self Efficacy

Most of the main informants explained that consistent use of condom was actually good, yet they were inconsistent in using it. They believed that it can prevent the spread of HIV/AIDS. It is in contrast to the opinion of MSM 1 and triangulation informants (IT1, IT2). The former explained that the MSMs did not consistently use condoms because sometimes their partners did not want to and were uncomfortable using it. Similar argument was also expressed by the triangulation informants (IT1, IT2), that the MSMs cannot be 100% consistent in using condom for the aforementioned reasons. However, most of the main informants explained that they managed to use condoms consistently because they were aware of the high risk of contracting HIV/AIDS. "Sometimes I don't consistently know why the customers don't want to use condoms, but it's good if they are consistent." (MSM 1). "Able. Because you already know the risk of not using a condom (MSM 2)

3.6 Cues to Action

All the main informants explained that they had seen people around them affected by STIs, which were their own friends, and there was even one of the main informants affected by STIs such as syphilis, bacterial fungi. All the main informants also explained that by looking at the incident of people around them with STI disease, it would affect the use of condoms consistently but it all depends on the spouse and customers. There were also those who explained that the incidence of STIs in the surrounding environment was very influential because he was HIV positive, so he had to be consistent in using condoms. "I also saw it directly, it was a friend of mine who had an STI, the pus went out and the urine was very hot" (MSM 1). "Very, very influential, yes, yes, because I already knew that I was positive so I always had to use condoms consistently. (MSM 3)

3.7 Condom Use Behavior

The main informant explained that he consistently used condoms because he knows the high risk of contracting HIV/AIDS. "Always consistent because of high risk, so always use condoms, and often mutually mate" (MSM 2)

However, other key informants argued that they are not consistent in using condom because sometimes their partners do not want to use it, do not feel comfortable. "*Can't be consistent because the partner doesn't want to use condoms*" (MSM 1)

4 DISCUSSION

4.1 Perception of Vulnerability

Perception of vulnerability is the belief that illness is the result of exhibiting certain behavior. Most MSMs and triangulation informants have known that HIV/AIDS is a disease caused by a virus that attacks human immune system. In addition, the MSMs also explained that those who are susceptible to HIV/AIDS are those who often change partners without using condoms during sexual intercourse. Informants further explained how HIV/AIDS is transmitted; those are through sexual intercourse, needles, blood transfusions, breast milk, and HIVpositive mothers to their children.

The respondents believed that MSMs are susceptible to contracting HIV because of having multiple partners, anal sex, and oral sex which increase the risk of HIV transmission. Based on the sexual activities, which are mostly anal sex, it does not rule out the possibility of MSMs being infected with various types of venereal diseases. Besides being prone to contracting venereal disease, MSMs and their partners are also susceptible to other diseases when the penis penetrates into the anus, it reaches the sigmoideum colon. The part contains many bacteria that can infect the penis through anal sex. In addition, MSMs are also prone to throat cancer due to oral sex (Kristina, 2008).

4.2 Perception of Seriousness

Perception of seriousness refers to subjective beliefs that diseases spread as the results of bad behavior or that people should avoid bad behavior to prevent them from getting diseases. In this perception of seriousness, most MSMs argued that HIV/AIDS is not a serious disease because when HIV is detected, it can be immediately addressed with ARVs. However, other MSMs claimed that HIV may have some effects, such as physical impact (reducing the immune system and blackening the skin), mental impact (stress, depression), and social impact (environmental discrimination, exclusion, death).

The perception agrees with Mudjahid (2000), stating that many changes occur within individuals after being infected with HIV/AIDS. The diseases they suffer affect personal, social, learning, career, and family life. Changes that occur inside and outside of people living with HIV/AIDS (PLWHA) make them have negative perceptions about themselves and influence the development of their own concepts. Some of the problems experienced by PLWHA, both physically and psychologically, include: stress, weight loss, anxiety, skin disorders, frustration, confusion, memory loss, decreased work enthusiasm, feelings of fear, feelings of guilt, rejection, depression and even the tendency to commit suicide. However, the impacts can be overcome through several ways, such as approaching MSMs in order to persuade them to come to services for VCT testing, inviting regular treatment in HIV/AIDS services, and always providing education to HIV positive people continuously so that they can build awareness to maintain safe sexual behavior.

Triangulation informants revealed that education is necessary for MSM and PLWHAs, considering MSMs who see HIV/AIDS to be a very severe disease are those living in remote areas that have not been exposed to any information about HIV/AIDS prevention. Conversely, MSMs in urban areas have received information about HIV/AIDS prevention, particularly from the AIDS Commission (KPA) and NGOs that deal with HIV/AIDS. As a result, MSMs in these areas think that HIV/AIDS is a non-severe disease. KPA and NGOs establish a program to educate the MSMs, that is peer education (PE). PE is a program in which information and education are spread and carried out by peer groups. It is seen as a very effective method in the context of KIE (Communication, Information and Education) related to HIV / AIDS.

4.3 Perception of Benefits

Perception of benefits refers to a belief in the benefits of the recommended method to reduce the risk of a disease. Individuals being aware of the benefits of early detection of any disease will continue to conduct healthy behaviors, such as taking routine medical check-ups. MSMs have a perception that condoms are very useful. They also explained that condoms are one of the media that can help prevent transmission of HIV/AIDS and for contraception. However, only two of all MSMs were always consistent in using condoms, while the other three were not. It was due to the fear of losing customers and one of them had a regular partner and therefore felt safe not to use condoms.

Based on the theory of Health Belief Model (HBM), people will take preventive measures directly after they were influenced by the results of a belief or health assessment, the benefits of preventive actions other than perceptions of vulnerability, seriousness, barrier, self-confidence,

and cues to action (Maryam, 2015). The key informants believed that the prevention measure for HIV/AIDS can be done by consistent use of condoms, by not exhibiting free sex, and by not changing sexual partner.

4.4 Perception of Barrier

Perceptions of barrier are the beliefs about the value of the behavior being carried out. It means the perception of decreasing comfort when leaving unhealthy behavior. The informants explained that they experienced a number of barriers while attempting to be consistent in the use of condoms, in that the partner or customer does not want to use condoms, for it creates discomfort and blockage.

Barriers of using condom can be overcome by multiplying lubricants during sexual intercourse, particularly to deal with the feeling of being blocked. Another alternative is to buy condoms with different flavors for better taste compared to those provided by KPAs and NGOs. In addition, in dealing with unwilling partner of the use condom, MSMs can create an intimate atmosphere with them while building their awareness of the high risk of contracting HIV/AIDS if they are not wearing condom.

4.5 Self Efficacy

As previously mentioned, some MSMs believed that condom is good to prevent the spread of HIV/AIDS, yet some others do not want to use it because of their partner refuses, apart from their awareness of its usefulness. The results are in accordance with Green's (1980) theory that knowledge would influence actions. The availability of condoms that meet the desire of MSMs (reinforcing factor) is closely related to the use of condoms by MSMs.

Green (1980) stated that someone's behavior related to health, in this case is the use of condom, is influenced by knowledge (predisposing factor). It is also supported by Notoatmodjo (2003) that knowledge is a cognitive domain that is very important for the formation of one's actions. If the acceptance of new behavior or adoption of behavior is based on knowledge, then what is learned among others is that the behavior will be direct. Conversely, if the behavior is not based on knowledge, the behavior will not last long. This means that if the respondent's knowledge is better about HIV/AIDS, it influences the actions to always use condoms during sexual intercourse (Notoatmodjo, 2003). Consistent use of condoms can be increased if the users are confident. This is in line with the opinion of the MSMs, stating that the confidence may appear after they are educated by the NGOs or AIDS Commission about the benefits of using condoms during sexual intercourse.

Most MSMs also explained that they could negotiate the use of condom with their partner because it has been provided at the stalls. Those who were aware of the risk tend to be consistent. Three MSMs believe that they were at high risk, while the other two were not sure of using condom for fear of losing customers. This is in line with Schultz's research in McDonough (2012) that self-efficacy is significantly associated with safe sexual behavior such as using condoms, abstinence behavior, and negotiation to use condoms.

4.6 Cues To Action

A signal to act in general is a person's confidence in carrying out a particular task, a person's trust in his ability to persuade in a situation or feel confident with the healthy behavior being exhibited. MSMs in this study had a perception about the signal to act by looking at the incidence of STIs experienced by their own friends. There is one MSM who is infected with STIs such as syphilis, bacterial fungi, and lime infestation. In fact, some who are infected with STIs do not recover because they are not familiar with STI services. The incident has encouraged the informants to use condoms consistently.

MSMs obtained the information about the usefulness of condom and about HIV/AIDS from their NGO friends. They were encouraged to use condom to avoid the disease. Even so, some MSMs did not use it and continue to have sexu without using it.

According to the HBM theory, a person will receive a signal to act. This is a trigger that makes the person feel the need to take action. According to Ronsenstock (1982), in carrying out health actions there is a precipitating factor for deciding to accept or reject these alternative actions, and the trigger factor for MSMs in this study are friends who suffer from STIs or their own experience in suffering from STIs.

4.7 Condom Use Behavior

In this study, sexual activities that were often carried out by MSMs include oral and anal sex, "*es gosrok*" (rubbing the penis), kissing, rimming (licking the anus), and pinching the thigh (clipping the penis). The activities taken depend on the request of each partner. Based on their sexual activity, there are MSM who are associated with regular partners, nonpermanent partners, and once partners. Some couples use condoms consistently and some other do not.

Three MSMs use condom consistently because they successfully negotiate with their partner to use it. Meanwhile, other MSMs did not do the same because they feel safe (not contracting the disease) for having only one regular partner. The former MSMs were influenced by the perception of vulnerability, in that they use condom because they have unsafe sexual behavior, have changing partners, and choose anal or oral sex; all of which increase the risk of HIV/AIDS transmission.

Conversely, the latter choose not to use condom because they were affected by the perception of barriers, in that their partner is unwilling to wear it. This is consistent with Kawangung (2012) who stated one of the reasons of not using condom is their mutual trust in their partner. Another study conducted by Jie et al, (2012) revealed that personal assumptions and feelings towards regular partners and financial incentives are factors that create the barriers to use condom by sex workers. Factors of trust and feelings of love are also barriers that hinder the use of condoms. It is proven by Stoebenau et al (2009) in his research about transvestites and that MSMs have different treatment between clients or regular customers and a regular partner. Again, an MSM in this study insisted on not using condoms for fear of losing customers even though he already knew how to use condoms: looking at the expiration date, paying attention to how to open it, sliding to the edge and then opening, making sure the air cavity should not bubble up.

5 CONCLUSIONS

Three MSMs decided to use condom consistently, one MSM did not use it because he has a regular partner, leading him to feel safer, and another MSM did not use condom for fear of losing his customers.

REFERENCES

- Dinas Kesehatan Kabupaten Sukoharjo, 2017, Profil Kesehatan Kabupaten Sukoharjo, Sukoharjo: Dinkes Sukoharjo.
- Firdaus, S & Agustin, H, 2013, 'Faktor Risiko Kejadian HIV Pada Komunitas LSL (Lelaki Seks Lelaki) Mitra

Yayasan Lantera Minangkabau Sumatera Barat'. Jurnal Kesehatan Komunitas, vol.2, no.2, pp. 94-99.

- Green, L, 1980, Health Education: A Diagnosis Approuch, The John Hopkins University, Mayfield Publishing Co.
- Jie, Wu *et al*, 2012, 'A Qualitative Exploration of Barriers to Condom Use among Female Sex Workers in China' *.PlosOne*
- Kawangung, V. Y., 2012., 'Pengaruh Ketersediaan Kondom Terhadap penggunaan Kondom pada seks komersial di Lokasi Batu 24 dan Batu 80 Kabupaten Bintan Provinsi Kepri tahun 2012', Thesis, Universitas Indonesia.
- Kementerian Kesehatan Republik Indonesia, 2011, Surveilans Terpadu Biologis dan Perilaku., Direktorat Pengendalian Penyakit dan Penyehatan Lingkungan, Jakarta
- Kementrian Kesehatan Republik Indonesia, 2016, Laporan Estimasi Nasional Infeksi HIV Indonesia. Direktorat Jenderal Pengendalian Penyakit Lingkungan, Jakarta.
- Komisi Penanggulangan AIDS Nasional, 2015, *Strategi dan Rencana Aksi Nasional*, Komisi Penanggulangan HIV/AIDS Nasional, Jakarta.
- Komisi Penanggulangan AIDS, 2017, Profil Kesehatan Kabupaten Sukoharjo. KPA Sukoharjo, Sukoharjo.
- Kristina, S. A, 2008, 'Perilaku Pengobatan Sendiri Yang Rasional Pada Masyarakat Kecamatan Depok Dan Cangkringan Kabupaten Sleman', *Majalah Farmasi Indonesia*, vol.19,no. 1, pp.32-40.
- Maryam, S. 2015. Promosi Kesehatan dalam Pelayanan Kebidanan. Penerbit Buku Kedokteran EGC, Jakarta.
- Mudjahid, 2000, *Pedoman Konseling Penanggulangan HIV/AIDS*. Departemen Agama RI, Jakarta.
- Mukhsinin, U, 2016, 'Faktor-Faktor yang Berhubungan dengan Praktik Penggunaan Kondom pada Pria Pekerja Seks untuk Pria sebagai Upaya Pencegahan HIV/AIDS di Kota Semarang Tahun 2015', Skripsi, Universitas Negeri Semarang
- Nirmala, H., 2016. 'Gambaran Perilaku Seksual Berisiko HIV/AIDS Pada Pasangan Gay,'.Journal Kesmas, vol.4,no.3.
- Notoatmodjo, S., 2003. *Pendidikan dan Perilaku Kesehatan*. Penerbit Rineka Cipta, Jakarta.
- Rosenstock, I., 1982, 'Historical origins of the Health Belief Model'. Health education Monographs, vol.2, no.4,pp.328-335.
- LSM Solidaritas Perempuan untuk Kemanusiaan dan Hak Asasi Manusia, 2017, *Data Jumlah Distribusi Kondom LSL Tahun 2014 dan 2015*, LSM. Solidaritas Perempuan untuk Kemanusiaan dan Hak Asasi Manusia, Sukoharjo.
- Stoebenau, K, 2009, 'The Implications Of Relationship Fluidity For Condom Use Among Women Sex Workers In Antananarivo. Madagascar'. American Journal Of Public Health, vol.9no.9, 811.
- UNAIDS, 2016, *Global AIDS Update*, United Nations Programme on HIV/AIDS, Geneva.