# Social Determinants of HIV/AIDS: a Public Health Perspective

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Abstract: Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome or commonly known as HIV/AIDS is a disease that is still a problem in many countries, including Indonesia. HIV AIDS cases in Indonesia continue to increase from year to year. HIV cases in Indonesia reached its peak in 2019, which was 50,282 cases. This study aimed to determine the effect of social determinants of health according to healthy people on the incidence of HIV/AIDS in Indonesia. The study design in this study uses a literature review to examine knowledge, ideas, or findings in academic-oriented literature. The type of data used is secondary data, namely data from journal articles, and literature reviews about HIV/AIDS. This research was conducted in November 2021. Based on the analysis of the articles collected, according to healthy people, there are several variables that influence the incidence of HIV/AIDS in Indonesia. In Economic Factors there are variables of employment and poverty that affect, on the determinants of education there are variables of early childhood education and development, enrollment in higher education, secondary school education, and literacy. Meanwhile, on the determinants of neighbors and the environment there are variables of crime and violence as well as variables of environmental conditions, and on the determinants of health and health services there are variables of access to health services that affect the incidence of HIV/AIDS.

**Keywords:** Social determinants of health, HIV/AIDS, Healthy people

#### INTRODUCTION

Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome or commonly known as HIV/AIDS is a disease that is still a problem in many countries, including Indonesia. AIDS is an infectious disease caused by infection with a virus called HIV. The HIV virus attacks and destroys white blood cells, namely T-helper cells, which function to make anti-substances in the body. The HIV virus will multiply in the lymphocyte cells which are then infected and later this virus will attack the immune system which makes disease easy to attack the body. HIV virus is found in blood and semen (Dewa Putu Yudi Pardita, 2001).

In 2019, data from the United Nations Program on HIV and AIDS (UNAIDS) showed that the largest HIV-infected population in the world was on the African continent (25.7 million people), then Southeast Asia (3.8 million), and in America (3.5 million). The high population of people

infected with HIV in Southeast Asia requires Indonesia to be more aware of the spread and transmission of this virus. Although it tends to fluctuate, data on HIV AIDS cases in Indonesia continues to increase from year to year. As in the picture below, during the last eleven years the number of HIV cases in Indonesia reached its peak in 2019, which was 50,282 cases. Meanwhile, the province with the highest number of AIDS cases is in Central Java, with 488 people (Kemenkes, 2019).

HIV/AIDS causes a lot of stigma in society. In addition, when viewed from various fields of life, the incidence of HIV/AIDS has a major impact. Starting from the social aspect where many people will stay away from the sufferer, from the psychological point of view the sufferer also feels it starting from them starting to know that they are infected with HIV/AIDS to the reaction of their environment. From an economic perspective, the HIV-AIDS epidemic will incur high costs, both for the sufferer and for the hospital. This is because the cure has not been found, so costs must continue to be spent only for treatment and prolonging the life of the patient. Judging from the existing impacts, it can be concluded that HIV/AIDS has affected people's lives and therefore it is also important to prevent and treat sufferers so as not to cause further problems.

Judging from the many cases of HIV/AIDS in Indonesia, of course this is a concern to be addressed immediately. The government has also tried to overcome this case, including the government has issued a policy on the use of condoms for the purpose of preventing the transmission of the HIV virus. The use of condoms is considered effective enough to reduce the incidence of HIV/AIDS. The national policy on HIV & AIDS prevention supports 100% use of condoms by sex workers and their customers, while the Basic Population Law (UU No. 1 0/1992) of the BKKBN considers that only husband and wife as partners are entitled to access family planning methods. from the government. On the other hand, condoms have been promoted in various regions/provinces for double protection. For example, in the regulations in East Java Province and the draft law in Papua, it is stated that 100% condoms are used in risky relationships as double protection. With the existence of these legal products, it is not clear whether this will be against the Population Law because it promotes the use of condoms against unmarried couples. The occurrence of discrepancies between one policy and another can be a means of discrimination against a group of people who are at high risk of being exposed to the disease (Latifa, no date).

Based on Acce Basri's research, it was found that there is an influence between stigma, depression, social support and ARV therapy on the quality of life of PLWHA, the variable with the strongest influence is stigma (Basri, 2018). In Wulandari's research, it was found that social

determinants that affect women's vulnerability to transmission of STIs and HIV (Dewi, Wulandari and D.N. Wirawan, 2018). Therefore, we took a study with the aim of knowing the effect of social determinants of health based on the healthy people framework on cases of HIV/AIDS in Indonesia.

## **METHOD**

The study design used in this research is a literature review to examine knowledge, ideas, or findings in academic-oriented literature, and formulate theories and methodologies on certain topics. Literature review studies can be obtained from various sources such as books, journals, documentation books, internet, and libraries. In this case, a literature study was conducted which was obtained from various journal articles related to the social determinants of HIV/AIDS. Article search results were shown in table 1.

Table 1. Article search

Web browser	Keyword	Result
Google Scholar	" Social determinants of HIV/AIDS "	5 articles
	"Relationship between Employment and HIV/AIDS Cases"	2 articles
	"Relationship between Income and HIV/AIDS Cases"	1 article
	" Housewives at Risk of HIV/AIDS "	1 article
Pubmed	" Social determinants of HIV/AIDS "	3 articles
	" Sex Workers at Risk of HIV/AIDS"	1 article
	" Living Environment and HIV/AIDS "	3 articles
	"Geographical Environment and HIV/AIDS"	2 articles
	"Relationship between education level and HIV/AIDS"	3 articles
	"Risk factors that influence the incidence of HIV/AIDS"	3 articles
	"Literacy of HIV/AIDS sufferers"	1 article
	"Health education on HIV/AIDS transmission from an early	1 article
	age "	
	" Support for families and health workers for HIV/AIDS sufferers "	1 article
	" Discrimination of People with HIV/AIDS "	1 article
	" HIV/AIDS sexual violence "	1 article
	" Access and quality of health services for HIV/AIDS "	1 article
	" Quality of health services "	1 article
	31 articles	
Screening /	26 articles	
Articles Co	9 articles	

This research was conducted in November 2021 using a literature review search study. The independent variable of this study is the social determinant of health according to healthy people. While the independent variable is the incidence or increase in the number of HIV/AIDS cases. The type of data used is secondary data, namely data from journal articles, and literature

reviews about HIV/AIDS. Data collection techniques start from searching articles from the internet, screening the articles obtained, to getting articles related to research variables, as shown in table 1.

This research is a descriptive analysis, namely the elaboration of the data obtained, then further explanation is given so that it can be well understood by the reader. This analysis is used to explain several factors, including social determinants of the increase in HIV/AIDS cases. The data that has been analyzed is then concluded so as to get a conclusion.

## **RESULTS**

Healthy people is used as a strategic management tool by federal, state, community, and other public and private sector partners. A comprehensive set of goals and targets is used to measure the progress of a health problem in a specific population, and serves as the foundation for prevention and health activities across sectors and within the federal government, and a measurement model at the state and local levels. Social determinants of health are one of the main focuses of Healthy People 2030.



Picture 1. Framework for Social Determinants of Health

In this framework, there are several social factors that can influence the occurrence of a disease. These factors include factors of access and quality of education, quality of health services, environmental factors, social and community contexts, and economic stability. Each factor consists of several parts, as shown in table 2.

Table 2. Social determinants of HIV/AIDS health

Economic Stability	Education	Social and Community	Neighborhood and Built Environment	Health and health Care
<ul><li>Employment</li><li>Poverty</li></ul>	<ul> <li>Early childhood education and development</li> <li>Enrollment in higher educatio</li> <li>High school education</li> <li>Literacy</li> </ul>	Discrimination	<ul> <li>Crime and Violence</li> <li>Environmental Conditions</li> </ul>	Access to health care

### DISCUSSION

Occupational Diseases are diseases suffered by workers due to work factors. One example of this PAK is HIV/AIDS, which mostly occurs in the productive age. Regarding HIV/AIDS, there are 2 types of work, namely risky work and non-risky work. Occupations at risk of HIV/AIDS include prostitutes, female sex workers, female sex workers, etc. While jobs that are not at risk include entrepreneurs, traders, housewives, and others.

In this case, it turns out that HIV/AIDS can occur in both risky and non-risky jobs. Commercial sex workers are jobs at risk of HIV/AIDS, based on the results of a survey with interviews with commercial sex workers in Dasin Hamlet, Sugiwaras Village, Jenu District, Tuban Regency, in November 2017, it was found that one of the female sex workers stated that most of the customers were reluctant to use condoms. This has the potential to cause the transmission of HIV/AIDS (Utami and Fikriyah, 2018). This is also in line with research conducted on 50 female sex workers in the city of Padang, where there is no significant relationship between condom availability and HIV/AIDS prevention behavior. Condoms are well available, but some customers are reluctant to use condoms during sexual intercourse thereby increasing the risk of contracting HIV/AIDS (Yuliza, Hardisman and Nursal, 2019).

As for jobs that are not at risk, it was found that research conducted on workers in the city of Semarang stated that over a period of 12 years (2007-2018) many AIDS cases suffered by employees as many as 109 sufferers with types of work such as parking attendants, flight attendants, artists, fishermen occupying the lowest position (Pramitasari and Aryani, 2018). This is also in line with the results of research where there are research results showing that of 312 patients who came to do HIV tests on women of childbearing age, HIV in women of childbearing age at the

VCT Clinic UPT BLUD Meninting Health Center in 2015-2017 the largest group was in the group. Jobs that are not at risk are 236 people (75.6%), while in jobs that are at risk are 76 people (24.4%) (Oktaseli, Rachmawati and Suliaty, 2019).

The same thing was also obtained based on the results of research conducted in Jombang Village, East Java that housewives who are often considered low risk actually have a high HIV/AIDS transmission, namely 31 people as housewives and 14 people working as entrepreneurs (Meri, 2020). One of the causes of HIV/AIDS transmission among housewives in Kuningan Regency is not using condoms when having sex with husband and wife or with other partners (Heriana, Amalia and Ropii, 2017).

Poverty and HIV/AIDS are two things that are closely related. Poverty is one of the factors that drag women to do risky jobs. Many women live as prostitutes because of poverty in order to obtain food, clothing, protection, and to fulfill the family's economy (Regar and Kairupan, 2016). Commercial sex workers are one of the jobs that have a high risk of being infected with HIV/AIDS. Based on the results of research conducted on female commercial sex workers in Jakarta, economic factors or poverty are the main motives causing women to work as prostitutes (Dalimoenthe, 2018).

Cost constraints also affect the difficulty of accessing health services. Based on the results of research conducted on 5 commercial sex workers in Tuban Regency, it was found that 4 out of 5 informants did not screen for HIV/AIDS due to limited funds (Utami and Fikriyah, 2018). This is also in line with research conducted on 90 housewives infected with HIV/AIDS in Kab. Belu, where the results were found that the majority of respondents with irregular husbands did not become BPJS participants due to difficulties in paying monthly premiums. This makes it impossible for the poor to take advantage of VCT (Voluntary Counseling and Testing) health services for HIV/AIDS (Yeni Tasa, Ina Debora Ratu Ludji, 2016).

Based on research conducted on street children in the city of Semarang, it was also found that poverty which is a factor in the emergence of street children also causes this group to become one of the groups that are vulnerable to risky behavior of HIV/AIDS transmission (Ningsih, 2014). Street children are very close to risky behavior such as free sex, drug use (especially injecting needles) which have the potential to transmit HIV/AIDS.

Increasing knowledge about HIV/AIDS can be a solution to avoid HIV/AIDS by avoiding its risk factors. Through education about HIV/AIDS, the target is taught the mode of transmission and the risk factors, so that the target can avoid these risk factors. With increased knowledge, it is

hoped that the target can maintain behavior towards changes in puberty and healthy sexual behavior so that in the future it can avoid risk factors for HIV/AIDS. The results of the evaluation given to students at SDIT Buah Hati Cilacap based on the article showed that the average knowledge of students increased to 97% about HIV/AIDS after being given educational videos about HIV/AIDS (Maryanti, Prasetyo and Sarwa, 2020).

Education level, Theoretically that a person's level of knowledge is influenced by the level of education. The level of relevant education will affect the understanding of the information he gets. Usually, the higher a person's education level, the easier it is to capture and understand the information obtained. The results of descriptive analysis in this study indicate that the higher the education, the better the knowledge. The results of descriptive analysis in this study indicate that the higher the education, the better the knowledge, so that a low level of education is declared to have an effect on the incidence of HIV and AIDS (Susilowati et al., 2019).

Characteristics of Respondents based on elementary and junior high school education are the level of initial basic education. At this level a person has not been able to understand the information given about HIV/AIDS at the time of holding counseling or information about HIV/AIDS. Education will affect a person's absorption of the information he receives. So if a person's level of education is high, then that person also has high knowledge. Lack of public knowledge, especially about HIV/AIDS, the possibility of transmission and prevention of the disease cannot be known (Akhiat, 2014).

Health literacy is an individual's ability to communicate health information correctly, clearly and understand it. Health literacy is relevant in all parts of the continuum of care, disability and health, for the prevention and early detection of disease as well as for diagnosis and decision-making for self-care. Based on the results of research in Garut on HIV/AIDS in an article, it shows that most of the respondents have low literacy as much as 56.7%, while for respondents with high literacy as much as 43.3%. The low level of health literacy in Garut is due to the difficulty of respondents in assessing health information and applying the health information they receive.

The low level of individual literacy about the disease has a risk of the low level of health that he has. This low literacy often makes individuals make mistakes in using therapy or medication, underutilize health service facilities, and lack self-care because of their limited understanding of health information. This has the potential to be a problem that will result in poor health behavior such as poor health care and health promotion, unable to prevent various diseases so that it has an impact on health outcomes (Kesumawati, Ibrahim and Witdiawati, 2019).

HIV/AIDS infection is a disease with a high mortality rate. Indonesia ranks first in the transmission of HIV/AIDS in Southeast Asia (Kemenkes, 2019). From the many cases in Indonesia, there is still a lot of stigma that develops in society. Environmental views and attitudes towards victims who generally cannot accept, are afraid, are labeled bad, which can have an impact on isolation/exclusion, exclusion and discrimination, making sufferers more depressed. (Vanchapo, 2019). In the article entitled "Peran Masyarakat Madani Dalam Mengurangi Stigma Dan Diskriminasi Terhadap Penderita HIV & AIDS" it was found that the issue of stigma and discrimination is closely related to issues of sexuality, gender, ethnicity, poverty, including the fear of being infected with the virus.

For example, fear can make stigma and discrimination against people living with HIV & AIDS even more difficult to remove. Here the role of the family is expected to be a support system for people living with HIV/AIDS. The family is a place where people with HIV I AIDS get support and care. However, it is not uncommon for families to give negative responses and actually take actions that lead to stigma and discrimination. The forms of negative actions include blame, rejection. Family refusal is influenced not only by the status of the patient, but also by the stigma about homosexuality, the use of illegal drugs, and free sex.

In one study, it was stated that the role of the community was very influential on the incidence of HIV/AIDS. In the study, it was exemplified that there was a community called PKBI Indramayu where they made efforts to prevent and reduce stigma and discrimination against people with HIV/AIDS by disseminating information about HIV/AIDS to stakeholders, such as the Health Service, Trantib, police, paramedics and to other civil society groups. Through this information, it is hoped that the community will become more cooperative, give a positive response to events or to people with HIV/AIDS.

Another effort made by PKBI Indramayu is to assist the process of health services and referrals related to HIV/AIDS to health clinics. From the statement above, it can be concluded that the role of society and organizations is very important for HIV/AIDS sufferers, they can be a support system and help change the stigma and discrimination that develops in society so that sufferers do not have any fear of taking treatment or admitting about their illness.

The determinants of neighbors and the environment that have an influence on HIV/AIDS infection are crime and violence. Women have a high risk of contracting HIV due to sexual violence by an HIV-infected partner. This is in accordance with research conducted by Ernawati suggesting sexual violence in general increases the risk of transmission because shields are generally not

used, resulting in physical trauma to the vaginal cavity thereby facilitating transmission of the virus during sex (Ernawati and Aisah, 2017). One example of sexual violence is that as many as 3 out of 15 people living with HIV/Aids in Kudus are female migrants.

They work in Malaysia and Saudi Arabia. One of these female migrant workers in Malaysia reported that she suffered from HIV/AIDS as a result of sexual violence by her employer's family. When migrants return to Kudus, they do not know that they are infected with HIV/AIDS, so they can transmit it to their husbands through sexual intercourse. The impact of sexual violence felt by female migrant workers still leaves trauma and prolonged stress and transmits infections to their husbands.

The environment is a medium in which living things live, seek, and have distinctive characters and functions in reciprocity with living things. The environment is a place to socialize, grow, and develop. The environment can be distinguished in the form of the physical environment, biological environment, or socio-economic. The first stage, humans try to recognize their environment, then adapt. In one study, environmental variables had a significant direct and positive effect on HIV/AIDS prevention behavior in commercial sex workers. It can be interpreted that the environment has a good influence on HIV/AIDS prevention behavior (Liawati, 2018).

Research by Burhan shows that there is a relationship between access to health care and the incidence of HIV. With distant access to health services, people rarely receive health education and people are lazy to go to health services for consultation and treatment related to HIV so that HIV prevalence increases. Provision of knowledge by quality health services about HIV is needed to prevent new infections by teaching how to prevent transmission of the virus to others. In addition, enabling and empowering people living with HIV/AIDS to improve their quality of life, as well as the basic needs of basic HIV information and treatment, so that people living with HIV can access medical services and HIV treatment (Burhan, 2015).

From Wulandari's research, data shows that health services have a contribution to vulnerability and HIV is associated with a person's ability to maintain their health which is influenced by access to information about STIs, HIV, and condoms, the quality of services provided, and the behavior of health workers (Dewi, Wulandari and D.N. Wirawan, 2018). If access to information is lacking, the quality and behavior of the officers are unsatisfactory, it will lead to a crisis of trust in the client and leave and even refuse service. Service quality has something to do with the motivation of health workers. Health services are important to control the increasing prevalence of HIV in Indonesia. Availability and accessibility of health services such as the provision of

consonants to reduce HIV prevalence, routine screening carried out by health services because many people with HIV do not show symptoms or signs, while many people are at high risk of being infected with HIV (Septarini, 2014).

The quality of health services that are not good will make people at risk of HIV confused and do not know where to find the right information through where and where to go to get health services, plus how to get health services about HIV. The quality of health services is also based on the adequacy of the number of health workers. The increasing number of people living with HIV-AIDS, the more the role of health workers is needed in tackling HIV/AIDS. Health workers are an important component in the approach to health services for people living with HIV/AIDS (PLWHA). One of the strategies for overcoming HIV/AIDS is to increase the development and empowerment of equitable and quality human resources, especially health workers in providing health services (Mujiati, Lestary and Sugiharti, 2017). With good quality of health services, public awareness and public trust will increase in health services. The quality assurance provided will also influence the community to access health services (Sutriani, 2013).

One of the efforts made by the government in the prevention and control of HIV-AIDS is the provision of Voluntary Counseling and Testing (VCT) Clinics in health facilities such as hospitals and health centers. VCT is an entry point to get the services needed by people living with HIV-AIDS. In addition, there is also a Care, Support, and Treatment (CST) clinic which is an integrated and continuous service to provide support for people living with HIV-AIDS during care and treatment. The hope is that the clinic can be used optimally by the community, especially those who are at risk of HIV-AIDS and people with HIV-AIDS. With the trust from the community because of the good quality of health services, people who are at risk of contracting HIV will access health services and there will be a decrease in HIV prevalence (Burhan, 2015).

## CONCLUSION

Based on the research that has been carried out, it can be concluded that there are 5 determinant factors that influence the incidence of HIV/AIDS according to the Healthy People theoretical framework. In Economic Factors there are variables of employment and poverty that affect, on the determinants of education there are variables of early childhood education and development, enrollment in higher education, secondary school education, and literacy. Meanwhile, on the determinants of neighbors and the environment there are variables of crime and violence as well as variables of environmental conditions, and on the determinants of health and health services there are variables of access to health services that affect the incidence of HIV/AIDS. In this study,

we only use the framework of social determinants of health according to healthy people, so suggestions for further research can use other frameworks of social determinants of health so that the results are more varied and obtain a broader picture of what social determinants affect HIV/AIDS. There is also a need for synergy in efforts to overcome the incidence of HIV/AIDS and the need for support for those who experience the incidence of HIV/AIDS by eliminating the stigma circulating in the community so that those who become HIV/AIDS sufferers are more open and can be addressed immediately.

#### REFERENCES

- Akhiat (2014) 'Hubungan Tingkat Pendidikan Dengan Pengetahuan Pekerja Seks Komersial Tentang Penyakit Hiv / Aids', pp. 156–160.
- Basri, A. (2018) 'Determinan Sosial "Quality of Life" Orang dengan HIV dan Aids (Odha)', 1(3), pp. 104–111.
- Burhan, R. (2015) 'Pemanfaatan Pelayanan Kesehatan oleh Perempuan Terinfeksi HIV / AIDS Health Service Utilization in Women Living with HIV / AIDS', (03), pp. 33–38.
- Dalimoenthe, I. (2018) 'Pemetaan Jaringan Sosial dan Motif Korban Human Trafficking pada Perempuan Pekerja Seks Komersial', Jupiis: Jurnal Pendidikan Ilmu-Ilmu Sosial, 10(1), p. 91. doi: 10.24114/jupiis.v10i1.8430.
- Dewa Putu Yudi Pardita (2001) 'Analisis dampak sosial, ekonomi, dan psikologis penderita hiv aids di kota denpasar', pp. 193–199.
- Dewi, D. M. S. K., Wulandari, L. P. L. and D.N. Wirawan (2018) 'Determinan Sosial Kerentanan Perempuan Terhadap Penularan Ims Dan Hiv', 2(1), pp. 22–35.
- Ernawati, E. and Aisah, S. (2017) 'Perilaku Seksual Pekerja Migran Boroyang Menderita Hiv/Aids Di Wilayah Kudus', Prosiding Seminar Nasional & Internasional, 1(1), pp. 142–152. Available at: https://jurnal.unimus.ac.id/index.php/psn12012010/article/view/2287/2267.
- Heriana, C., Amalia, I. S. and Ropii, A. (2017) 'Faktor risiko penularan hiv/aids pada ibu rumah tangga pasangan migran di kabupaten kuningan tahun 2017', Bhakti Husada Kuningan, 6(2), pp. 50–58.
- Kemenkes (2019) 'Laporan\_Perkembangan\_Hiv\_Aids\_\_\_Pims\_Triwulan\_Iv\_Tahun\_2019.pdf'.
- Kesumawati, R., Ibrahim, K. and Witdiawati, W. (2019) 'Literasi Kesehatan Orang Dengan HIV/AIDS', Jurnal Pendidikan Keperawatan Indonesia, 5(1), pp. 77–88. doi: 10.17509/jpki.v5i1.15533.
- Latifa, A. (no date) 'Mengurangi Stigma Dan Diskriminasi Terhadap Penderita Hiv & Aids', VI(2).
- Liawati (2018) 'Faktor Yang Berpengaruh Terhadap Perilaku Remaja Pekerja Seks Komersial Di Kolaka Tahun 2018.', Patria Artha Journal of Nursing Science, 2(1), pp. 25–35. doi: 10.33857/jns.v2i1.113.
- Maryanti, D., Prasetyo, A. and Sarwa (2020) 'Antisipasi Penularan HIV/AIDS Sejak Dini Melalui Edukasi Tentang HIV/AIDS Dan Perubahan Pubertas Pada Siswi Kelas V Di SDIT Buah Hati Cilacap Tahun 2020', Jurnal Pengabdian Masyarakat Al-Irsyad, II(1), pp. 1–8.
- Meri, K. (2020) 'Bantenese Jurnal Pengabdian Masyarakat', pp. 26–33.
- Mujiati, M., Lestary, H. and Sugiharti, S. (2017) 'Kecukupan Tenaga Kesehatan dan Permasalahannya dalam Pelayanan Kesehatan Anak dengan HIV-AIDS di Rumah Sakit pada Sepuluh Kabupaten/Kota, Indonesia', Media Penelitian dan Pengembangan Kesehatan, 27(1), pp. 1–8. doi: 10.22435/mpk.v27i1.5550.1-8.

- Ningsih, P. E. W. (2014) Penanganan Anak Jalanan Di Rumah Perlindungan Sosial Anak Pelangi Oleh Dinas Sosial, Pemuda Dan Olah Raga Kota Semarang. Universitas Negeri Semarang.
- Oktaseli, S., Rachmawati, M. and Suliaty, A. (2019) 'Hubungan Karakteristi Pasien, Perilku Bersesiko Dan Ims Dengan Kejadian Hiv/Aids Pada Wanita Usia Subur Di Klinik Vct Upt Blud Puskesmas Meninting Tahun 2015-2017', Jurnal Medikes (Media Informasi Kesehatan), 6(2), pp. 133–154. doi: 10.36743/medikes.v6i2.189.
- Pramitasari, R. and Aryani, L. (2018) 'Prevalensi kasus aids pada pekerja di Kota Semarang analisis data sekunder', J. Kesehat. Masy. Indones, 13(1), p. 2018.
- Regar, P. M. and Kairupan, J. K. (2016) 'Pengetahuan Pekerja Seks Komersial (PSK) Dalam Mencegah Penyakit Kelamin Di Kota Manado', Jurnal Holistik, (17), pp. 1–20.
- Septarini, N. W. (2014) 'Determinan Sosial Dan Lingkungan Infeksi Hiv Pada Wanita Pekerja Seks Di Indonesia', Jurnal Ilmu Kesehatan Masyarakat, 5, pp. 1–8.
- Susilowati, T. et al. (2019) 'Faktor Risiko Yang Mempengaruhi Kejadian Hiv/Aids Di Magelang', Prosiding: Seminar Nasional Rekam Medis & Informasi Kesehatan Standar Akreditasi Rumah Sakit (SNARS) Edisi 1, pp. 85–95.
- Sutriani (2013) 'Hubungan Kualitas Pelayanan HIV dan AIDS terhadap Kepuasan Pasien di Rumah Sakit Umum Labuang Baji Makassar', Mkmi, pp. 212–220.
- Utami, A. P. and Fikriyah, K. (2018) 'Perilaku Wanita Pekerja Seks Dalam Pencegahan Penyebaran HIV/AIDS Di Kabupaten Tuban', Jurnal Midpro, 10(2), p. 1. doi: 10.30736/midpro.v10i2.74.
- Vanchapo, A. R. (2019) 'Penanganan Terhadap Stigma Masyarakat tentang Orang Dengan HIV/AIDS (ODHA) di Komunitas Muhammad Saleh Nuwa', 10, pp. 49–54.
- Yeni Tasa, Ina Debora Ratu Ludji, R. P. (2016) 'Pemanfaatan Voluntary Counseling and Testing Oleh Ibu Rumah Tangga Terinfeksi Human Immunodeficiency Virus', Jurnal Kesehatan Masyarakat, 11(2), p. 222. doi: 10.15294/kemas.v11i2.4495.
- Yuliza, W. T., Hardisman, H. and Nursal, D. G. A. (2019) 'Analisis Faktor yang Berhubungan dengan Perilaku Pencegahan HIV/AIDS Pada Wanita Pekerja Seksual di Kota Padang', Jurnal Kesehatan Andalas, 8(2), p. 376. doi: 10.25077/jka.v8i2.1015.