

Eduvest - Journal of Universal Studies Volume 4 Number 12, December, 2024 p- ISSN 2775-3735- e-ISSN 2775-3727

EFFECTIVENESS OF FAMILY SUPPORT IN ANTIRETROVIRAL THERAPY AND COMPLICATIONS OF HIV/AIDS

(Clinical Research at the VCT Polyclinic Gambiran Regional Kediri City Hospital)

Anis Khoirin Hayati¹, Dwi Wahyu Indrawati² , Dedi Fardiaz³ , Joni Haryanto⁴ , Agus Hayatal Falah⁵

1,2,3,5 Universitas Muhammadiyah Sidoarjo, Indonesia

⁴ Universitas Airlangga, Indonesia

Email: aniskhoirinhayati@umsida.ac.id, indrawatidwi55@gmail.com, dedifardiaz@umsida.ac.id, joni-h@fkp.unair.ac.id, agushf@umsida.ac.id

ABSTRACT

HIV/AIDS is a frightening disease for Indonesian society today, so that people with HIV/AIDS often get excessive stigma and discrimination. The design of this study was an observational quantitative study with a cross sectional approach with a research focus directed at analyzing family support and service quality on the utilization of the VCT Poly and compliance of HIV / AIDS patients in undergoing antiretroviral therapy (ARV). at Gambiran Hospital, Kediri City with a sample of 109 respondents taken by Accidental Sampling technique. The results showed that most respondents had sufficient family support, namely 56 respondents (51.4%). Most respondents rated the quality of service in the moderate category as many as 56 respondents (51.4%). Most respondents had moderate utilization as many as 55 respondents (50.5%). Most respondents were not compliant with antiretroviral therapy (ARV), as many as 65 respondents (59.6%). The results of the study using the Path Analysis Test showed a p-value <0.05, so H0 was rejected and H1 was accepted, so it was concluded that there was a significant effect of family support and service quality through the use of VCT Poli on the compliance of HIV / AIDS patients in undergoing antiretroviral therapy (ARV) at Gambiran Hospital, Kediri City. Compliance of HIV / AIDS patients in undergoing antiretroviral therapy (ARV) is influenced by family support, service quality and utilization in the VCT Poly itself. So that patients need to be given good support and improve the quality of services available at the VCT Poly.

KEYWORDS Family, therapy, antiretroviral, HIV/AIDS, VCT clinic



This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International

Anis Khoirin Hayati, et al (2024). Effectiveness of Family Support In

Antiretroviral Therapy and Complications of Hiv/Aids

(Clinical Research at the VCT Polyclinic Gambiran Regional Kediri City

How to cite: Hospital). *Journal Eduvest.* 4 (12): 12221-12230

E-ISSN: 2775-3727

INTRODUCTION

HIV/AIDS is a frightening disease for Indonesian society today, so people with HIV/AIDS are often stigmatized and discriminated against. The stigma that develops in society today about HIV/AIDS is that this disease is a punishment for immoral behavior committed by sufferers. In fact, stigmatization and discrimination will be the main obstacle to HIV/AIDS prevention. Stigma can prevent a person from getting tested for HIV. It also makes sufferers reluctant to tell others about their illness and not behave to reduce the risk of HIV transmission (Stuart, 2011).

According to WHO (2018), the global HIV epidemic has claimed fewer victims in 2018 than any other year in the past two decades, and fewer new cases of HIV AIDS than in previous years. This year, the number of people with HIV AIDS in the world reached 36.7 million. The development of antiretroviral therapy (ART) programs has reduced the number of deaths from HIV AIDS to 1.1 million in 2018 (45% lower than in 2008). Nonetheless, countries need to strive to fulfill the commitment to end the AIDS epidemic which is a public health threat with a target time of 2030.

Statistics on patients reported by the Directorate General of PP and PL until December 2018, the number of HIV-AIDS patients in Indonesia was 16,110 cases or there were an additional 4,969 new cases during 2008, with a total of 3,362 deaths (Ministry of Health RI 2018). By September 2009, the number of HIV-AIDS patients in Indonesia reached 18,442 cases with 3,708 deaths. In September 2018, the number of HIV-AIDS patients in Indonesia increased again to 22,726 cases, with a total of 4,249 deaths (Ministry of Health, 2018). The prevalence of HIV-AIDS cases in Indonesia is 9.85 per 100,000 population. Meanwhile, the cumulative number of HIV cases from January 2018 to December 2018 was 96,740 cases (Ministry of Health, 2018).

In East Java alone, the cumulative number of HIV AIDS cases from January 2010 to December 2017 was 12,230 cases (SIHA Ministry of Health, 2018). And this is the province with the highest number of PLWHA among other provinces. In a meeting between the East Java Provincial Health Office and the Kediri City Health Office as well as all health facilities related to STI and HIV AIDS clinics in Kediri city, it was discussed that the high data does not mean the highest HIV AIDS cases in East Java, but because of the active health workers and counseling in East Java in finding new cases compared to other provinces. The TIPK program (HIV Testing for Health Worker Initiation and Counseling) is also very helpful in finding new cases. At Gambiran Hospital in Kediri alone, 250 cases of PLWHA were found in April 2018.

Based on preliminary studies conducted by researchers at the Gambiran City Viri Police VCT Hospital on April 29, 2019, data were given to 10 respondents according to which 7 respondents were strongly supported by their families to undergo ARV treatment starting from drug supervision, control and so on. the family protects everything that can corner or ostracize the respondent. In the quality of service, 8 respondents stated that the quality of service was still lacking due to

confidentiality which was still not fully secure where the room used as an examination site was not fully soundproofed so that the sound of communication between respondents and health workers who were inside could be heard from outside. In the use of respondents, almost all of them utilize the VCT Poly health facility as a consultation, routine visit, drug referral and service referral. Meanwhile, almost all respondents were compliant in undergoing ARV therapy according to the doctor's recommendations.

Lack of adherence is a major cause of failure of HIV patients on ART, therefore adherence must be monitored and evaluated regularly and encouraged at every visit. Maintaining treatment adherence is not easy, with surveys showing that one-third of HIV patients forget to take their medication within three days of the survey, whereas achieving virologic suppression requires very high levels of ART adherence. Research suggests that to achieve optimal viral suppression at least 90 - 95% of all doses should not be forgotten. (Ministry of Health, 2017).

In the National Guidelines for Antiretroviral Therapy of the Ministry of Health of the Republic of Indonesia, it is stated that the expected adherence to taking ARVs is 100% or Highly Active Antiretroviral Therapy (HAART), meaning that all ARV combinations must be taken in the right dose and not missed at the right time. There are 3 (three) classifications regarding the level of ARV treatment adherence, namely: 95% adherence level (good adherence), if less than 3 doses of antiretroviral drugs are not taken within 30 days, 80-95% adherence level (moderate adherence), if 3 - 12 doses of antiretroviral drugs are not taken within 30 days, and <80% adherence level (low adherence means low or non-compliant, if more than 12 doses of antiretroviral drugs are not taken within 30 days (Ministry of Health, 2017).

The results of several studies show that ARV treatment can improve the quality of life of PLWHA, as stated by the International Center for AIDS Care and Treatment Programs (ICAP). From July 2004 to December 2006, 171,259 HIV patients and 71,842 people have received ARV treatment. HIV patients reported to have died on treatment amounted to: 4% - 6%, treatment defaulters amounted to: 1-17%, while patients who continued treatment consisted of: 98% of adults and 93% of pediatric patients, with an average CD4 count increase within 12 months of treatment from 116/mm3 to 149/mm3. Cutsem reported that of 3,373 HIV patients treated between 2001-2005 and monitored in September 2006, 70% were still alive and receiving ART, while 16.9% were reported dead. (Theo Cerdas, 2007).

High adherence to antiretroviral treatment is also a predictor of HIV infection and lower survival and healthcare costs. This has been proven by researchers from John Hopkins Bloomberg School of Public Health. The study showed that the effect of high ARV treatment adherence can improve the health status of PLWHA and can save \$85 per month in treatment costs per patient (Science Daily, 2010).

Tuft Medical Center in Boston used a counseling approach to improve adherence of 156 PLWHA receiving ARV treatment and found that the role of the provider was very influential in improving adherence. They did this by: Providing complete and comprehensive information, understanding the patient's inability to use the medication, offering more effective counseling by having the patient self-report their adherence or belief in the medication and more time to dialogue with

EFFECTIVENESS OF FAMILY SUPPORT IN ANTIRETROVIRAL THERAPY AND COMPLICATIONS OF HIV/AIDS

(Clinical Research at the VCT Polyclinic Gambiran Regional Kediri City Hospital)

the patient to help solve problems encountered in medicine. (TMC, 2010). Patient adherence can be influenced by several factors, namely family support, quality of service and utilization of health facilities.

According to Friedman (2014) family support is the attitude, action and acceptance of the family towards its members. Family members are seen as an integral part of the family environment. The family also functions as a support system for its members and family members view that people who are supportive, are always ready to provide assistance with assistance if needed.

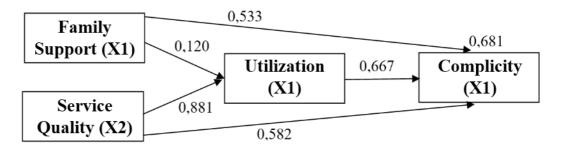
People as consumers certainly want quality service. Service quality is defined as the level of excellence expected and control over that level of excellence to meet customer desires (Tjiptono, 2008, in Dimas and Oktafani, 2014). Service quality can be interpreted as an effort to meet the needs and desires of consumers and the accuracy of delivery in balancing consumer expectations (Oktafani, 2014).

RESEARCH METHOD

In this study, researchers used a quantitative analytic design with a cross sectional approach, namely research to study the dynamics of the correlation between risk factors and their impact, by means of an approach, observation or data collection at a time (point time approach), meaning that each research subject was only observed once and measurements were made of the status of the character or subject variable at the time of the examination. This does not mean that all research subjects are observed at the same time (Soekidjo, 2002). This study will analyze family support and service quality on the utilization of VCT clinic and compliance of HIV/AIDS patients in undergoing Antiretroviral therapy (ARV) at Gambiran Hospital, Kediri City. The sample size of this study was 109 respondents with sampling technique using Accidental Sampling. Data analysis using Path Analysis test.

RESULT AND DISCUSSION

The results of the analysis of family support and service quality on the utilization of VCT Poli and compliance of HIV / AIDS patients in undergoing Antiretroviral therapy (ARV) at Gambiran Hospital, Kediri City.



Anis Khoirin Hayati, Dwi Wahyu Indrawati, Dedi Fardiaz, Joni Haryanto, Agus Hayatal Falah

Discussion

Family Support for HIV/AIDS Patients in Underlying Antiretroviral Therapy (ARV) at Gambiran Hospital, Kediri City. The results showed that the majority of respondents had sufficient family support as many as 56 respondents (51.4%). In addition, 29 respondents (26.6%) had good family support. Meanwhile, 24 respondents (22%) had less family support category.

Family is someone who is very close and has a blood relationship or marital status. Family is the main factor that influences everything a person will do. So that family support will be very important to be given to someone, especially to people who are in the stage of treatment or therapy in order to have the motivation to recover. Based on the results of the study, it is known that most respondents have sufficient family support categories where more support is provided by the respondent's parents to be obedient to undergo Antiretroviral Therapy (ARV) at the VCT Clinic of Gambiran Hospital, Kediri City. However, the study found that there were still a few respondents who did not get family support, this was because the respondents felt that the family did not pay attention if the respondent needed help and sometimes ignored the respondent's needs. In addition, the family is also often angry with the respondent if the respondent forgets to take medicine but rarely reminds to take medicine.

Quality of VCT Poli Services for HIV/AIDS Patients at Gambiran Hospital, Kediri City

The results showed that the majority of respondents rated the quality of service as sufficient, namely 56 respondents (51.4%). In addition, 27 respondents (24.8%) rated the service quality as poor. Meanwhile, 26 respondents (23.9%) rated the quality of service as good. Good service at a health facility is highly desired by all patients ranging from children to the elderly and even near death. Where the quality of service will be very concerned by patients, especially patients with certain diseases. Good service quality will affect patient interest in using available health facilities. Based on the results of the study, it is known that most respondents stated that the quality of service at the Gambiran Hospital VCT Polytechnic in Kediri City was in the sufficient category, but there were some respondents who considered the quality of service at the Gambiran Regional Hospital to be lacking. The lack of quality is caused by respondents considering that the room used for consultation is not soundproof where this is due to the room used is not well organized due to the relocation of a new hospital so that the availability of facilities is still under development.

Utilization of VCT Policies for HIV/AIDS Patients at Gambiran Hospital, Kediri City

The results showed that most respondents had moderate utilization as many as 55 respondents (50.5%). In addition, a total of 29 respondents (26.6%) had a low utilization category. Meanwhile, 25 respondents (22.9%) had high category utilization. The utilization of a health facility will be influenced by the quality of services available at the health facility. Where if the quality is less, the utilization will also be low, and vice versa, if the quality is good, the utilization will be high,

EFFECTIVENESS OF FAMILY SUPPORT IN ANTIRETROVIRAL THERAPY AND COMPLICATIONS OF HIV/AIDS

(Clinical Research at the VCT Polyclinic Gambiran Regional Kediri City Hospital)

which patients assume will not feel worried about entrusting their pain complaints to health facilities. Based on the results of the study, it is known that most of them stated that they had utilization in the moderate category, but there were a small number who stated that utilization at the Gambir VCT Polyclinic in Kediri City was in the low category, which was caused by a lack of quality services and also patients considered that consultation in the hospital was less private and less comfortable so that respondents chose to use consultation with people outside the hospital who were indeed engaged in ARV consultation and therapy in collaboration with Gambiran Hospital, Kediri City.

Compliance of HIV/AIDS Patients in Underlying Antiretroviral Therapy (ARV) at Gambiran Hospital, Kediri City

The results showed that most respondents were not compliant with antiretroviral therapy (ARV), namely 65 respondents (59.6%). While 44 respondents (40.4%) were compliant with antiretroviral therapy (ARV). Patient compliance in carrying out therapy is needed so that therapy can run smoothly so that the disease can be cured or weakened. However, it is not uncommon for patients to become non-compliant with taking drugs because they are bored and feel their motivation is lost because they think the patient cannot recover completely. Based on the results of my research, I found that most respondents were not compliant with antiretroviral (ARV) therapy that had been instructed by health workers to take according to dosage and schedule. The non-compliance was caused by often forgetting to take medicine on time and also patients often forget to bring medicine when traveling far away so that the treatment schedule is often interrupted.

The Effect of Family Support on the Utilization of VCT Policies at Gambiran Hospital, Kediri City

Based on the results of the Linear Regression analysis of the family support variable on utilization, the p-value is 0.000 < 0.05, so H0 is rejected, so it is concluded that there is a direct effect of family support on the utilization of the VCT Poly at the VCT Poly. Gambiran Hospital, Kediri City. Family support can affect the desire of HIV / AIDS patients to utilize the VCT Clinic at Gambiran Hospital, Kediri City. This is due to the inability of patients to force themselves to conduct examinations and treatment to health facilities. So if the family can support it well, then the patient's desire to use the VCT Poly will increase because the respondent will assume there is still someone who cares about his health so that he will try to check his illness. Where this is in accordance with the results of the study where there is a direct influence of family support on the utilization of the VCT Clinic at Gambiran Hospital, Kediri City.

The Effect of Service Quality on the Use of VCT Policies at Gambiran Hospital, Kediri City

Based on the results of Linear Regression analysis of service quality variables on utilization, the p-value is 0.000 <0.05, so H0 is rejected, so it is concluded that there is a direct effect of service quality on VCT utilization. Poly at Gambiran Hospital, Kediri City. Assessment of the quality of services provided at a health

facility will affect the patient's desire to utilize the health facility. If the quality of service is less, the patient will choose to use another health facility whose quality of service is better than the previous health facility. The utilization itself is based on many things but what affects the quality of service where it is in accordance with the results of the study that there is a direct influence of service quality on the utilization of the VCT Clinic at Gambiran Hospital, Kediri City.

The Effect of Family Support on the Utilization of VCT Policies at Gambiran Hospital, Kediri City

Based on the results of the Linear Regression analysis of the family support variable on utilization, the p-value is 0.000 < 0.05, so H0 is rejected, so it is concluded that there is a direct effect of family support on the utilization of the VCT Poly at the VCT Poly. Gambiran Hospital, Kediri City. Family support can affect the desire of HIV / AIDS patients to utilize the VCT Clinic at Gambiran Hospital, Kediri City. This is due to the inability of patients to force themselves to conduct examinations and treatment to health facilities. So if the family can support it well, then the patient's desire to use the VCT Poly will increase because the respondent will assume there is still someone who cares about his health so that he will try to check his illness. Where this is in accordance with the results of the study where there is a direct influence of family support on the utilization of the VCT Clinic at Gambiran Hospital, Kediri City.

The Effect of Service Quality on the Use of VCT Policies at Gambiran Hospital, Kediri City

Based on the results of Linear Regression analysis of service quality variables on utilization, the p-value is 0.000 <0.05, so H0 is rejected, so it is concluded that there is a direct effect of service quality on VCT utilization. Poly at Gambiran Hospital, Kediri City. Assessment of the quality of services provided at a health facility will affect the patient's desire to utilize the health facility. If the quality of service is less, the patient will choose to use another health facility whose quality of service is better than the previous health facility. The utilization itself is based on many things but what affects the quality of service where it is in accordance with the results of the study that there is a direct influence of service quality on the utilization of the VCT Clinic at Gambiran Hospital, Kediri City.

The Effect of Family Support on Adherence of HIV/AIDS Patients in Undergoing Antiretroviral Therapy (ARV) at Gambiran Hospital, Kediri City

Based on Linear Regression analysis of family support variables on compliance, the p-value is 0.004 <0.05, so H0 is rejected, so it is concluded that there is a direct influence of family support on the compliance of HIV / AIDS patients. in undergoing antiretroviral treatment (ARV) at Gambiran Hospital, Kediri City. Family support is an important role for families, especially parents in caring for and educating children. In this case the family provides support to comply with antiretroviral therapy (ARV) at Gambiran Hospital, Kediri City, which is to treat and suppress HIV / AIDS disease where the disease must be treated for a long period of time because there is no specific drug that can cure it in a certain way. solve the

EFFECTIVENESS OF FAMILY SUPPORT IN ANTIRETROVIRAL THERAPY AND COMPLICATIONS OF HIV/AIDS

(Clinical Research at the VCT Polyclinic Gambiran Regional Kediri City Hospital)

disease. So that antiretroviral therapy (ARV) itself is very important to prevent the transmission of this disease to others. This is in accordance with the results of the study which states that there is a direct influence of family support on the compliance of HIV / AIDS patients in undergoing Antiretroviral therapy (ARV) at Gambiran Hospital, Kediri City.

The Effect of Service Quality on HIV/AIDS Patient Compliance in Undergoing Antiretroviral Therapy (ARV) at Gambiran Hospital, Kediri City

Based on the results of Linear Regression analysis of service quality variables on compliance obtained p-value 0.007 < 0.05 then H0 is rejected so it is concluded that there is a direct effect of service quality on compliance of HIV / AIDS patients in undergoing antiretroviral therapy (ARV) at Gambiran Hospital, Kediri City. Assessment of the quality of services provided at a health facility will affect the patient's desire to undergo antiretroviral therapy (ARV) at the health facility. If the quality of service is lacking, the patient will choose to use another health facility whose quality of service is better than the previous health facility. This is in accordance with the results of the study of the direct effect of service quality on the compliance of HIV / AIDS patients in undergoing Antiretroviral therapy (ARV) at Gambiran Hospital, Kediri City. This relates to good quality will increase the compliance of HIV / AIDS patients undergoing antiretroviral therapy (ARV) where patients who think if the quality of health facilities is good then it will entrust all therapies that must be done will be handled by professionals in their field. Vice versa, if the patient considers the quality of service to be lacking, the patient will choose to use other health facilities that are more capable and trustworthy.

Effect of Utilization on Adherence of HIV/AIDS Patients in Undergoing Antiretroviral Therapy (ARV) at Gambiran Hospital, Kediri City

Based on the results of Linear Regression analysis of utilization variables on compliance obtained p-value 0.020 < 0.05 then H0 is rejected so it is concluded that there is a direct influence on the utilization of HIV / AIDS patients. compliance undergoing antiretroviral therapy (ARV) at Gambiran Hospital, Kediri City. Utilization of health facilities will increase patient compliance in undergoing antiretroviral therapy (ARV). Based on the results of the study, it was found that there is a direct influence on the compliance of HIV/AIDS patients in undergoing Antiretroviral (ARV) therapy at Gambiran Hospital, Kediri City. This is because the more often he uses the VCT clinic, the more the patient will get input and discussion related to the handling of his disease and health workers will direct and motivate patients to routinely undergo antiretroviral therapy (ARV).

The Effect of Family Support Through the Use of VCT Policies on HIV / AIDS Patient Compliance in Undergoing Antiretroviral Therapy (ARV) at Gambiran Hospital, Kediri City

It is known that the direct effect of family support on compliance is 0.533. While the indirect effect of family support through the use of compliance is $0.120 \times 0.667 = 0.080$. Then the total influence of family support through the use of compliance is 0.533 + 0.080 = 0.613. Obtained a total influence value of 0.613 so

Anis Khoirin Hayati, Dwi Wahyu Indrawati, Dedi Fardiaz, Joni Haryanto, Agus Hayatal Falah

it can be concluded that there is an influence of family support through the use of VCT Poli on the compliance of HIV / AIDS patients in undergoing antiretroviral therapy (ARV) at Gambiran Hospital, Kediri City.

Family support can affect the desire of HIV/AIDS patients to utilize the VCT clinic at Gambiran Hospital, Kediri City. This is due to the inability of patients to force themselves to conduct examinations and treatment to health facilities. So if the family can support it well, then the patient's desire to use the VCT Poly will increase because the respondent will assume there is still someone who cares about his health so that he will try to check his illness. In addition, family support is an important role for families, especially parents in caring for and educating children. In this case, providing support for adherence to antiretroviral therapy (ARV) at Gambiran Hospital, Kediri City is to treat and suppress HIV / AIDS disease where the disease must be treated for a long period of time because there is no specific drug that can completely cure the disease. So that antiretroviral therapy (ARV) itself is very important to prevent transmission of this disease to others. This is in accordance with the results of research on the effect of family support through the use of VCT Poli on the compliance of HIV / AIDS patients in undergoing antiretroviral therapy (ARV) at Gambiran Hospital, Kediri City.

The Effect of Service Quality Through the Use of VCT Policies on HIV / AIDS Patient Compliance in Undergoing Antiretroviral Therapy (ARV) at Gambiran Hospital, Kediri City

It is known that the direct effect given by service quality on compliance is 0.582. While the indirect effect of service quality through utilization on compliance is $0.881 \times 0.667 = 0.588$. Then the total effect of service quality through utilization on compliance is 0.582 + 0.588 = 1.170. Obtained a total effect value of 1.170 so it can be concluded that there is an influence of service quality through the utilization of VCT Poli on the compliance of HIV / AIDS patients in undergoing antiretroviral therapy (ARV) at Gambiran Hospital, Kediri City.

Assessment of the quality of services provided at a health facility will affect the patient's desire to utilize the health facility. If the quality of service is lacking, the patient will choose to use another health facility whose quality of service is better than the previous health facility. The utilization itself is based on many things but the most important is the quality of service. In addition, the assessment of service quality will affect the patient's desire to undergo antiretroviral therapy (ARV) at the health facility. If the quality of service is lacking, the patient will choose to use another health facility with better service quality than the previous health facility. This is in accordance with the results of research on the effect of service quality through the utilization of VCT Poli on the compliance of HIV/AIDS patients in undergoing antiretroviral therapy (ARV) at Gambiran Hospital, Kediri City.

CONCLUSION

This study found that most respondents had sufficient family support and service quality, but the level of compliance in undergoing antiretroviral therapy (ARV) was still low, with 59.6% of respondents being non-compliant. The utilization of VCT clinic services at Gambiran Hospital, Kediri City was in the moderate category. The results of the analysis showed a significant influence between family support and service quality on VCT Poly utilization and patient compliance in undergoing ARV therapy. Family support and service utilization contribute directly to improving adherence of HIV/AIDS patients at Gambiran Hospital.

As a follow-up, the study recommends that patients utilize the VCT clinic and counseling regularly to improve adherence in ARV therapy. Families are expected to actively provide verbal and nonverbal support, including reminding therapy schedules and giving special attention to patients. This study also suggests further in-depth research related to the knowledge and motivation of HIV/AIDS patients. In addition, educational institutions are expected to use the results of this study as a reference to increase understanding of the importance of family support and service quality in improving adherence to ARV therapy.

REFERENCES

- Arif Sumantri. Metodologi Penelitian Kesehatan. Kencana Prenada media Group : Jakarta, 2016.
- Direktorat Pengendalian Penyakit dan Penyehatan Lingkungan Departemen Kesehatan R.I (2017). Laporan Penemuan Kasus HIV/AIDS Triwulan IV Tahun 2011
- Herlambang Sasmita Aji (2015). Kepatuhan Pasien HIV dan AIDS Terhadap Terapi Antiretroviral di RSUP Dr. Kariadi Semarang. Jurnal Promosi Kesehatan Vol. 5/No.1/Januari 2015.
- Jack Morin et al (2015). Stigma dan HIV/AIDS Di Wilayah Pengunungan Tengah. Jayapura Papua. www.papuaweb.org.
- Liz Highleyman (2016). Hasil Terapi Antiretroviral yang baik pada populasi pasien yang menantang. http://spiritia.or.id
- Okki Ramadian et al (2015). Efek samping Antiretroviral Lini Pertama Terhadap Adherence pada ODHA di Layanan Terpadu HIV RSCM.
- Science Daily (2015) Kepatuhan Terapi Antiretrovital Tinggi Berhubungan Dengan Biaya Kesehatan Yang lebih Rendah. http://spiritia.or.id.
- Theo Smart (2016) HATIP 176: Kepatuhan dan Penahanan pada Perawatan HIV di Rangkaian Sumber Daya Terbatas. http://spiritia.or.id.