Indonesian Journal of Global Health Research
Volume 8 Number 6, December 2026
e-ISSN 2715-1972; p-ISSN 2714-9749
http://jurnal.globalhealthsciencegroup.com/index.php/IJGHR

THE RELATIONSHIP BETWEEN SPIRITUAL NEEDS AND ADHERENCE TO ARV MEDICATION

Yance Ronard Rainuny[1]*, Yestiani Norita Joni[1], Fenska Narly Makualaina[2], Lisma Natalia Br Sembiring[2], Fathia Fakhri Inayati Said[2], Farhan Imba[2]
[1]Nursing Profesional Education Study Program, Faculty of Health Siences, Universitas Jayapura, Jln. Youmakhe Sentani, Jayapura, Papua 99111, Indonesia
[2]Bachelor of Nursing Program, Faculty of Health Siences, Universitas Jayapura, Jln. Youmakhe Sentani, Jayapura, Papua 99111, Indonesia
*arsrainuny@gmail.com

ABSTRACT
Adherence to antiretroviral (ARV) therapy is crucial for people living with HIV/AIDS (PLWHA) to suppress viral replication and prevent resistance. The spiritual dimension is often considered a source of internal strength, yet its relationship with medical adherence at the primary health center level remains under-researched. This study aims to analyze the relationship between spiritual needs and adherence to antiretroviral (ARV) medication at the Sentani Health Center. This analytical quantitative study with a cross-sectional design involved 59 respondents selected via incidental sampling at the Sentani Public Health Center (October 2024–February 2025). The research instruments used in this study were the Spiritual Needs Questionnaire (SPNQ) and the 8-item Morisky Medication Adherence Scale (MMAS-8). The results of the validity and reliability tests indicated that both instruments were valid, reliable, and suitable for use in this study. Data were analyzed using the Kendall's Tau-b correlation test. The majority of respondents were aged 20-24 years (44.1%) and were female (50.8%). A total of 86.4% of respondents reported high spiritual needs, yet 93.2% exhibited low adherence to ARV medication. Statistical testing indicated no significant correlation between spiritual needs and ARV medication adherence ($p = 0.416 > 0.05$), with a very weak and negative relationship ($r = -0.107$). High spiritual needs do not directly guarantee adherence to antiretroviral (ARV) medication among people living with HIV/AIDS (PLWHA) at the Sentani Community Health Center. Adherence is a multifactorial phenomenon that is likely influenced more by psychosocial factors, family support, and distress tolerance.

Keywords: ARV adherence; HIV/AIDS; spiritual needs

How to cite (in APA style)
Rainuny, Y. R., Joni, Y. N., Makualaina, F. N., Sembiring, L. N. B., Said, F. I., & Imba, F. (2026). The Relationship between Spiritual Needs and Adherence to ARV Medication . *Indonesian Journal of Global Health Research*, *8*(6), 1–8. https://doi.org/10.37287/ijghr.v8i6.2569.

INTRODUCTION

HIV/AIDS remains a major global and national public health challenge that significantly affects not only the physical condition of people living with the disease, but also their psychological, social, and spiritual dimensions (Nsubuga, 2024). In Indonesia, Papua Province is recognized as one of the regions with the highest HIV/AIDS burden in the country. According to regional health data, the cumulative number of HIV/AIDS cases in Papua Province has exceeded more than 18,000 to 23,000 active cases, with Jayapura Regency being one of the largest contributors, accounting for more than 5,900 to 6,200 cumulative cases (Jubi, 2025; Tribun Papua, 2025). The annual increase in new cases indicates that HIV transmission and disease burden continue to require very serious attention. HIV/AIDS remains a major global and national public health challenge that significantly affects not only the physical condition of people living with the disease, but also their psychological, social, and spiritual dimensions (Nsubuga, 2024). In Indonesia, Papua Province is recognized as one of the regions with the highest HIV/AIDS burden in the country. According to regional health data, the cumulative number of HIV/AIDS cases in Papua Province has exceeded more than 18,000 to 23,000 active cases, with Jayapura Regency being one of the largest contributors, accounting for more than 5,900 to 6,200 cumulative cases (Jubi, 2025; Tribun Papua,

2025). The annual increase in new cases indicates that HIV transmission and disease burden continue to require very serious attention.

In Jayapura Regency, particularly within the working area of the Sentani Community Health Center as one of the primary referral health facilities, efforts to control HIV/AIDS continue to be strengthened through counseling, HIV testing, and the provision of antiretroviral (ARV) therapy (Sembiring & Makualaina, 2024). However, people living with HIV/AIDS (PLWHA) often face various complex psychosocial challenges in everyday life, including social stigma, discrimination, excessive anxiety, depression, and treatment fatigue that may lead to treatment discontinuation (dropout) (Kiling & Kiling-Bunga, 2019). When psychological motivation and external support weaken, patients' adherence to their daily treatment regimen tends to decline significantly, which directly contributes to failure of viral suppression and an increased risk of drug resistance.

It is within this context that non-pharmacological dimensions such as spirituality and the fulfillment of spiritual needs play a crucial role that is often overlooked in standard clinical practice (Najihah et al., 2026). Spiritual needs encompass an individual's search for meaning, hope, inner peace, and a relationship with the Creator when facing a life-threatening chronic illness (Muthmainnah & Kep, 2025). For people living with HIV/AIDS (PLWHA), an HIV-positive diagnosis frequently triggers existential suffering and profound inner struggles; therefore, the fulfillment of spiritual needs may become a source of inner strength that helps patients accept the reality of their condition and develop perseverance in adhering to treatment (Olii & Muridan, 2026).

Various previous empirical studies have demonstrated that spiritual well-being and positive spiritual coping are strongly associated with improved health adherence behaviors among patients with chronic illnesses (Rabuzain et al., 2026). Patients whose spiritual needs are fulfilled tend to experience lower levels of stress, better emotional stability, and stronger internal motivation to comply with treatment instructions provided by healthcare professionals (Irwan et al., 2026). In contrast, unmet spiritual needs or the emergence of negative spiritual coping—such as perceiving illness as a divine punishment—may lead to hopelessness, denial of health status, and discontinuation of antiretroviral (ARV) therapy (Moreira & Rodrigues, 2022). Although the importance of a holistic approach in nursing has been widely recognized, studies specifically examining the relationship between spiritual needs and adherence to antiretroviral (ARV) medication in primary healthcare facilities, such as Sentani Community Health Center, remain very limited. Considering the high number of HIV/AIDS cases in Jayapura Regency and the importance of adherence to ARV therapy, further assessment of the spiritual dimension is therefore essential and warrants further investigation.

METHOD

This study was an analytic quantitative study using a cross-sectional approach. This design was selected because all research variables were measured or observed at a single point in time for each subject through interviews or questionnaire administration. The study was conducted from October to February 2025. The population of this study consisted of 140 people. The sample size was determined using the Slovin formula, resulting in 59 respondents. Samling was carried out using a non-probability sampling technique, specifically incidental sampling. The inclusion criteria were people living with HIV/AIDS (PLWHA) who were willing to participate as respondents, aged 18 years or older, able to read and write, and currently undergoing ARV therapy. The exclusion criteria were PLWHA who experienced severe physical discomfort that prevented them from participating in the study. The instruments used in this study included the Spiritual Needs Questionnaire (SPNQ) to measure spiritual needs (Büssing et al., 2010). The SPNQ consists of 26 items assessed using a four-point Likert scale, with response options of not important (0), somewhat important (1), very important (2), and extremely important (3). The questionnaire is divided into four dimensions: relationship with oneself (8 items; items 1–8), relationship with others (13 items; items 9–21),

relationship with nature (2 items; items 22–23), and relationship with God (3 items; items 24–26). The instrument demonstrated good validity, with r-values > 0.70, and good reliability, with reliability coefficients ranging from r = 0.74 to 0.92, indicating that the instrument was suitable for use (Saputri, 2026).

Adherence to ARV medication was measured using the 8-item Morisky Medication Adherence Scale (MMAS-8), with total scores ranging from 0 to 8. Adherence levels were categorized as high adherence (score = 8), moderate adherence (score = 6–7), and low adherence (score < 6) (Inoue et al., 2023). Validity and reliability testing of the instrument showed that the calculated r-values (r-count) were greater than the r-table value (0.355), while the reliability test yielded a Cronbach's Alpha coefficient of 0.729, indicating that the instrument was valid and reliable for use in this study (Amirudin et al., 2026). Bivariate analysis was performed using Kendall's Rho test. If the p-value was greater than the alpha level (0.05), the result indicated that there was no statistically significant relationship between the independent and dependent variables studied.

RESULT

Table 1.
Respondent characteristics (n=59)

Characteristics	f	%
Age		
15 - 19 years	13	22
20 - 24 years	26	44,1
25 – 49 years	20	33,9
>50 years	0	0
Responden Religion		
Prostestan	55	93,2
Catholic	0	0
Islam	4	6,8
Hinduism	0	0
Buddhist	0	0
Sex		
Male	29	49,2
Female	30	50,8
Education		
No Formal Education	0	0
Primary School Graduate	4	6,8
Junior High School Graduate	5	8,5
Senior High School Graduate	38	64,4
College	12	20,3
Occupation		
Unemployed	10	16,9
Housewife	8	13,6
Private Employee	4	6,8
Farmer	4	6,8
Laborer	0	0
Student	23	39
Civil Servan /Military/Police officer	6	10,2
Other	4	6,8

Table 1 shows that the majority of respondents were aged 20–24 years, accounting for 25 respondents (44.1%). Most respondents were Protestant Christians, totaling 55 respondents (93.2%). Based on sex, the largest proportion were female, with 30 respondents (50.8%). In terms of educational level, most respondents were senior high school graduates, totaling 38 respondents (64.4%). Regarding occupation, the largest group consisted of students, with 23 respondents (39.0%).

Table 2 shows that among the 59 respondents, 51 respondents (86.4%) had high spiritual needs, while 8 respondents (13.6%) had low spiritual needs.

Table 2
Distribution of Respondents According to Spiritual Needs (n = 59)

Spiritual Needs	f	%
Low	8	13,6
High	51	86,4

Table 3
Distribution of Respondents According to ARV Medication Adherence (n = 59)

ARV Medication Adherence	F	%
High Adherence	0	0%
Moderate Adherence	4	6,8%
Low Adherence	55	93,2%

Table 3 shows that among the 59 respondents, the majority had low adherence, accounting for 55 respondents (93.2%), while the fewest respondents had high adherence, totaling 4 respondents (6.8%).

Table 4
The Relationship Between Spiritual Needs and Antiretroviral (ARV) Medication Adherence

Spiritual Needs	Adherence to ARV Medication								α	Sig. 2-tailed	Correlation Coefficient
	High Adherence		Moderate Adherence		Low Adherence		Total				
	f	%	f	%	f	%	f	%			
High	0	0	0	0	8	13,6	8	13,6	< 0,05	0,416	- 0,107
Low	0	0	4	6,8	47	79,7	51	86,4			

Table 4 presents the results obtained from 59 respondents at the Sentani Community Health Center. The Kendall's tau-b test was interpreted as follows: the Sig. (2-tailed) value was 0.416, which was greater than the alpha value (α = 0.05). Therefore, there was no statistically significant relationship between spiritual needs and adherence to ARV medication at the Sentani Community Health Center. The correlation coefficient was -0.107, indicating that the relationship between spiritual needs and adherence to ARV medication was very weak. Furthermore, the Kendall's tau-b correlation coefficient of -0.107 was interpreted as a weak negative relationship. Thus, the relationship between spiritual needs and ARV medication adherence at the Sentani Community Health Center was negative, meaning that spiritual needs and adherence to ARV medication were inversely related and did not move in the same direction.

DISCUSSION

Respondent Characteristics: Age, Religion, Sex, Education, and Occupation

Age

The majority of respondents were aged 20–24 years (44.1%). In developmental psychology literature, this age group is categorized as emerging adults or young adults. This stage is characterized by identity exploration and high cognitive flexibility. Individuals in this age group have unique characteristics in responding to health and social guidelines, as they tend to possess high idealism while still being in the process of aligning it with practical life skills (Yurni et al., 2026). The predominance of respondents in this age group indicates that the study data reflect the perspectives of individuals who are in a productive transitional phase of life. This finding also suggests a relatively high prevalence of behaviors associated with HIV/AIDS risk among people living with HIV/AIDS within the working area of the Sentani Community Health Center.

Religion

The majority of respondents were Protestant Christians, totaling 55 respondents (93.2%). These data indicate that the respondent characteristics in this study were predominantly represented by individuals with a Protestant Christian background. The predominance of a particular religion within a region is generally influenced by demographic, social, cultural, and historical factors related to community development. In the Sentani area and Jayapura Regency, Protestant Christianity is indeed the religion adhered to by most community members; therefore, the

distribution of respondents in this study reflects the characteristics of the local population

Sex

The majority of respondents were female, accounting for 30 respondents (50.8%). The predominance of female respondents may be influenced by several factors, including the proportion of women within the target population, access to healthcare services, and the tendency of women to utilize healthcare facilities more actively than men. The findings of this study are consistent with previous research reporting that most people living with HIV/AIDS who were undergoing ARV therapy were female. That study explained that women tend to be more adherent in utilizing healthcare services and are generally more open to receiving family and social support during treatment (Seran et al., 2025).

Education

The majority of respondents were senior high school graduates, totaling 38 respondents (64.4%). This finding indicates that most respondents had a secondary level of education. Educational level is an important factor that may influence an individual's ability to receive information, understand explanations provided by healthcare professionals, and make decisions related to health behaviors, including adherence to ARV medication. Previous studies have also reported that most people living with HIV/AIDS undergoing ARV therapy had a secondary educational background (senior high school level). These studies suggest that secondary education provides adequate basic skills to understand health education and comply with treatment recommendations (Lavenia et al., 2026).

Occupation

The results of the study showed that the largest occupational group among respondents was students, comprising 23 respondents (39.0%). This finding indicates that most respondents were in late adolescence to young adulthood and were still pursuing their education. Students represent a productive age group with distinctive psychosocial developmental characteristics, such as identity exploration, increased social interaction, and adaptation to educational and peer environments. Previous studies have similarly reported that most young people living with HIV/AIDS were students. These studies demonstrated that social support from families and educational environments plays an important role in improving adherence to ARV therapy among young individuals (Ratnawati et al., 2022)

Spiritual Needs

The results of the study showed that among the 59 respondents, the majority had high spiritual support needs, totaling 51 respondents (86.4%), while only 8 respondents (13.6%) had low spiritual support needs. These findings indicate that spirituality is a highly important need for people living with HIV/AIDS. Living with a lifelong chronic illness, undergoing long-term ARV therapy, and experiencing social stigma may create significant psychological distress, leading individuals to seek inner sources of strength to maintain hope and meaning in life. In holistic nursing, spirituality is regarded as an essential dimension associated with coping ability, self-acceptance, and adaptation to illness (Astle & Duggleby, 2024). The high level of spiritual support needs is consistent with findings from other studies, which reported that most people living with HIV/AIDS require spiritual support from their families, healthcare professionals, and religious communities to help them cope with anxiety, fear, and stigma associated with their illness (Halauwet et al., 2024).

Adherence to ARV Medication

The results of the study showed that among the 59 respondents, the majority had low adherence to ARV medication, totaling 55 respondents (93.2%), while only 4 respondents (6.8%) had high adherence. These findings indicate that the level of adherence to ARV therapy among the respondents was still very low. Low adherence is a serious problem in HIV/AIDS management

because ARV therapy must be taken regularly and continuously to suppress viral replication, increase CD4 cell counts, and prevent the development of drug resistance.

Poor adherence to ARV medication may be influenced by various factors, including limited knowledge about the importance of therapy, medication side effects, treatment fatigue due to long-term medication use, social stigma, inadequate family support, economic difficulties, and limited access to healthcare services (Misutarno et al., 2025). Previous studies have also reported that most people living with HIV/AIDS undergoing ARV therapy had low levels of adherence, particularly among patients who received insufficient family and psychosocial support (Rantepadang & Tamuntuan, 2025).

The Relationship Between Spiritual Needs and Adherence to ARV Medication at the Sentani Community Health Center

The Kendall's Tau-b test showed a p-value of 0.416, which was greater than the significance level of $\alpha = 0.05$. This finding indicates that there was no statistically significant relationship between spiritual needs and adherence to ARV medication among respondents at the Sentani Community Health Center. The result suggests that the fulfillment or level of spiritual needs among people living with HIV/AIDS in this setting was not a primary determinant directly influencing medication adherence behavior. This finding is consistent with several studies reporting that the influence of spirituality on health is complex and not always linear (Carvalho, 2022). Although spirituality is often regarded as a positive coping mechanism, in the context of medical adherence, other factors such as distress tolerance and social support have frequently been found to exert a stronger and statistically more significant influence than spirituality itself (Saputra et al., 2024).

The correlation coefficient value of -0.107 indicates a very weak negative relationship. This negative direction provides an interesting theoretical implication, suggesting that as perceived spiritual needs increase (or possibly as spiritual imbalance/spiritual distress increases), adherence to ARV medication tends to decrease, although the effect is extremely small and not statistically significant. Some individuals with certain spiritual beliefs may perceive that their healing is entirely in God's hands, thereby reducing the perceived urgency to adhere strictly to a medical regimen (do Espírito Santo et al., 2013; Kremer et al., 2009). High spiritual needs that remain unmet may encourage patients to seek faith-based or spiritual healing as a substitute for medical treatment, which may ultimately reduce adherence to ARV therapy (Thielman et al., 2014). Furthermore, patients with high spiritual needs that are not adequately addressed may experience psychological distress, which can decrease their self-efficacy to remain adherent to treatment (Fadhilah & Yuliza, 2025).

This finding at the Sentani Community Health Center provides a different perspective from the study by Umah (2019), which reported that spiritual motivation could improve adherence through changes in attitude (Umah & Irawanto, 2019). This difference is most likely influenced by cultural background, family support, and accessibility of healthcare services in Sentani, which may have a greater influence on patients' behavior than spirituality alone. Recent research by Olanrewaju et al. (2024) emphasized that demographic variables such as age and educational level, as well as clinical conditions, are often stronger predictors of viral load and treatment adherence than spiritual practices alone (Olanrewaju et al., 2024). Therefore, the absence of a significant relationship at the Sentani Community Health Center may be explained by the presence of other mediating factors that were not measured in this study, such as peer support or patients' self-efficacy.

CONCLUSION

The absence of a significant relationship at the Sentani Community Health Center emphasizes that ARV adherence is a multifactorial phenomenon.

REFERENCES

Amirudin, I., Rohmawati, D. L., Aryani, D. F., Yasni, M., & Marsiami, A. S. (2026). Factors associated with antiretroviral therapy adherence among people living with HIV/AIDS in Indonesia. Cendekia Medika: Jurnal Stikes Al-Maarif Baturaja, 11(1), 139–148.

Astle, B. J., & Duggleby, W. (2024). Potter and Perry's Canadian fundamentals of nursing. Elsevier Canada.

Büssing, A., Balzat, H.-J., & Heusser, P. (2010). Spiritual needs of patients with chronic pain diseases and cancer-validation of the spiritual needs questionnaire. European Journal of Medical Research, 15(6), 266.

Carvalho, P. P. (2022). Religiosidade / Espiritualidade e Adesão à Terapia Antirretroviral em Pessoas Vivendo com HIV. 45–60.

do Espirito Santo, C. C., Gomes, A. M. T., de Oliveira, D. C., & Marques, S. C. (2013). Antretroviral treatment adherence and the spirituality of people with HIV/AIDS: social representations study/Adesao ao tratamento antirretroviral e a espiritualidade de pessoas com HIV/AIDS: estudo de representacoes sociais/Adhesión al tratamiento antirretroviral y la espiritualidad de personas con VIH/SIDA: estudio de representaciones sociales. Enfermagem Uerj, 21(4), 458–464.

Fadhilah, N., & Yuliza, H. (2025). Self-Efficacy Pasien Tuberkulosis Dalam Menjalankan Pengobatan. Pertama. Jakarta: Nuansa Fajar Cemerlang Jakarta.

Fitri, D. Y., Indawati, E., Suliati, A. R., & Murtiani, F. (2023). PENGARUH TINGKAT SPIRITUALITAS TERHADAP KUALITAS HIDUP PASIEN HIV/AIDS THE INFLUENCE OF SPIRITUALITY LEVEL ON THE QUALITY OF LIFE IN HIV/AIDS PATIENTS. Jurnal Ilmu Kesehatan Masyarakat, 19(3), 180–186.

Halauwet, I., Watak, S. R., & Montang, R. D. (2024). PERANAN PELAYANAN BIMBINGAN KONSELING TERHADAP ORANG DENGAN HIV/AIDS (ODHA) DI KOTA SORONG. NERIA, 2(1), 24–43.

Inoue, Y., Oka, S., Yokoyama, S., Hasegawa, K., Mahlich, J., Schaede, U., Habuka, N., & Murata, Y. (2023). Medication adherence of people living with HIV in Japan—a cross-sectional study. Healthcare, 11(4), 451.

Irwan, N. M., Kep, M., Ginting, C. N., & Chiuman, L. (2026). Pendekatan Holistik dalam Perawatan Pasien Diabetes yang menjalani Hemodialisis: Teori, Praktik, dan Implementasi Pendekatan Menyeluruh pada Pasien Kronis. PT KIMHSAFI ALUNG CIPTA.

Jubi. (2025). Kasus HIV/AIDS di Papua meningkat pada tahun 2025. Jubi Papua. https://jubi.id

Kiling, I. Y., & Kiling-Bunga, B. N. (2019). Pengukuran dan faktor kualitas hidup pada orang usia lanjut. Journal of Health and Behavioral Science, 1(3), 149–165.

Kremer, H., Ironson, G., & Porr, M. (2009). Spiritual and mind–body beliefs as barriers and motivators to HIV-treatment decision-making and medication adherence? A qualitative study. AIDS Patient Care and STDs, 23(2), 127–134.

Lavenia, M., Ratnawati, R., & Rokhman, M. T. N. (2026). Health Education and Self-Care: The Impact of Adherence to Medication: Pendidikan Kesehatan dan Self Care Terhadap Pengaruh Kepatuhan Minum Obat. Academia Open, 11(1), 10–21070.

Misutarno, M., Hasina, S. N., Ainiyah, N., & Sulistyorini, S. (2025). Hubungan peer group support dengan kepatuhan pengobatan ARV penderita HIV/AIDS. Jurnal Keperawatan, 17(3), 563–572.

Moreira, R. D., & Rodrigues, A. P. F. (2022). Coping religioso espiritual e adesão terapêutica em pessoas vivendo com HIV. Revista Pistis & Praxis, 14(3).

Muthmainnah, N., & Kep, M. (2025). Dimensi Spiritual Dalam Proses Penyembuhan. CV Jejak (Jejak Publisher).

Najihah, S. K., Lembang, F. T. D., Nurhayati, E., Kp, S., Kep, M., Mat, N. S. K., Jumilia, N., Kep, M., & Hafid, M. A. (2026). BUNGA RAMPAI KEPERAWATAN KLINIK MODERN: PENDEKATAN HOLISTIK DAN BERBASIS BUKTI DALAM PELAYANAN KESEHATAN DI INDONESIA. Optimal Untuk Negeri.

Nsubuga, S. N. (2024). HIV/AIDS and stigma: Challenges and strategies for change. Newport International Journal of Public Health and Pharmacy, 5(2), 78–81.

Olanrewaju, M. T., Olanrewaju, O. O., Ibrahim, A. O., Ipinnimo, T. M., Ajayi, P. O., & Sito, O. K. (2024). Pattern of Medication Adherence, Spirituality and Viral Load amongst Adult Patients on Highly Active Antiretroviral Therapy in Rural Southwest Nigeria. Nigerian Postgraduate Medical Journal, 31(4), 290–298.

Olii, P. L., & Muridan, M. (2026). Peran Pembimbing Rohani dalam Penguatan Diri pada Pasien Kanker Serviks di RSUD Banyumas. Jurnal Ilmiah Nusantara, 3(2), 668–677.

QALBI, N. U. R. (2026). Hubungan Dukungan Keluarga, Dukungan Sosial, Dan Self Stigma Dengan Kepatuhan Pengobatan Antiretroviral (Arv) Pada Orang Dengan Hiv-Aids (Odhiv) Di Puskesmas Kassi Kassi Tahun 2025 The Relationship Between Family Support, Social Support, And Self-Stigma with Antiretroviral (Arv) Treatment Adherence Among People Living With HIV/AIDS (PLWHA) At THE KASSI KASSI COMMUNITY HEALTH CENTER IN 2025. Universitas Hasanuddin.

Rabuzain, R., Wantonoro, W., & Asykuri, A. (2026). Kesejahteraan Spiritual dan Dampaknya terhadap Kecemasan, Depresi, dan Kualitas Hidup Pasien Hemodialisa: Sebuah Tinjauan Literatur. Jurnal Keperawatan Florence Nightingale, 9(1), 99–111.

Rantepadang, A., & Tamuntuan, L. A. (2025). Kepatuhan Minum Obat Antiretroviral dan Kualitas Hidup Orang dengan HIV. Klabat Journal of Nursing, 7(2), 299–306.

Ratnawati, D., Wahyuniar, L., & Herman, R. (2022). Faktor–faktor yang Berhubungan dengan Kepatuhan Minum Obat ARV pada ODHIV. Journal of Midwifery and Health Administration Research, 2(2), 89–102.

Saputra, R., Waluyo, A., & Edison, C. (2024). The Relationship between distress tolerance and spiritual well-being towards ARV therapy adherence in people living with HIV/AIDS. Healthcare, 12(8), 839.

SAPUTRI, Y. (2026). Gambaran Kebutuhan Spiritual pada Pasien Kanker Wanita yang Menjalankan Kemoterapi Menggunakan Spiritual Needs Questionnare (Spnq) Di Rumah Sakit Pendidikan Universitas Hasanuddin Makassar. Universitas Megarezky.

Sembiring, L. N. B., & Makualaina, F. N. (2024). HIV/AIDS pada Remaja di Puskesmas Sentani Papua. Journal of Nursing and Health, 9(3), 399–408.

Seran, M. R., Nayoan, C. R., Bunga, E. Z. H., & Marni, M. (2025). Hubungan Gaya Berpacaran dan Paparan Pornografi terhadap Perilaku Seksual Berisiko Remaja di SMA Negeri 2 Kupang Timur. Sehat Rakyat: Jurnal Kesehatan Masyarakat, 4(2), 409–421.

Thielman, N. M., Ostermann, J., Whetten, K., Whetten, R., Itemba, D., Maro, V., Pence, B., Reddy, E., & Team, C. R. (2014). Reduced adherence to antiretroviral therapy among HIV-infected Tanzanians seeking cure from the Loliondo healer. Journal of Acquired Immune Deficiency Syndromes (1999), 65(3), e104.

Tribun Papua. (2025). Kabupaten Jayapura menjadi penyumbang kasus HIV/AIDS tertinggi di Papua.
Tribun Papua. https://papua.tribunnews.com/

Umah, K., & Irawanto, D. (2019). Motivasi spiritual meningkatkan kepatuhan minum obat ARV pada pasien HIV/AIDS. Journals of Ners Community, 10(2), 251–263.

Yurni, M. S., Noor, H. F. A., Zuhri, I., Putri, G. A., Hasni, U., Harlistyarintica, Y., Augustiana, L. W., Prathiwi, S., Anggarasari, N. H., & Ardelia, V. (2026). Psikologi Perkembangan: Konsep, Tahapan, dan Dinamika Kehidupan Manusia. PT Cipta Digital Edukasi.