



Social support from fellow people living with HIV/ AIDS (PLWHA) and adherence to ARV treatment among PLWHA in Indonesia: Literature review

Pujaannicha ^{a,1}, Herlina Siwi Widiani ^{b,2*}

^{a,b} Faculty of Psychology, Universitas Ahmad Dahlan, Yogyakarta, Indonesia

¹ pujaannicha26799@gmail.com; ² herlina.widiana@psy.uad.ac.id

*Corresponding Author

Submitted: 12 July 2024

Revised: 19 December 2024

Accepted: 20 December 2024

KEYWORDS

adherence to arv treatment;
PLWHA;
social support.

ABSTRACT

Low adherence to ARV treatment in people living with HIV/AIDS (PLWHA) can lead to drug resistance, increased transmission, and worsen the condition of PLWHA due to insufficient HIV suppression in the body, ultimately increasing HIV-related mortality. Therefore, adherence to ARV treatment is crucial. This study aims to explore the social support among PLWHA and its impact on ARV treatment adherence. The databases used include Google Scholar, ScienceDirect, ResearchGate, Elsevier, and PubMed, based on articles published in the last 8 years, primary research articles, and written in Indonesian or English, with the research conducted in Indonesia. The literature review of 14 articles indicates that social support among PLWHA can significantly affect adherence to ARV treatment in Indonesia. In conclusion, PLWHA is more likely to adhere to ARV treatment with adequate social support from fellow PLWHA.

This is an open-access article under the [CC-BY-SA](#) license.



Introduction

Human Immunodeficiency Virus (HIV) is a virus that attacks the human immune system, while Acquired Immune Deficiency Syndrome (AIDS) develops after a person has been infected with HIV for five to ten years or more, weakening the immune system and making the body more susceptible to one or more infections that can become more severe than usual (Murni et al., 2015; Wulandari & Setiyorini, 2016). The HIV epidemic has become a serious global public health issue (Sari et al., 2023). According to the databox, there were 16,410 new AIDS cases in Indonesia throughout 2023, with the highest number of cases found in West Java Province at 16%, followed by Central Java and East Java Provinces (Muhamad, 2024). Antiretroviral (ARV) treatment is one of the efforts in controlling and managing HIV/AIDS. Supriyatni et al. (2023) stated that ARV treatment aims to suppress HIV replication in the body, improve the quality of life for people living with HIV/AIDS (PLWHA), and reduce the mortality rate caused by HIV-related complications.

Adherence to ARV treatment among PLWHA remains a challenge in the fight against HIV/AIDS in Indonesia, despite the proven effectiveness of ARV treatment in reducing HIV/AIDS transmission and mortality rates caused by HIV/AIDS-related complications (Supriyatni et al., 2023). World Health Organization (2024) stated that many people still need

to be informed about their HIV status, access and receive ARV treatment, and undergo viral suppression. The AIDS Handling Commission (KPA) of one province in Indonesia, DKI Jakarta, has stated that not all PLWHA residing in DKI Jakarta are adhering to regular ARV treatment (Santosa, 2024). Only 40,000 out of 59,424 PLWHA residing in DKI Jakarta consistently take ARV treatment (Santosa, 2024).

Adherence to ARV treatment among PLWHA was chosen as the focus of this research because adherence is a key factor in the success of HIV/AIDS prevention and management. Successful adherence to ARV treatment in PLWHA allows for optimal viral suppression in the body (Fahriati et al., 2021). However, previous studies have shown that adherence to ARV treatment among PLWHA is often hindered by feelings of boredom and the demands of daily activities (Wulandari & Rukmi, 2021), side effects of ARV medications include dizziness, allergies, diarrhea, vomiting, insomnia, fever, anemia, and pale skin (Khairunnisa et al., 2017), allergy (Spiritia, 2014), low literacy and information (De Andrade Moraes et al., 2017; Nainggolan & Tarigan, 2023; Talumewo et al., 2019; Waskito et al., 2023), low motivation (Ahmed et al., 2019), perception (Sisyahid & Indarjo, 2017), level awareness and belief (Yuniar et al., 2013), service or social support (Jusriana et al., 2020).

Treatment adherence refers to an individual's ability to follow the medical instructions provided by healthcare professionals (Morisky et al., 2008). Krousel-Wood et al., (2004) stated that treatment adherence is crucial as it reflects the responsibility and involvement of the patient in their medical care. Adherence is demonstrated by the frequency of forgetfulness in taking medication, the ability to control oneself to continue taking the medication, the intentional discontinuation of medication without the knowledge of healthcare providers, and the feeling of being disturbed by the medication schedule (Krousel-Wood et al., 2009).

The low adherence to treatment among PLWHA is often influenced by the lack of social support from family, friends, the community, and the government. The support received by PLWHA can enhance their self-confidence, optimism, and desire to live, thereby increasing their sense of responsibility in adhering to ARV treatment (Pujaannicha & Widiana, 2023; Rosita & Lindayani, 2023). PLWHAs who are isolated from their environment and do not receive social support are more likely to face difficulties in following healthcare providers' instructions regarding ARV consumption (Shubber et al., 2016). Support from family, such as reminding the schedule for taking medication, accompanying them during doctor consultations, or simply providing moral support, can improve ARV adherence among PLWHA (Mahamboro et al., 2020). Low social support can influence decision-making regarding ARV treatment. PLWHA who have low social support tend to feel doubtful and uncertain about the long-term benefits of ARV treatment. As a result, they may struggle to adhere to a strict treatment plan.

Low adherence to ARV treatment among PLWHA can have detrimental effects on both the health of PLWHA and those around them. This is due to the development of drug-resistant strains of HIV, which can increase transmission and make the management of the disease more difficult to control (Sari et al., 2023). Arisudhana et al., (2022) stated that low adherence to ARV treatment among PLWHA can also result in insufficient suppression of HIV replication in the body, which can worsen the condition of PLWHA. A study conducted by Bam et al., (2015) showed that non-adherence to treatment among PLWHA carries a risk of death 3.87 times higher. Therefore, adherence to ARV treatment is crucial for PLWHA and is influenced by adequate social support, which is essential in improving the success of ARV treatment.

The urgency of this study is that consistency and adherence to ARV treatment are crucial in determining the effectiveness of treatment for PLWHA. Social support from fellow PLWHA has been identified as one of the factors that can influence adherence. However, there are still limitations in the comprehensive understanding of the relationship between the two, especially in Indonesia. The research question is: how is the relationship between social support from among PLWHA and adherence to ARV treatment? Therefore, this study aims to gather empirical evidence that meets the established feasibility criteria to answer the research

question, providing deeper and more informative insights for the development of more effective and targeted intervention strategies to improve adherence to ARV treatment in Indonesia.

Method

This study is conducted using the systematic literature review method. The systematic literature review aims to collect empirical evidence that meets the established feasibility criteria to answer the research question. This approach uses a structured and systematic method, minimizing bias and resulting in reliable and useful findings, which are then used to conclude. This study follows the general method of systematic reviews according to Cochrane (Higgins & Green, 2011).

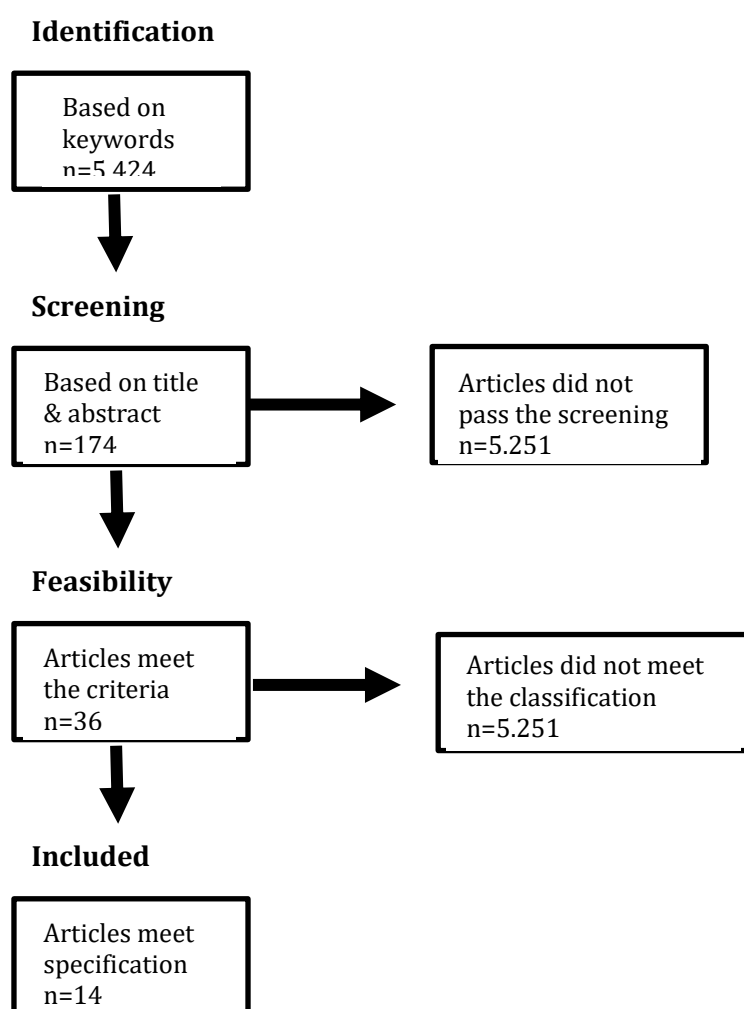


Figure 1. Flowchart of The Articles Identified and Selected

The literature search uses Google Scholar, ScienceDirect, Researchgate, Elsevier, and PubMed. The keywords used Medical Subject Headings (MeSH) and synonyms include phrase are "People with HIV-AIDS (PLWHA)", "support from fellow PLWHA" and "Adherence to antiretroviral (ARV)". The following characteristics were used to select articles for extraction: articles written in Indonesian or English, published between 2016 and 2024, focusing on a population of PLWHA undergoing ARV treatment, and studies conducted in Indonesia. The

discussion topics included social support among PLWHA and its impact on adherence to ARV treatment, addressing benefits, barriers, and efforts to overcome adherence challenges. The results of the search process are shown in Figure 1. Articles that met these characteristics were then extracted. Identified articles were selected based on the title, abstract, and full text. The title selection phase involved eliminating articles that did not align with the topic. The next step was the abstract selection phase, where articles that matched the topic, design, and population were chosen. Articles that passed the screening process were thoroughly read using predefined inclusion criteria, ensuring they met the requirements. Data extraction and chart creation were then conducted to begin data synthesis and analysis.

Results

Based on the database search and review, 14 relevant and suitable articles were obtained. These articles were then extracted and presented in Table 1.

Table 1. The Results of The Literature Review

Author/ Year	Title	Objective	Design/Method	Results
Lobis et al., (2020)	Influences of Peer Support Group and Psychosocioeconomic Determinants on Treatment Compliance in HIV/AIDS Patients: A Path Analysis Evidence from Sragen, Central Java	To determine the influence of peer support groups and psychosocial-economic determinants on medication adherence among people living with HIV/AIDS (PLWHA) in Sragen, Central Java.	Case-control	Adherence to treatment among people living with HIV/AIDS (PLWHA) is directly influenced by perceptions of benefits, peer support groups, family support, perceptions of threats, and perceptions of barriers. Medication adherence in PLWHA is also indirectly influenced by learning through observation.
Arisudhana et al., (2022)	Pengaruh Peer Leader Support Terhadap Kepatuhan Minum Obat Orang dengan HIV AIDS [The influence of Peer Leader Support on Medication Adherence among People Living with HIV/AIDS (PLWHA)]	To determine the effect of peer leader support on medication adherence among people living with HIV/AIDS (PLWHA)	Experiment: One Group pre-test post-test	Interventions using a peer support approach have a progressive impact on behavior change in people living with HIV/AIDS (PLWHA), particularly in increasing awareness about taking ARV medications. It can be concluded that peer leader support influences medication

Naldi & Amanah, (2019)	The Role of Patient Characteristics and Group Support to Adherence Treatment in People with HIV/AIDS (PLWHA) in Cirebon City	To analyze the role of patient characteristics, family support, and peer support in medication adherence among people living with HIV/AIDS (PLWHA) in Cirebon City.	Cross-sectional	adherence among PLWHA. Group support, family support, and young age have a significant role in medication adherence among people living with HIV/AIDS (PLWHA).
Nurhayati et al., (2024)	Determinants of Antiretroviral (ARV) Treatment Initiation Behavior among People with HIV at Dr. Drajat Prawiranegara Hospital	To identify the factors associated with the behavior of starting ARV treatment among people living with HIV in Dr. Drajat Prawiranegara Hospital	Cross-sectional	There is no relationship between the distance to healthcare services and the behavior of starting ARV treatment. However, a significant relationship exists between education level, attitude, and family support with the behavior of starting ARV treatment.
Nainggolan & Tarigan, (2023)	The Relationship between Family Support and Compliance of PLWHA with Antiretroviral at RSUD HKBP Balige	To determine the relationship between family support and medication adherence among people living with HIV/AIDS (PLWHA) in taking antiretroviral (ARV) medications in RSUD HKBP Balige.	Cross-sectional	There is a relationship between family support and medication adherence among people living with HIV/AIDS (PLWHA) in taking antiretroviral (ARV) medications in RSUD HKBP Balige.
Sofro & Hidayanti, (2019)	A Social Support for Housewives with HIV/AIDS through a Peer Support Group	To explore the social support received by HIV/AIDS-infected	Qualitative Research: Etnometodologi	Peer support group activities can provide social support for housewives living

		housewives through peer support groups in RSUP Dr. Kariadi Semarang.		with HIV/AIDS. The social support includes informational support regarding treatment and HIV/AIDS disease progression; emotional support, self-esteem support, and network support such as intensive communication and strong friendships; and practical assistance: business capital, business skills, and guidance in accessing treatment.
Purnomo & Subiwati, (2021)	Relationship of Social Support and Treatment Compliance with the Quality of Life of HIV/AIDS Patients in Hospitals RAA Soewondo Pati	To determine the relationship between social support and medication adherence with the quality of life of HIV/AIDS in Hospital RAA Soewondo Pati	Cross-sectional	There is a significant relationship between social support and medication adherence with the quality of life of HIV/AIDS patients in Hospital RAA Soewondo Pati.
Fauk et al., (2020)	A Qualitative Inquiry of Adherence to Antiretroviral Therapy and Its Associated Factors: A Study with Transgender Women Living with HIV in Indonesia	To explore the factors associated with adherence to Antiretroviral Therapy (ART) among HIV-positive transgender women in Yogyakarta, Indonesia.	Qualitative Research	Individual, social, and structural factors support adherence to Antiretroviral Therapy (ART) among HIV-positive transgender women in Yogyakarta, Indonesia. These findings highlight the need for the development of HIV/AIDS-related healthcare support systems in healthcare facilities, as well as the dissemination

				of knowledge and information about HIV/AIDS and related services for HIV-positive transgender women, other people living with HIV, and the general population in other parts of the country and similar environments worldwide.
Sunaryo et al., (2016)	Association between Knowledge, Perceived Seriousness, Perceived Benefit and Barrier, and Family Support on Adherence to Anti-Retrovirus Therapy in Patients with HIV/AIDS	To determine the relationship between knowledge, disease severity, benefits and barriers, and family support with adherence to Antiretroviral Therapy (ART) in patients with HIV/AIDS.	Cross-sectional	There is no relationship between knowledge about medications and adherence to Antiretroviral Therapy (ART) in patients with HIV/AIDS. However, there is a significant relationship between disease severity, benefits and barriers, and family support with adherence to ART in patients with HIV/AIDS.
Martawinarti et al., (2020)	Lived Experience of People Living with HIV/AIDS Undergoing Antiretroviral Therapy: A Qualitative Study	To understand the life experiences of people living with HIV/AIDS who are undergoing Antiretroviral Therapy (ART).	Qualitative Research	Six topics emerge from the experiences of people living with HIV/AIDS undergoing Antiretroviral Therapy (ART): knowledge about HIV and antiretroviral medications, self-motivation, social support, skills in self-care management, adherence, and quality of life.
Suryana et al., (2019)	Factors Associated with Adherence to Anti-Retroviral Therapy among People Living	To determine the factors associated with	Cross-sectional	Employment status, type of ARV, and family support are

	with HIV/AIDS at Wangaya Hospital in Denpasar, Bali, Indonesia: A Cross-Sectional Study	adherence to Antiretroviral Therapy (ART) among people living with HIV/AIDS at Wangaya Hospital in Denpasar, Bali, Indonesia		factors associated with adherence to Antiretroviral Therapy (ART) among people living with HIV/AIDS at Wangaya Hospital in Denpasar, Bali, Indonesia
Purwaningsih et al., (2019)	Medication Adherence and Quality of Life among People Living with HIV/AIDS (PLWHA) Who Joined and Did Not Join a Peer Support Group	To determine the medication adherence to Antiretroviral Therapy (ART) and quality of life between people living with HIV/AIDS (PLWHA) who are members of a peer support group and those who are not.	Quantitative Research	People living with HIV/AIDS (PLWHA) who are members of a peer support group have better adherence to Antiretroviral Therapy (ART) and a better quality of life compared to those who are not members of a peer support group.
Suntara et al., (2022)	Hubungan Dukungan Keluarga dengan Kepatuhan Pengobatan Antiretroviral (ARV) pada Penderita HIV dan AIDS (ODHA) di Klinik VCT RS St. Elisabeth Blok II Lubuk Baja Batam	To determine the relationship between family support and adherence to Antiretroviral Therapy (ART) in individuals with HIV and AIDS at Klinik VCT in Santa Elisabeth Blok II Lubuk Baja.	Cross-sectional	There is a relationship between family support and medication adherence in patients with HIV/AIDS.
Kristina & Suweni, (2022)	Study of HIV/AIDS Treatment Non-Compliance in the Perspective of Family Support in Jayapura City	To determine the relationship between family support and non-adherence to Antiretroviral Therapy (ART) in patients with HIV/AIDS in Abepura Hospital	Cross-sectional	There is a relationship between family support and non-adherence to Antiretroviral Therapy (ART) in patients with HIV/AIDS in Abepura Hospital

Discussion

Treatment adherence is the extent to which an individual can take medication according to the doctor's instructions and medical recommendations, including timing, dosage, and consistency, including among PLWHA (Iswari & Daramatasia, 2022). Talumewo et al. (2019) stated that high adherence to Antiretroviral Therapy (ART) is required, as ART needs to be taken for a lifetime. Non-adherence to treatment can reduce the effectiveness of ARV medications and may even increase the resistance to the virus (Fahriati et al., 2021). PLWHA who do not adhere to treatment or intentionally or unintentionally stop taking ARV medications may increase resistance to ARVs, raise the risk of transmitting HIV to others, and increase the risk of death for PLWHA (Tahir et al., 2019). Non-adherence to prescribed medication by PLWHA in Indonesia can impact their health status and lead to increased healthcare costs (Arisudhana et al., 2022). Non-adherence to treatment can be caused by personal factors or system-level factors, including forgetfulness, reluctance to experience side effects from the medication, lack of knowledge, the large number of medications to be taken, unwillingness to make necessary lifestyle changes, the need for a systematic treatment plan, and lack of social support (Harison et al., 2020).

Social support is the exchange of resources between at least two people or more, intending to help one of the parties involved (Zimet et al., 1988). Social support is a behavior provided by others or a group to an individual, such as comfort, offering rewards, assistance, or attention (Sarafino & Smith, 2012). Social support is an action aimed at helping an individual cope with problems by involving emotional support, providing information, offering practical assistance, and giving positive evaluation (House & Khan, 1985).

The social support needed by PLWHA to improve treatment adherence can come from family, friends, the community, and peers (Anok et al., 2018; Burhan et al., 2015; Dyagustin & Listyani, 2015; Prasetyawati et al., 2016). Three forms of support can be provided within a peer group of PLWHA, including face-to-face interactions, phone calls, or text messages (Levy et al., 2019). Social support from fellow PLWHA can include providing motivation, encouragement, as well as information related to HIV/AIDS, and showing empathy by being a good listener to each PLWHA's concerns (Dyagustin & Listyani, 2015).

Peer support groups play a role in monitoring the ARV medication adherence process and evaluating it for PLWHA, providing care for ill PLWHA, and bridging the need for Voluntary Counseling and Testing (VCT) services (Iswari & Daramatasia, 2022; Jusriana et al., 2020). Social support from fellow PLWHA is crucial to assist in daily activities, enabling PLWHA to maintain their health and avoid both physical and psychological distress, therefore this support also plays a key role in helping prevent the transmission of HIV to others around them (Latif et al., 2014).

Social support from fellow PLWHA can enhance adherence to treatment and the will to live, as they remind each other to take ARV medications on time (Silalahi & Yona, 2023). Social support from fellow PLWHA within a peer group plays a significant role in shaping positive behaviors and new values among PLWHA, with members of these peer groups have been shown to enhance morale and improve behavioral skills throughout the treatment process (Iswari & Daramatasia, 2022). Social support plays a crucial role in the adherence of HIV/AIDS patients to treatment. The support received by PLWHA can enhance their adherence to ARV medication because they feel accepted and valued (Fahriati et al., 2021). This sense of acceptance encourages them to faithfully follow their treatment, ultimately leading to the success of their therapy.

The social support provided to PLWHA helps them feel accepted, have a space to share experiences, feel cared for, and find happiness (Iswari & Daramatasia, 2022). Peer support in groups helps PLHIV address their challenges and offers interventions both at the group and individual levels. This support fosters increased self-confidence among PLWHA and improves relationships within their community through effective intervention (Iswari & Daramatasia,

2022). The support provided by fellow PLWHA through reminding each other to take ARV medication and sharing information about proper nutrition helps PLWHA maintain their health, then enables them to work without worrying about their physical condition, making them more productive and improving their overall well-being (Mufarika et al., 2018).

Support from fellow PLWHA helps patients share and enhance their knowledge and experiences regarding the importance of adhering to their medication regimen and strengthens their understanding and commitment to following the prescribed treatment (Naldi & Amanah, 2019). Adherence to medication among PLWHA who receive strong support is 2.09 times higher compared to those with low support (Lobis et al., 2020). Based on the findings from the systematic literature review adherence to treatment in PLWHA can be improved with the influence of fellow PLWHA support. A limitation of this study is that the research focused on a single country, Indonesia. This study's results may limit the generalizability of the findings to PLWHA in other regions due to differences in healthcare policies and cultural norms.

Conclusion

Based on the results and discussion, it can be concluded that adherence to ARV treatment is crucial for people living with HIV/AIDS (PLWHA). Support from fellow PLWHA plays an important role in enhancing adherence to ARV treatment. Adequate social support can increase adherence among PLWHA, leading to successful treatment outcomes. Research shows that PLWHA with strong social support from fellow PLWHA tend to be more adherent to ARV treatment.

Acknowledgment

The authors would like to thank the Directorate of Research, Technology and Community Service, Ministry of Education, Culture, Research and Technology of Indonesia for providing this research grant (Letter of Grant Agreement on Implementation of Postgraduate Thesis Grant Research No. 058/PTM/LPPM-UAD/VI/2024).

References

- Ahmed, S. I., Farooqui, M., Syed Sulaiman, S. A., Hassali, M. A., & Lee, C. K. C. (2019). Facilitators and barriers affecting adherence among people living with HIV/AIDS: a qualitative perspective. *Journal of Patient Experience*, 6(1), 33–40. <https://doi.org/10.1177/2374373518770805>
- Anok, M. R., Aniroh, U., & Wahyuni, S. (2018). Hubungan peran kelompok dukungan sebaya dengan kepatuhan odha dalam mengkonsumsi ARV Di Klinik VCT RSUD Ambarawa. *Jurnal Ilmu Keperawatan Maternitas*, 1(2), 8. <https://doi.org/10.32584/jikm.v1i2.147>
- Arisudhana, G. A. B., Wulandari, N. P. D., Risnawati, N. E., & Monica, D. P. C. (2022). Pengaruh peer leader support terhadap kepatuhan minum obat orang dengan HIV AIDS. *Jurnal Ners Indonesia*, 12(2), 134. <https://doi.org/10.31258/jni.12.2.134-141>
- Bam, K., Rajbhandari, R. M., Karmacharya, D. B., & Dixit, S. M. (2015). Strengthening adherence to antiretroviral therapy (ART) monitoring and support: operation research to identify barriers and facilitators in Nepal health systems and services in low and middle-income settings. *BMC Health Services Research*, 15(1), 1–11. <https://doi.org/10.1186/s12913-015-0846-8>
- Burhan, R. F., Fourianalistyawati, E., & Zuhroni, Z. (2015). Gambaran kebermaknaan hidup orang dengan HIV/AIDS (ODHA) serta kesamaannya menurut Islam. *Journal Psikogenesis*, 2(2), 110–122. <https://doi.org/10.24854/jps.v2i2.46>
- De Andrade Moraes, D. C., De Oliveira, R. C., Arruda do Prado, A. V., Cabral, J. da R., Corrêa, C. A., & Barbosa de Albuquerque, M. M. (2017). Knowledge of people living with HIV/AIDS about antiretroviral therapy. *Enfermería Global*, 17(1), 96.

- <https://doi.org/10.6018/eglobal.17.1.274001>
- Dyagustin, E., & Listyani, R. H. (2015). Konstruksi orang dengan HIV & AIDS (ODHA) tentang penyakit HIV & AIDS di kelompok dukungan sebaya Jombang care center. *Paradigma*, 3(3), 1–7. <https://ejournal.unesa.ac.id/index.php/paradigma/article/view/13061>
- Fahriati, A. R., Purnama, F., Indah, S., Satria, B. M., & Ayu, A. (2021). Faktor-faktor yang berhubungan dengan kepatuhan minum antiretroviral pada ODHA (Orang Dengan HIV / AIDS) Berdasarkan Systematic Literature Review. *PHRASE (Pharmaceutical Science Journal)*, 1(1), 29–46.
- Fauk, N. K., Merry, M. S., Ambarwati, A., Sigilipoe, M. A., Ernawati, & Mwanri, L. (2020). A qualitative inquiry of adherence to antiretroviral therapy and its associated factors: a study with transgender women living with HIV in Indonesia. *Indian Journal of Public Health*, 64(2), 116. https://doi.org/10.4103/ijph.IJPH_338_19
- Harison, N., Waluyo, A., & Jumaiyah, W. (2020). Pemahaman pengobatan antiretroviral dan kendala kepatuhan terhadap terapi antiretroviral pasien HIV/AIDS. *JHeS (Journal of Health Studies)*, 4(1), 87–95. <https://doi.org/10.31101/jhes.1008>
- Higgins, J. P., & Green, S. (2011). *Cochrane handbook for systematic reviews of interventions (Version 5.1.0)*. The Cochrane Collaboration. <https://handbook-5-1.cochrane.org/>
- House, J. S., & Khan, R. L. (1985). *Social support and social structure*. Academic Press. <http://www.jstor.org/stable/684531>
- Iswari, Y., & Daramatasia, W. (2022). Hubungan kelompok sebaya dengan keterampilan berperilaku dalam kepatuhan terapi ARV pada ODHA di JCC. *Media Husada Journal of Nursing Science*, 3(3), 294–305. <https://doi.org/10.33475/mhjns.v3i3.114>
- Jusriana, Gobel, F. A., & Arman. (2020). Faktor yang mempengaruhi kepatuhan terapi antiretroviral pada orang dengan HIV di yayasan peduli kelompok dukungan sebaya Kota Makassar. *Window of Public Health Journal*, 1(3), 241–249. <https://doi.org/10.33096/woph.v1i3.56>
- Khairunnisa, Sawaraswati, L. D., Adi, M. S., & Udiono, A. (2017). Gambaran kepatuhan pengobatan ARV (Antiretroviral) (studi pada wanita pekerja seks (WPS) positif HIV/AIDS di Kabupaten Batang). *Jurnal Kesehatan Masyarakat (e-Journal)*, 5(4), 387–395. <https://doi.org/10.14710/jkm.v5i4.18376>
- Kristina, Y., & Suweni, K. (2022). Study of HIV / AIDS treatment non-compliance in the perspective of family support in Jayapura City. *Neuroquantology*, 20(17), 502–512. <https://doi.org/10.14704/Nq.2022.20.17.Nq88062>
- Krousel-Wood, M., Islam, T., Webber, L. S., Re, R. N., Morisky, D. E., & Muntner, P. (2009). New medication adherence scale versus pharmacy fill rates in seniors with hypertension. *American Journal of Managed Care*, 15(1), 59–66. <https://pubmed.ncbi.nlm.nih.gov/19146365/>
- Krousel-Wood, M., Thomas, S., Muntner, P., & Morisky, D. (2004). Medication adherence: a key factor in achieving blood pressure control and good clinical outcomes in hypertensive patients. *Current Opinion in Cardiology*, 19(4), 357–362. <https://doi.org/10.1097/01.hco.0000126978.03828.9e>
- Latif, F., Maria, I. L., & Syafar, M. (2014). Efek samping obat terhadap kepatuhan pengobatan antiretroviral orang dengan HIV/AIDS. *Kesmas: National Public Health Journal*, 9(2), 101. <https://doi.org/10.21109/kesmas.v9i2.495>
- Levy, B. B., Luong, D., Perrier, L., Bayley, M. T., & Munce, S. E. P. (2019). Peer support interventions for individuals with acquired brain injury, cerebral palsy, and spina bifida: A systematic review. *BMC Health Services Research*, 19(1), 1–11. <https://doi.org/10.1186/s12913-019-4110-5>
- Lobis, Y. B., Murti, B., & Prasetya, H. (2020). Influences of peer support group and psychosocioeconomic determinants on treatment compliance in HIV/AIDS patients: a path analysis evidence from Sragen, Central Java. *Journal of Epidemiology and Public Health*, 5(3), 348–358. <https://doi.org/10.26911/jepublichealth.2020.05.03.09>

- Mahamboro, D. B., Fauk, N. K., Ward, P. R., Merry, M. S., Siri, T. A., & Mwanri, L. (2020). HIV stigma and moral judgement: Qualitative exploration of the experiences of HIV stigma and discrimination among married men living with HIV in Yogyakarta. *International Journal of Environmental Research and Public Health*, 17(2), 1–15. <https://doi.org/10.3390/ijerph17020636>
- Martawinarti, R. T. S. N., Nursalam, N., & Wahyudi, A. S. (2020). Lived experience of people living with HIV/AIDS undergoing antiretroviral therapy: A qualitative study. *Jurnal Ners*, 15(1 Special Issue), 157–163. <https://doi.org/10.20473/jn.v15i1Sp.19002>
- Morisky, D. E., Ang, A., Krousel-Wood, M., & Ward, H. J. (2008). Retracted: predictive validity of a medication adherence measure in an outpatient setting. *The Journal of Clinical Hypertension*, 10(5), 348–354. <https://doi.org/10.1111/j.1751-7176.2008.07572.x>
- Mufarika, Fitriah, & Aisyah, S. (2018). Hubungan peran kelompok dukungan sebaya dengan kualitas hidup orang HIV / AIDS (ODHA) Di Poli VCT RSUD Syarifah Ambami Rato Ebu Bangkalan. *Jurnal Keperawatan Malang*, 3(2), 67–74.
- Muhamad, N. (2024). Ada 16 ribu kasus AIDS baru di Indonesia, terbanyak di Jawa Barat. Databoks. <https://databoks.katadata.co.id/datapublish/2024/03/01/ada-16-ribu-kasus-aids-baru-di-indonesia-terbanyak-di-jawa-barat>
- Murni, S., Green, C. W., Djauzi, S., Setiyanto, A., & Okta, S. (2015). *Hidup dengan HIV/AIDS*. Yayasan Spiritia.
- Nainggolan, E., & Tarigan, A. R. (2023). The relationship between family support and compliance of PLHA with antiretroviral at RSUD HKBP Balige. *International Journal of Health Engineering and Technology (IJHET)*, 2(3), 110–115. <https://doi.org/10.55227/ijhet.v2i3.159>
- Naldi, Y., & Amanah, A. (2019). The role of patient characteristics and group support to adherence treatment in people with HIV / AIDS (PLWHA) in Cirebon City. *International Conference on Agriculture, Social Sciences, Education, Technology and Health (ICASSETH)*, 429, 221–223.
- Nurhayati, N., Ramayulis, R., & Ismarina. (2024). Determinants of antiretroviral (ARV) treatment initiation behavior among people with HIV at Dr. Drajat Prawiranegara Hospital. *Health and Technology Journal (HTechJ)*, 2(2), 181–189. <https://doi.org/10.53713/htechj.v2i2.184>
- Prasetyawati, D., Utami, S. W., & Farida, I. A. (2016). Hubungan antara efikasi diri dan dukungan sosial dengan kebermaknaan hidup pada ODHA. *Jurnal Sains Psikologi*, 5(2), 25–31. <https://doi.org/10.17977/um023v5i22016p25-31>
- Pujaannicha, P., & Widiانا, H. S. (2023). Dukungan sosial dan optimisme pada orang dengan HIV/AIDS. *Seminar Nasional Psikologi Universitas Ahmad Dahlan*, 68–75. <https://seminar.uad.ac.id/index.php/SNFP/article/viewFile/13156/3785>
- Purnomo, M., & Subiwati. (2021). Relationship of social support and treatment compliance with the quality of life of HIV/AIDS patients in hospitals RAA Soewondo Pati. *Proceedings of the 1st Paris Van Java International Seminar on Health, Economics, Social Science and Humanities (PVJ-ISHESSH 2020)*, 535, 461–464. <https://doi.org/10.2991/assehr.k.210304.103>
- Purwaningsih, Nastiti, A. A., & Mularwati, E. Y. (2019). Medication adherence and quality of life among people living with HIV/AIDS (PLWHA) who joined and did not join a peer support group. *Indian Journal of Public Health Research and Development*, 10(8), 2788. <https://doi.org/10.5958/0976-5506.2019.02294.0>
- Rosita, E., & Lindayani, L. (2023). Factors influencing antiretroviral medication adherence based on the health belief model in HIV/AIDS patients. *Jurnal Keperawatan PPNI Jawa Barat*, 1(2), 101–117. <https://ppnijabar.or.id/ojs/index.php/jkp/article/view/9>
- Santosa, L. W. (2024). KPA DKI sebut belum seluruh orang dengan HIV patuh minum obat. ANTARA. <https://www.antaranews.com/berita/4168671/kpa-dki-sebut-belum-seluruh-orang-dengan-hiv-patuh-minum-obat>

- Sarafino, E. P., & Smith, T. W. (2012). *Health psychology: Biopsychosocial interactions* (7th ed.). John Wiley & Sons Inc.
- Sari, D. M. N., Sudaryo, M. K., Nada, Q., & Ahmadi, I. (2023). Faktor-faktor yang berhubungan dengan ketidakpatuhan minum antiretroviral pada orang dengan HIV di Rumah Sakit Umum Daerah Balaraja Kabupaten Tangerang. *Jurnal Epidemiologi Kesehatan Indonesia*, 7(2), 125–130.
- Shubber, Z., Mills, E. J., Nachega, J. B., Vreeman, R., Freitas, M., Bock, P., Nsanzimana, S., Penazzato, M., Appolo, T., Doherty, M., & Ford, N. (2016). Patient-reported barriers to adherence to antiretroviral therapy: a systematic review and meta-analysis. *PLoS Medicine*, 13(11), 1–14. <https://doi.org/10.1371/journal.pmed.1002183>
- Silalahi, W. J., & Yona, S. (2023). Hubungan dukungan teman sebaya dan dukungan spritual dapat meningkatkan kepatuhan minum antiretroviral pada pasien HIV/AIDS: literature review. *Jurnal Keperawatan*, 15(2), 893–904. <https://doi.org/10.32583/keperawatan.v15i2.942>
- Sisyahid, A. K., & Indarjo, S. (2017). Health belief model dan kaitannya dengan ketidakpatuhan terapi antiretroviral pada orang dengan HIV/AIDS. *Unnes Journal of Public Health*, 6(1), 9. <https://doi.org/10.15294/ujph.v6i1.11341>
- Sofro, M. A. U., & Hidayanti, E. (2019). A social support for housewives with HIV/AIDS through a peer support group. *Psikohumaniora*, 4(1), 77–94. <https://doi.org/10.21580/pjpp.v4i1.3378>
- Spiritia. (2014). *Masalah kulit*. Yayasan Spiritia. <https://spiritia.or.id/informasi/detail/96>
- Sunaryo, Demartoto, A., & Adriani, R. B. (2016). Association between knowledge, perceived seriousness, perceived benefit and barrier, and family support on adherence to anti-retrovirus therapy in patients with HIV/AIDS. *Journal of Health Promotion and Behavior*, 1(1), 54–61. <https://doi.org/10.26911/thejphb.2016.01.01.08>
- Suntara, A. D., Siska, D., & Rinna Wati Sinaga, T. (2022). Hubungan dukungan keluarga dengan kepatuhan pengobatan antiretroviral (ARV) pada [enderita HIV dan AIDS (ODHA) di Klinik VCT RS St. Elisabeth Blok II Lubuk Baja Batam. *ZAHR: Journal Of Health And Medical Research*, 2(2), 118–128.
- Supriyatni, N., Salim, L. A., Hargono, A., & Febriyanti. (2023). Antiretroviral medication adherence for people with HIV/AIDS. *Journal of Public Health in Africa*, 14(7). <https://doi.org/10.4081/jphia.2023.2434>
- Suryana, K., Suharsono, H., & Antara, I. G. P. J. (2019). Factors associated with adherence to anti-retroviral therapy among people living with HIV/AIDS at Wangaya Hospital in Denpasar, Bali, Indonesia: A cross-sectional study. *HIV/AIDS - Research and Palliative Care*, 11, 307–312. <https://doi.org/10.2147/HIV.S219695>
- Tahir, M. Y., Darwis, A. W., & Damayanti, A. (2019). Hubungan dukungan keluarga dengan kepatuhan minum obat antiretroviral (ARV) pada pasien HIV/AIDS di Balai Besar [STIKES Panakkukan Makassar]. In *STIKES panakkukang Makassar*. <https://stikespanakkukang.ac.id/assets/uploads/alumni/0c42cb2a4958a54910c7383e7e2d3a43.pdf>
- Talumewo, O. C., Mantjoro, E. M., Kalesaran, A. F. C., Kesehatan, F., Universitas, M., & Ratulangi, S. (2019). Faktor-faktor yang berhubungan dengan kepatuhan ODHA dalam menjalani terapi antiretroviral di Puskesmas Tikala Baru Kota Manado tahun 2019. *Kesmas*, 8(7), 100–107. <https://ejournal.unsrat.ac.id/index.php/kesmas/article/view/26558>
- Waskito, I. B., Wardani, D. W. S. R., & Susianti, S. (2023). Pengetahuan berhubungan dengan kepatuhan ODHA dalam menjalani terapi antiretroviral. *Jurnal Penelitian Perawat Profesional*, 5(2), 803–810. <https://doi.org/10.37287/jppp.v5i2.1608>
- World Health Organization. (2024). *HIV and AIDS*. World Health Organization. <https://www.who.int/news-room/fact-sheets/detail/hiv-aids>
- Wulandari, E. A., & Rukmi, D. K. (2021). Hubungan tingkat pengetahuan dengan kepatuhan terapi ARV pada ODHA di Yogyakarta. *Clinical and Community Nursing Journal*,

- 5(November), 157–166.
- Wulandari, N. A., & Setiyorini, E. (2016). *Asuhan keperawatan pada ODHA (orang dengan HIV/AIDS)*. Media Nusa Creative (MNC Publishing).
- Yuniar, Y., Handayani, R. S., & Aryastami, N. K. (2013). Faktor – faktor pendukung kepatuhan orang dengan HIV AIDS (ODHA) dalam minum obat antiretroviral di kota bandung dan Cimahi. *Bulletin Penelitian Kesehatan*, 41(2), 72–83.
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, 52(1), 30–41. https://doi.org/10.1207/s15327752jpa5201_2