Nurse and Holistic Care,
Vol. 5, No 2, August 2025
www.journal2.unusa.ac.id/index.php/nhc

Review Articles: Narrative Review

THE ROLE OF SOCIAL SUPPORT AND EDUCATION LEVEL IN ADHERENCE TO ANTI-RETROVIRAL (ARV) DRUGS IN HIV/AIDS PATIENTS: NARATIVE REVIEW

Jakasmir Girsang[1*], Tiarnida Nababan[2], Refi Ikhtiari[3]
[1] Master of Nursing Student, Faculty of Nursing and Midwifery, Universitas Prima Indonesia
[2] PUI-PT Palliative Care, Universitas Prima Indonesia
[3] Department of Biomedical Sciences, Faculty of Medicine, Dentistry and Health Sciences, Universitas Prima Indonesia

Article history:
Received: August 7, 2025
Accepted: September 20, 2025

Correspondence:
Jakasmir Girsang
Master of Nursing Student, Faculty of Nursing and Midwifery, Universitas Prima Indonesia
Email: jakasmirtambun@gmail.com

Keywords:
HIV/AIDS, ARV, Adherence, Social Support, Education.

Page Number: 158-170

Abstract

Background: Adherence to antiretroviral (ARV) therapy is essential for effective HIV/AIDS management. Social support and patients' education levels have been shown to influence treatment adherence.

Objective: To review the role of social support and education in adherence to ARV medication among people living with HIV/AIDS (PLWHA).

Methods: This study is a narrative literature review. Articles were retrieved from Google Scholar using predefined inclusion and exclusion criteria. The quality of the selected studies was assessed using the JBI Critical Appraisal Checklist, and findings were synthesized thematically.

Results: Ten articles met the inclusion criteria (n = 10). Most studies reported that family support and higher education levels were positively associated with better adherence to ARV therapy.

Conclusion: Social support and education are key determinants of ARV adherence. Interventions that emphasize patient education and family involvement are recommended to improve treatment outcomes in PLWHA.

INTRODUCTION

Adherence to antiretroviral therapy (ART) remains a major challenge in HIV/AIDS management. While ART has transformed HIV into a manageable chronic illness, many people living with HIV (PLHIV) struggle to maintain consistent treatment. Limited social support, stigma, and low education levels often hinder adherence, which in turn increases the risk of opportunistic infections, mortality, drug resistance, and ongoing transmission (UNAIDS, 2023).

Acquired Immune Deficiency Syndrome (AIDS) and Human Immunodeficiency Virus (HIV) remain major global health problems, including in Indonesia. HIV/AIDS case reporting has been conducted across 38 provinces in the country. Between January and June 2024, a total of 3,182,913 individuals at risk of contracting HIV underwent testing, representing approximately 41.4% of the national target of 7,685,159 people. When compared by quarter, the testing coverage in the second

quarter of 2024 was slightly higher at 21.0%, compared to 19.7% in the first quarter. During the same period, 23,375 people living with HIV (PLHIV) initiated antiretroviral therapy (ART), accounting for 74.1% of the 31,564 PLHIV identified. However, the proportion of PLHIV starting ART declined in the second quarter (72.3%) compared to the first quarter (75.8%) (Ministry of Health of the Republic of Indonesia, 2024).

HIV attacks white blood cells and weakens the immune system, making the body susceptible to infections and cancer. It is transmitted through bodily fluids, not through touch or food. HIV can be prevented and controlled with ARV therapy. If left untreated, HIV can progress to AIDS, especially if the CD4 count is below 200 cells/mm³ (World Health Organization, 2024). HIV and sexually transmitted infections remain a health problem in Indonesia with social and economic impacts. PLHIV often experiences stigma due to a lack of knowledge and misunderstanding of HIV and AIDS (Regulation of the Minister of Health of the Republic of Indonesia Number 23 of 2022).

Family support is a crucial factor influencing adherence to antiretroviral therapy (ART) among people living with HIV/AIDS (PLWHA). Research in Indonesia shows that strong family involvement improves patients' motivation, treatment commitment, and overall quality of life (Aini et al., 2024; Supriyatni et al., 2023). Similarly, a study by Yona et al. (2023) found that self-awareness and family support are central to long-term ART adherence, showing that adherence relies on both individual and social factors.

Studies by Shimels et al. (2023) demonstrate full compliance with ART treatment. Given the many factors that influence the success of therapy, stakeholders need to strengthen efforts such as active follow-up, case tracking, ensuring access and affordable treatment costs, and providing psychosocial support to patients. In addition, according to Dake et al. (2023), most choose positive coping strategies in dealing with their illness. This choice is influenced by several factors, especially higher levels of education and the presence of both parents as caregivers. Research by Rainuny and Imba (2024)shows that self-education can increase patient awareness of the importance of adherence to taking ARV medication. Formal and non-formal education also play an important role in increasing patient adherence to ARV therapy.

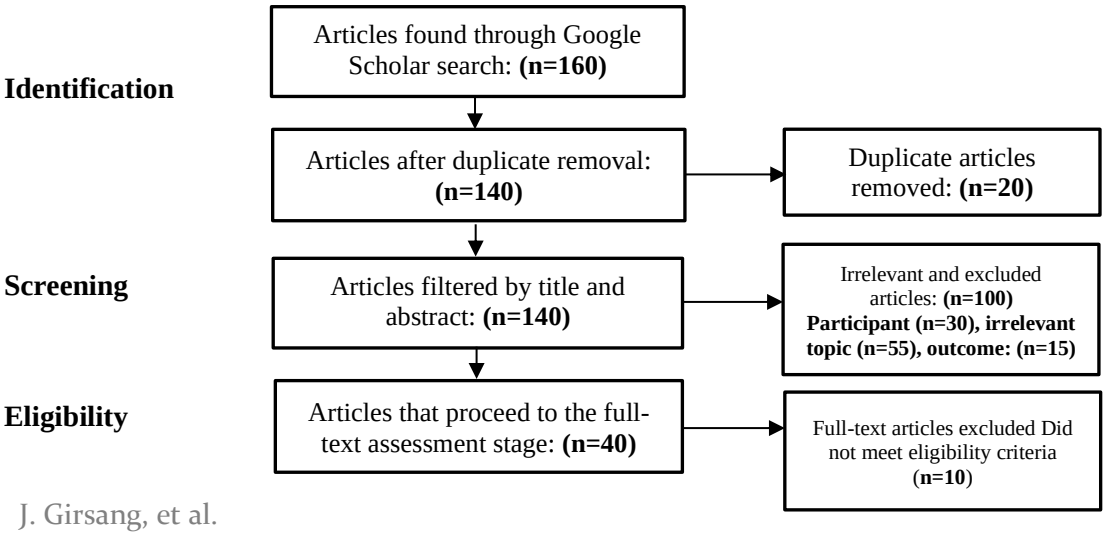
This study introduces a novel approach by combining two critical determinants, social support and education, as primary factors influencing adherence to antiretroviral therapy (ART) among people living with HIV/AIDS (PLWHA). Previous research has primarily examined these variables separately, focusing either on the role of family and community support (Supriyatni et al., 2023; Yona et al., 2023) or on education and health literacy in treatment outcomes. Few studies, however, have investigated their interaction. The uniqueness of this study lies in analyzing how social support and education not only function independently but also reinforce one another in shaping adherence behaviors more comprehensively.

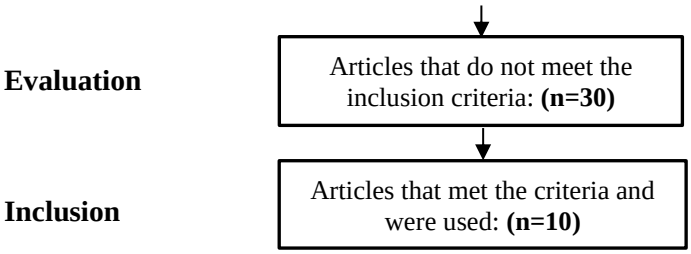
DEVELOPMENT

This study uses a Narrative review approach with a focus on studies that discuss the relationship between social support, education level, and adherence to antiretroviral therapy (ARV) in people with HIV/AIDS (PLWHA). The purpose of this study was to identify, evaluate, and synthesize empirical evidence related to the contribution of social and educational factors to ARV treatment adherence. The literature search was conducted through the Google Scholar database, Keywords used in the search were "ARV adherence", "PLWHA family support", "education and HIV", "adherence to ARV", and other relevant keyword combinations using Boolean operators (AND/OR). Inclusion Criteria for articles written in Indonesian, published in the period 2020 to 2025 as many as 10 appropriate review articles, focusing on ARV adherence in PLWHA and discussing the role of social support and/or education level, using a quantitative research design and exclusion criteria for full-text articles, articles can be freely accessed, articles do not display primary data or direct relevance to the focus of ARV adherence. This review focuses on quantitative studies for measurable outcomes and comparability. Qualitative and mixed-methods research, though excluded for standardization, are recognized for their valuable insights and may be considered in future reviews to deepen understanding of ARV adherence.

The quality of the included studies was appraised using the JBI Critical Appraisal Checklist, which was adapted for quantitative designs. Evaluation focused on the clarity of research objectives, appropriateness of data collection methods, validity and reliability of instruments, suitability of data analysis, and accuracy of result interpretation. Only studies meeting these standards were retained. Data extraction was followed by thematic analysis to identify recurring patterns and key findings. Three major themes were identified: (1) the role of family support in promoting ARV adherence, (2) the influence of education on patients' understanding of therapy, and (3) broader social factors influencing adherence. Findings were synthesized across studies to draw comprehensive conclusions regarding social and educational contributions to adherence among PLWHA.

Data from articles that met the inclusion criteria were analyzed using a thematic analysis approach, namely by grouping findings into main themes: (1) social support, (2) education level, and (3) adherence. This synthesis aims to identify the dominant factors and specific contexts that influence adherence to antiretroviral (ARV) therapy.





RESULTS

Table 1. Results of data extraction and synthesis.

No.	Research Title and Author	Study Objectives	Method	Main Findings
1.	Compliance with Taking Anti-Retro Viral (ARV) Drugs in HIV/AIDS Patients (Suryanto & Nurjanah, 2021)	This study aims to identify factors related to adherence to drinking Anti Retro Viral drugs (ARV) in HIV patients at Karawang Local General Hospital in 2019.	• Cross-sectional study using total sampling with a survey analytic approach. • A total sampling of 115 HIV patients • Measured variables: knowledge, self-efficacy, family support • Data collection: interviews, questionnaires, checklists • Statistical analysis: chi-square tests, odds ratios	• Knowledge had a significant association with ARV adherence. • Self-efficacy was significantly related to adherence. • Family support was an essential factor, significantly influencing adherence.
2.	Type of Job and Level of Education Affect Compliance in Taking Antiretroviral (ARV) Drugs in HIV/AIDS Patients (Haryadi et al., 2020)	To determine the relationship between the type of work and adherence to taking ARV drugs. To determine the relationship between the level of education and adherence to taking ARV drugs.	• The study is a correlational analytic with a cross-sectional design. • The sample consists of 55 patients with HIV/AIDS from the VCT clinic at RSUD Batang. • Fisher's Exact Test	• Education level was significantly related to ARV adherence, with higher education linked to better adherence. • Type of work showed a significant relationship with adherence, with certain occupations having higher adherence rates. • Most respondents had a junior high school education, worked in the private sector, and 60% adhered to ARV treatment.
3.	Relationship between Family Support and Compliance of People with HIV/AIDS (ODHA) in Taking ARV Medication (CB & Sianturi, 2020)	The study objective is to investigate the relationship between family support and adherence to ARV treatment among People Living With HIV/AIDS (PLWH) at St. Carolus Hospital Jakarta.	• Cross-sectional observational study • Purposive nonprobability sampling • 113 PLWH on ARV >1 year • Data collected using questionnaire • Data analyzed with Kendall's Tau-b test	• There is no significant correlation between family support and adherence to ARV treatment among PLWH, as indicated by a p-value of 0.363 (P>0.05).
4.	The Relationship Between Social Support and ARV	To analyze the relationship between social support and ARV compliance in	• Study type: Quantitative analytical research • Cross-sectional design • Total sampling technique	• At the Sukabumi Health Center, 48.6% of HIV/AIDS patients received high emotional

No.	Research Title and Author	Study Objectives	Method	Main Findings
	Compliance in HIV/AIDS Patients at Sukabumi Health Center, Bandar Lampung (Aini et al., 2024)	HIV AIDS patients at the Sukabumi Community Health Center.	• 72 people • Data collection using questionnaires	support, while 51.4% received low emotional support. • This indicates that the majority of HIV/AIDS patients at the center experience low emotional support. • Emotional support is important because it helps patients feel cared for, offers guidance, and provides emotional relief.
5.	The Relationship Between Family Support and Compliance of Pregnant Women with HIV in Consuming ARV (Prasetyo, 2024)	The purpose of the research is to find out the relationship between family support and the compliance of pregnant women with HIV in taking ARVs.	• Cross-sectional design with purposive sampling (30 respondents) • Spearman test for analysis • Variables: family support (independent) and ARV adherence (dependent) • Data collected using questionnaires on characteristics, family support, and adherence	• Most respondents were aged 26–45, had a high school education, and were housewives. • Family support was significantly associated with ARV adherence among pregnant women with HIV (p = 0.004). • Strong family support improved adherence to ARV treatment..
6.	The Influence of Family and Community Support on HIV/AIDS Patient Treatment Behavior in Tulungagung Regency (Prasetio et al., 2022)	- Determine the effect of family support on adherence to taking anti-retroviral drugs in HIV/AIDS sufferers in Tulungagung Regency. - Determine the effect of community support on adherence to taking anti-retroviral drugs in HIV/AIDS sufferers in Tulungagung Regency.	• Study type: Observational analytic study with a cross-sectional approach • Sample size: 60 HIV/AIDS patients • Research instrument: Questionnaire • Statistical analysis: Spearman rank test	• Family support significantly influenced treatment behavior among HIV/AIDS patients in Tulungagung (p = 0.011). • Community support had no significant effect (p = 0.835). • Family support showed a positive correlation with ARV adherence (r = 0.328).
7.	Factors Associated with Antiretroviral Medication Adherence Among People Living with HIV (PLHIV) (Ratnawati et al., 2022)	The study aimed to determine the factors associated with adherence to taking ARV medication in PLHIV.	• Descriptive analytic method with cross-sectional research design • Purposive sampling with 102 respondents • Questionnaire as the data collection instrument • Data analysis included univariate, bivariate, and multivariate analysis	• Side effects, stigma, service access, family support, and community support were significantly associated with ARV adherence in PLHIV. • Stigma was the most dominant factor, with an odds ratio of 11.257.
8.	Relationship Between Motivation Level	This study aimed to analyze the relationship between motivation level and	• Study design: Cross-sectional	• Motivation levels were significantly associated with ARV adherence among PLWHA at Jombang Care

No.	Research Title and Author	Study Objectives	Method	Main Findings
	and Therapy Compliance Antiretroviral People with HIV/AIDS at Jombang Care Center Plus Jombang Regency (Widiyanti et al., 2023)	adherence to antiretroviral therapy among PLWHA at Jombang Care Center Plus (JCC+) in Jombang Regency.	• Sample collection technique: Purposive sampling • Data collection instruments: LW-IMB-AAQ for motivation, MMAS-8 for adherence • Statistical analysis: Somers'd test	Center Plus, showing a moderate correlation (r = 0.415). • The average motivation level was moderate, with 42.1% of respondents in this category.Adherence to antiretroviral therapy was highest among respondents, with 57.9% showing high adherence.
9.	Factors Associated with Antiretroviral (ARV) Medication Adherence Among People Living with HIV/AIDS (PLWHA) at RSUD 45 Kuningan in 2023 (Herawati et al., 2023)	The aim is to analyze the factors associated with adherence to antiretroviral medication among people living with HIV/AIDS (PLWHA) at RSUD 45 Kuningan.	• The study involved 265 PLWHA selected through accidental sampling. • Data were collected using a closed-ended questionnaire. • Analyses included univariate, bivariate (Spearman's Rank), and multivariate (logistic regression).	• Adherence to ARV medication was significantly associated with age (p = 0.000), gender (p = 0.014), knowledge (p = 0.000), family support (p = 0.011), and health worker support (p = 0.000). • No significant associations were found for ARV side effects (p = 0.341) or stigma (p = 0.082). • Family support was the most dominant factor influencing PLWHA adherence.
10.	Analysis of Determinants of People's Compliance With Hiv/Aids In The Consumption Of Antiretroviral Drugs (Arv) at the Batu Anam Health Center, Simalungun Regency. (Simanjuntak et al., 2023)	To analyze the factors that determine the compliance of people with HIV/AIDS in consuming antiretroviral drugs (ARV) at Batu Anam Health Center.	• Research design: Cross-sectional • Population size: 179 • Sample size: 123 • Sampling technique: Purposive sampling	• Age and peer community support significantly influenced ARV adherence among PLWHA. • Peer community support was the most influential factor, with better support significantly increasing the likelihood of adherence.

Based on a total of 160 published articles, the author found 30 articles that matched the title and could be accessed and retrieved from 2020 to 2025. The results of the 30 articles were only 10 that met the inclusion criteria. The types of jobs found in this research journal also vary, namely civil servants, TNI / POLRI, housewives, and private employees. Data from the 10 journals reviewed showed that mostly private workers were less compliant in consuming ARVs.

Social support has been shown to have a significant influence on patient compliance in taking ARVs. The most influential type of social support is family support: A study by Herawati et al. (2023) showed that patients who received emotional and instrumental support from their families had a 1.7

times higher level of adherence than patients who did not receive it. Support from health workers: Regular counseling, adherence monitoring, and good communication with health workers strengthen patients' motivation to follow therapy. Peer/community groups: Participation in support groups plays a role in reducing stigma, increasing knowledge, and creating a sense of togetherness that contributes to adherence.

Health education has a positive impact on patient understanding of the importance of long-term ARV therapy. Some forms of effective educational interventions include: Routine counseling at VCT clinics: Patients who receive regular counseling have a better understanding of the consequences of non-adherence and the importance of a consistent treatment schedule. Use of educational media (leaflets, videos, mobile applications): Information technology facilitates patient access to accurate information and can improve self-management. Individual-based education: Through a personal approach, education is tailored to the needs and understanding of patients, especially for patients with low levels of education.

Several studies have combined social support and education interventions, which have been shown to provide more significant results on ARV medication adherence than either intervention alone. Herawati et al. (2023) found that patients who received family-based education had an increase in compliance of 84.9% and compliance with taking ARV medication was 201 respondents (75.8%).

DISCUSSION

Draw out the applicability, theoretical, and practical implications of the review findings. End with limitations, strengths, and generalizability/ transferability of the evidence.

Social Support

The study by CB and Sianturi (2020) found no significant relationship between family support and adherence to antiretroviral (ARV) medication among people living with HIV/AIDS (PLWHA). This finding contrasts with several other studies, which emphasize that social support from family, friends, and the broader community plays a crucial role in improving treatment adherence and reducing the risk of treatment interruption (Aini et al., 2024).

According to Suryanto and Nurjanah (2021) found that social involvement benefits PLWHA psychologically, by reducing internal stigma and increasing confidence to continue long-term treatment. According to research conducted, community support is also considered an important factor in improving the overall treatment behavior of HIV/AIDS patients, in addition to family. Overall, social support is a psychosocial resource that reduces stress, increases desire, and encourages PLWHA to seek treatment.

These differences in findings can be understood through the Health Belief Model and Social Support Theory. Social support, whether from family or the community, can act as encouragement, reduce perceived barriers, and increase confidence in continuing treatment. The study by CB and Sianturi (2020), which found no significant link between family support and adherence, may reflect

differences in cultural context, quality of support, or personal beliefs about ARV therapy. Researchers assume that while support is generally beneficial, its impact depends on how it aligns with patients' knowledge, motivation, and access to healthcare, highlighting the need for interventions that combine emotional, informational, and practical assistance.

Level of Education

The extent to which patients understand the importance of ARV adherence and the impact of neglect is influenced by their level of education. Study Haryadi et al. (2020) found that patients with secondary or higher education had a better understanding of how drugs work and the risk of resistance, which resulted in increased adherence. According to Laily and Ilmi (2022), there is a correlation between the type of work and level of education with compliance with ARV drugs. Most respondents (43.6%) work in the private sector (56.4%).

The results of the review of ten articles that met the inclusion criteria showed that social support, especially from family, has an important role in increasing the compliance of people with HIV/AIDS (PLWHA) in taking antiretroviral drugs (ARVs). This social support includes emotional, motivational, and instrumental support, such as reminders to take medication and hospitalization. An external factor that helps patients remain consistent in long-term therapy is family support.

A study by Afriani et al. (2023)showed that patients with family support showed higher levels of adherence compared to patients without family support. Another study showed that patients who felt accepted and psychosocially supported were more likely to visit their doctor regularly, which strengthens this finding. Support from the community or environment also contributes, although the role of the nuclear family is not strong. Study Suryanto and Nurjanah (2021) stated that treatment for more than one year can increase adherence to ARV therapy.

It has been proven that, in addition to social support, the level of education has a positive correlation with adherence to ARV therapy. Education influences patient understanding of the importance of treatment, drug side effects, and the risk of resistance if not adhered to. According to Prasetyo (2024), patients with better ARV knowledge, most of whom came from higher education levels, were more likely to adhere to their medication schedule. The study also emphasized that practical knowledge of ARVs is more important than formal education alone, which is important information for building educational strategies.

Studies by Widiyanti et al. (2023) found that education level can affect a person's emotional support. According to the data collected, the highest level of education held by respondents was Senior High School (SMA). Their level of education influences a person's attitude in making decisions and solving problems.. The higher a person's education is, the more they think about the benefits of treatment. Therefore, based on this theory, it is expected that a higher level of education will result in a higher level of ARV therapy compliance.

Medication Compliance

According to Dahochlory et al. (2019), the family can be a very influential factor in determining individual health beliefs and values and has a significant role in increasing treatment compliance, namely by supervising and encouraging PLWHA. Family support is critical in increasing PLWHA's self-confidence to be able to live longer by obediently taking ARV drugs.

According to Suryanto and Nurjanah (2021) getting family support and adhering to ARV therapy. ARV therapy has reduced the mortality rate of HIV patients. Along with the development and progress of ARV, the life expectancy of HIV patients has changed from a fatal disease to a treatable disease, and life expectancy has doubled. ARV therapy can also improve the immunological status and survival of patients. Researcher Prasetyo (2024) showed the results of his research that in the cross-tabulation distribution between family support and adherence to antiretroviral treatment, the majority of respondents received family support, and the majority of respondents who suffered from HIV/AIDS and took ARVs were included in the adherent category.

The researcher assumes that family support is crucial for PLWHA to adhere to ARV therapy. Emotional encouragement, supervision, and practical assistance from family help patients feel more confident, understand the importance of treatment, and maintain consistent medication intake. The impact of support depends not only on its presence but also on its quality and the patient's awareness, highlighting the need for interventions that combine family involvement with patient education and counseling.

Critical Analysis and Differences in Findings

Although most studies support the relationship between social support, education level, and ARV adherence, there are differences in measurement methods and contexts. For example, in rural areas, family is the only dominant social factor, while studies in urban areas show a significant influence of the PLWHA community as a source of support. Some studies did not find a significant direct correlation between adherence and education level, especially in patients who have higher education but do not receive sufficient health information.

These differences are due to the different instruments in each study, the sample sizes used, and the methodological approaches used. Therefore, it is important to pay attention to the numerical results and understand the local social, cultural, and policy contexts underlying the studies.

A conceptual model can be created based on the literature that has been conducted to describe the relationship between social factors, education, and adherence to taking antiretroviral (ARV) drugs in people with HIV/AIDS (PLWHA). This model is intended to describe how family support, community social support, and education levels affect patient motivation and understanding, which in turn impacts the level of treatment adherence.

Family support consists of emotional elements, such as feelings of acceptance and affection; instrumental, such as helping to obtain health services; and informational, such as reminders to take medication and basic education. Meanwhile, the involvement of the PLWHA community, health workers, and a stigma-free social environment are examples of community social support. The ability to understand medical information, the benefits of ARV therapy, and the effects of non-adherence correlate with the education level. Furthermore, these three main components impact two important internal components of the patient: the desire to recover and awareness of the importance of treatment.

The literature analyzed in this review has several limitations. Most studies used a cross-sectional design, which limits the ability to identify causal relationships. In addition, some articles did not describe the instruments' validity and reliability in detail. Small sample sizes and limitations in population representation also pose challenges in drawing broader generalizations. Variations in the approach to measuring social support and education interpret results less consistently across studies.

CONCLUSION

Based on a review of ten relevant national studies, it can be concluded that social support, particularly from family and patients' educational levels, plays a crucial role in improving adherence to antiretroviral (ARV) treatment among people living with HIV/AIDS (PLWHA). Emotional, informational, and instrumental support from family members can encourage patients to continue their therapy. In contrast, patients' knowledge of adherence, the risks of drug resistance, and the benefits of long-term therapy are strongly influenced by their level of education.

However, variations in the findings across studies indicate that the impact of social support and education cannot be separated from the broader social, cultural, and health information contexts in each region. In addition, the strength of the current evidence is limited by methodological issues, including the relatively small number of studies reviewed (n = 10), the predominance of cross-sectional designs, and potential database constraints that may have excluded other relevant research.

AUTHOR CONTRIBUTION

Jakasmir Girsang: Conceptualization, Methodology, Formal Analysis, Writing – Original Draft Preparation.

Tiarnida Nababan: Data Curation, Investigation, Resources, Writing – Review & Editing.

Refi Ikhtiari: Validation, Visualization, Supervision, Writing – Review & Editing, Final Approval of the Manuscript.

ORCHID

Jakasmir Girsang : None.
Tiarnida Nababan : None.
Refi Ikhtiari : None.

CONFLICT OF INTEREST

There is no conflict of interest in this research.

ACKNOWLEDGEMENT

Thank you to the Faculty of Nursing and Midwifery, which helped in completing this research and compiling this manuscript.

REFERENCE

Afriani, B., Camelia, R., & Astriana, W. (2023). Analisis kejadian hipertensi pada lansia. *Jurnal Gawat Darurat*, *5*(1). https://doi.org/10.32583/jgd.v5i1.912

Aini, F., Hasbie, N. F., Fitriani, D., & Farich, A. (2024). Hubungan dukungan sosial dengan kepatuhan arv pada pasien hiv/aids Di Puskesmas Sukabumi Bandar Lampung. *Jurnal Medika Malahayati*, *8*(3). https://doi.org/https://doi.org/10.33024/jmm.v8i3.15784

CB, D., & Sianturi, S. R. (2020). Hubungan dukungan keluarga dengan kepatuhan orang dengan hiv/aids minum obat arv. *Jurnal Keperawatan Terapan*, *6*(2). https://doi.org/https://doi.org/10.31290/jkt.v6i2.1572

Dahoklory, B. M., Romeo, P., & Takaeb, A. E. L. (2019). Hubungan dukungan keluarga odha dengan kepatuhan minum obat antiretroviral di Klinik VCT Sobat Kupang. *Timorese Journal of Public Health*, *1*(2). https://doi.org/10.35508/tjph.v1i2.2129

Dake, S., Bonful, H. A., Ganu, V., Puplampu, P., Asamoah, A., Arthur, H. A., Mwintuu, L., Asampong, E., Kretchy, I. A., & Anum, A. (2023). Coping strategies among adolescents and young adults living with HIV/AIDS in Accra-Ghana. *BMC Public Health*, *23*(1). https://doi.org/10.1186/s12889-023-17147-9

Haryadi, Y., Sumarni, S., & Angkasa, M. P. (2020). Jenis pekerjaan dan tingkat pendidikan mempengaruhi kepatuhan minum obat antiretroviral (arv) pada pasien hiv/aids. *Jurnal Lintas Keperawatan*, *1*(1). https://doi.org/10.31983/jlk.v1i1.6446

Herawati, I., Iswarawanti, D. N., Febriani, E., & Badriah, D. L. (2023). Faktor - faktor yang berhubungan dengan kepatuhan minum obat antiretroviral (ARV) pada ODHA di RSUD 45 Kuningan 2023. *Journal of Health Research Science*, *3*(02). https://doi.org/10.34305/jhrs.v3i02.938

Kementerian Kesehatan RI. (2024). *Laporan eksekutif perkembangan HIV AIDS dan penyakit infeksi menular seksual (PIMS) semester I tahun 2024*.

Laily, N. F., & Ilmi, T. (2022). Jenis pekerjaan dan tingkat pendidikan mempengaruhi kepatuhan minum obat antiretroviral (arv) pada pasien hiv/aids. *Java Health Jounal*, *9*(2). https://doi.org/https://doi.org/10.1210/jhj.v9i2.648

Permenkes RI Nomor 23 Tahun 2022 Tentang Penanggulangan Human Immunodeficiency Virus, Acquired Immunodeficiency Syndrom, Dan Infeksi Menular Seksual, Pub. L. No. 831, 2 (2022). https://peraturan.bpk.go.id/Details/245543/permenkes-no-23-tahun-2022

Prasetio, O. D., Nursalam, & Qur'aniati, N. (2022). Pengaruh dukungan keluarga dan masyarakat terhadap perilaku pengobatan pasien HIV/AIDS di Kabupaten Tulungagung. *Dunia Keperawatan: Jurnal Keperawatan Dan Kesehatan*, *10*(2). https://doi.org/10.20527/jdk.v10i2.99

Prasetyo, T. (2024). Hubungan dukungan keluarga terhadap kepatuhan ibu hamil dengan hiv dalam mengkonsumsi arv. *Jurnal Keperawatan Muhammadiyah*, *9*(2). https://doi.org/https://doi.org/10.30651/jkm.v9i2.21810

Rainuny, Y. R., & Imba, F. (2024). Edukasi mandiri kepatuhan minum obat ARV pada orang yang terinfeksi HIV di Puskesmas Sentani. *Jurnal Pengabdian Dan Pemberdayaan Kesehatan*, *1*(3). https://doi.org/https://doi.org/10.70109/jupenkes.v1i3.34

Ratnawati, D., Wahyuniar, L., Herman, R., Kuningan, S., Lingkar Kadugede No, J., & Barat, J. (2022). Faktor-faktor yang berhubungan dengan kepatuhan minum obat arv pada odhiv. In *Journal of Midwifery and Health Administration Research* (Vol. 2, Issue 2).

Shimels, T., Kassu, R. A., Bogale, G., Bekele, M., Getnet, M., Getachew, A., Shewamene, Z., & Abraha, M. (2023). Adherence to antiretroviral medications among people living with HIV in the era of COVID-19 in Central Ethiopia and perceived impact of the pandemic. *Community Health Equity Research and Policy*, *44*(1). https://doi.org/10.1177/0272684X221094151

Simanjuntak, A., Purba, R. M., Marbun, V. E., & Gurusinga, M. F. (2023). Analisisdeterminan kepatuhan orang dengan hiv/aids dalam konsumsi obat antiretroviral (arv) di Puskesmas Batu Anam Kabupaten Simalungun. *Jurnal Penelitian Kesmasy*, *5*(2). https://doi.org/10.36656/jpksy.v5i2.1279

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

Suryanto, Y., & Nurjanah, U. (2021). Kepatuhan minum obat anti retro viral (arv) pada pasien hiv/aids. *Jurnal Ilmu Keperawatan Indonesia (JIKPI)*, *2*(1). https://doi.org/10.57084/jikpi.v2i1.635

UNAIDS. (2023). The path that ends AIDS: UNAIDS Global AIDS Update 2023. In *UNAIDS*. https://www.unaids.org/sites/default/files/media_asset/2023-unaids-global-aids-update_en.pdf

Widiyanti, Daramatasia, W., & Muntaha. (2023). Hubungan tingkat motivasi dengan kepatuhan terapi antiretroviral pPada orang dengan HIV/AIDS di Jombang Care Center Plus Kabupaten Jombang. *Jurnal Kesehatan Tambusai*, *4*(3).

World Health Organization. (2024). *HIV and AIDS*. https://www.who.int/news-room/fact-sheets/detail/hiv-aids

Yona, S., Edison, C., Nursasi, A. Y., & Ismail, R. (2023). Self-awareness as the key to successful adherence to antiretroviral therapy among people living with HIV in Indonesia: A grounded theory study. *Belitung Nursing Journal*, *9*(2). https://doi.org/10.33546/bnj.2480