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Correlation Between Family Support and Depression Among Pre-Elderly Individuals with HIV in Jakarta

Gracella Tanjaya, Surilena*, Nicholas Hardi, Eva Suryani

Department of Psychiatry and Behavioral Science, School of Medicine and Health Sciences, Atma Jaya Catholic University of Indonesia, North Jakarta 14440, Indonesia

*E-mail: surilena@atmajaya.ac.id

Abstract

Depression among pre-elderly with human immunodeficiency virus (HIV) can significantly impact their quality of life. Family is often the primary source of support for this demographic and is recognized as a protective factor against depression. Therefore, identifying protective factors against depression is essential for promoting healthy aging among pre-elderly with HIV. This study aimed to determine the correlation between family support and depression among pre-elderly with HIV in Jakarta. A total of 120 pre-elderly with HIV from the Indonesia AIDS Coalition who were receiving HIV care at health centers across Jakarta participated in this cross-sectional study. The participants were recruited using convenience sampling. Data collection involved demographic questions, a family support questionnaire, and the Depression Anxiety Stress Scales 21 (DASS-21). The analysis comprised univariate and bivariate analyses. The univariate analysis described the characteristics, family support, and depression levels, while the bivariate analysis assessed the correlation between the variables using the Spearman test. The results indicated that pre-elderly with HIV primarily received support from siblings and spouses. The participants reported low family support (median 25.00) and mild depressive symptoms (median 8.00). A significant moderate negative correlation was found between family support and depression in this population (r = -0.344). This study suggests that enhancing family support for pre-elderly with HIV can help reduce depression. Consequently, there is a critical need for healthcare providers to engage families in the treatment of pre-elderly with HIV to mitigate depression and promote healthier aging.

Keywords: depression, family support, HIV, pre-elderly

Abstrak

Korelasi antara Dukungan Keluarga dan Depresi: Sebuah Studi pada Pra-lansia dengan* HIV *di Jakarta. *Depresi pada pra-lansia dengan* HIV *dapat memengaruhi kualitas hidupnya. Keluarga dapat menjadi sumber dukungan utama bagi pra-lansia dan diketahui merupakan faktor protektif terhadap depresi. Maka dari itu, perlu dilakukan identifikasi terkait faktor protektif terhadap depresi agar pra-lansia dengan* HIV *dapat menua dengan baik. Penelitian ini bertujuan untuk melihat korelasi antara dukungan keluarga dengan depresi pada pra-lansia dengan* HIV *di Jakarta. Penelitian* cross-sectional *ini diikuti oleh 120 pra-lansia dengan* HIV *yang tergabung di* Indonesia AIDS Coalition *dan menerima pengobatan* HIV *di layanan kesehatan Jakarta dengan metode* convenience sampling*. Digunakan kuesioner karakteristik, kuesioner dukungan keluarga, dan* DASS-21*. Analisis data terdiri atas analisis univariat untuk melihat gambaran karakteristik, dukungan keluarga, dan depresi, sedangkan analisis bivariat untuk menguji korelasi menggunakan* Spearman test*. Pra-lansia dengan* HIV *menerima dukungan keluarga utamanya dari saudara kandung dan pasangan. Didapatkan bahwa partisipan mendapatkan dukungan keluarga yang relatif rendah (median 25,00) dan tingkat depresi yang ringan (median 8,00). Terdapat korelasi negatif yang signifikan dengan tingkat sedang antara dukungan keluarga dengan depresi pada pra-lansia dengan* HIV *di Jakarta (r = -0,344). Studi ini menunjukkan bahwa peningkatan dukungan keluarga pada pra-lansia dengan* HIV *dapat membantu menurunkan depresi. Dengan demikian, menjadi penting bagi tenaga kesehatan untuk melibatkan peran keluarga dalam tatalaksana pra-lansia dengan* HIV*. Melibatkan keluarga dalam perawatan pra-lansia dengan* HIV *perlu mendapat perhatian khusus untuk mengurangi depresi dan mendukung proses penuaan yang lebih sehat.*

Kata Kunci: *depresi, dukungan keluarga,* HIV*, pra-lansia*

Introduction

Human immunodeficiency virus (HIV) is a pathogen that causes chronic infections, which can progress to acquired immunodeficiency syndrome (AIDS). In the early years of HIV epidemic, there were significant reports of deaths, with infected individuals having a life expectancy of only about one year following diagnosis (Ghosh, 2023). Over the past few decades, there has been considerable progress in the knowledge and treatment of HIV infection. Moreover, accessibility to these therapies has notably increased (Jocelyn et al., 2024). As a result, mortality rates and life expectancy for people living with HIV (PLWHIV) have changed. By age 40, individuals receiving antiretroviral therapy (ARV) can expect to gain an additional 35 years of life (Trickey et al., 2023). In addition, the number of pre-elderly (aged 45–59) living with HIV has increased significantly over the last decade. In 2021, those over 50 years old accounted for 8% of the global population of PLWHIV (The Joint United Nations Programme on HIV and AIDS [UNAIDS], 2021). In Indonesia, there has been a significant increase in this population since 2010, rising from 3.9% to 8.1% in 2021 (Ministry of Health Republic Indonesia, 2021).

As individuals enter the pre-elderly stage, they experience multiple changes, including shifts in social participation and functional capacity. These changes can affect their health, including their psychological conditions (Carmona-Torres et al., 2021). Depression and anxiety are common psychological issues in this age group, with depression being the second-leading cause of disability in 2019 (Santomauro et al., 2021). Globally, the prevalence of depression tends to increase with age, rising from 4.1% in those aged 25–59 to 5.8% in those aged 55–59 (Institute for Health Metrics and Evaluation [IHME], 2020). Moreover, the prevalence of depression among the urban population in Jakarta increased during the pandemic and has not returned to pre-pandemic levels since then (Hardi et al., 2023).

Multiple studies have shown a higher prevalence of depression among PLWHIV compared to those living without the virus and it stands out as the primary concern among various psychological issue (Den Boer et al., 2025; Gooden et al., 2022). A study conducted in 2020 showed that the prevalence of depression in PLWHIV over the age of 50 reached 44.8%, significantly higher than the 20.4% prevalence among those without HIV (Luo et al., 2020). A similarly high rate of depression, at 50.9%, was reported among PLWHIV in Jakarta (Yunihastuti et al., 2021). These rates highlight the urgent need to address depression in PLWHIV, particularly in the pre-elderly population, due to its potentially detrimental effects on their overall well-being.

Depression can negatively impact adherence to ARV therapy, worsen existing health conditions, accelerate the progression of HIV to AIDS, decrease quality of life, and increase the risk of mortality (Tran et al., 2019). Several factors are known to elevate the risk of depression. In pre-elderly with HIV, socioeconomic factors, such as unemployment and low monthly income, act as significant stressors (Tan et al., 2022). Additionally, the increase in other comorbidities may contribute to depression in this demographic (Bernard et al., 2020). Common social prejudices and discrimination against PLWHIV are other psychological stressors that can heighten the risk of depression (Matsumoto et al., 2017).

Adequate family support can significantly enhance health and well-being. In patients with chronic diseases, family support serves as a protective factor against depression (Wulandari & Livana, 2022; Wulandari et al., 2022). The buffering theory explains this protective effect, suggesting that family support acts as a buffer against negative stressful impact of critical life events, thereby reducing the risk of depression (Buchwald, 2017; Manczak et al., 2018). While there are different types of social support, family support is one of the most essential during times of illness (Amiya et al., 2014). For pre-elderly with HIV, family can be the primary

source of support, particularly when social network participation decreases. Sufficient family support can assist PLWHIV in coping with their condition, improving therapy adherence, and enhancing quality of life (Huang et al., 2021). Conversely, inadequate family support can lead to maladaptive coping mechanisms, making individuals more susceptible to psychological disturbances and negatively impacting their quality of life (Tavares et al., 2019).

Depression in PLWHIV affects not only younger individuals but also remains prevalent among the elderly, as previously noted. Given the harmful effects of depression, particularly as PLWHIV age, preventing it before they enter later life stages is crucial. As more PLWHIV begin to age, the pre-elderly period becomes a critical window for early intervention. Recent studies on family support and depression have primarily focused on the general population of PLWHIV, with none specifically examining the pre-elderly demographic (Umar et al., 2025; Yulianti et al., 2019). Therefore, this study aims to identify a potential factor that can help reduce depression by exploring the correlation between family support and depression in pre-elderly with HIV.

Methods

A cross-sectional study was conducted from May to July 2023. The target population comprised pre-elderly with HIV who received treatment at health centers across Jakarta or were integrated with the Indonesia AIDS Coalition (IAC). This community-based organization encompasses PLWHIV throughout Indonesia. The participants were included based on the following criteria: 1) HIV positive; 2) aged 45–59 years; 3) willing to participate in the study and having signed the informed consent. The exclusion criteria eliminated those who were unable to operate online applications.

A total of 120 participants were recruited through convenience sampling techniques. The sample was obtained through coordination with the IAC, where the community coordinator helped reach out to members who met the inclusion criteria. Peer supporters in primary healthcare centers around Jakarta also assisted in contacting their members. The participants were asked to fill out a Google Form, providing a convenient and efficient way to gather responses from participants across Jakarta. The study was approved by the Ethics Committee of the Faculty of Medicine and Health Science at Atma Jaya Catholic University (No: 13/03/KEP-FKIKUAJ/2023). Before participating in the study, all participants were briefed about the study objectives and were permitted to proceed only after providing written informed consent. They were not required to provide their names to ensure confidentiality, and all personal information collected from respondents was kept confidential.

The instruments used in this study included a characteristics questionnaire, a family support questionnaire, and the Depression Anxiety Stress Scale 21 (DASS-21). The sociodemographic questionnaire collected information on age, gender, educational level, marital status, monthly income, employment status, domicile, and source of family support. The monthly income was based on the 2023 Jakarta Provincial Minimum Wage of 4,901,798 IDR. Family support was measured using the Family Support Questionnaire developed by Kusuma (2011), which demonstrated reliability with a Cronbach's alpha of 0.883 (Kusuma, 2011). This questionnaire consists of 18 items, and the participants rated the truthfulness of each statement on a four-point Likert scale ranging from (0) "Not at all" to (3) "All the time." The total score was obtained by summing all items, with higher scores indicating greater family support received and lower scores indicating less support.

Depression was assessed using the Indonesian version of DASS-21, which has demonstrated reliability ($\omega \geq 0.785$) (Onie et al., 2020). Although the scale contains 21 items, only the depression items (numbers 3, 5, 10, 13, 16, 17, and 21) were used. The participants rated each statement on a four-point Likert scale from (0)

"Did not apply to me at all" to (3) "Applied to me very much, or most of the time." The total score was calculated by summing all relevant items, with higher scores indicating more severe depression and lower scores indicating less severity. The collected data were further analyzed using univariate and bivariate analyses. Univariate analysis was presented with frequency, percentage, and median ± interquartile range (IQR). Both family support and depression were measured on an ordinal scale, and due to abnormal data distribution (as assessed by Kolmogorov-Smirnof test), the Spearman test was conducted to assess the correlation between family support and depression.

Results

The majority of the respondents were male (62.5%) with a median age of 46 (IQR = 4). All respondents had received formal education, with 55.5% having completed senior high school. More than half of the respondents (78.3%) reported a monthly income below the provincial minimum wage, indicating a predominantly low-income population and 63.3% of the respondents were employed. Approximately 40.8% of respondents were married, and family support

Table 1. Characteristics of Respondents (N = 120)

Characteristics	n (%)
Age, median (IQR) years	46 (IQR = 4)
Gender	
Male	75 (62.5)
Female	43 (35.8)
Transgender	2 (1.7)
Education	
No formal education	0
Primary school	4 (3.3)
Junior high school	5 (4.2)
Senior high school	66 (55.0)
Associate/Bachelor	40 (33.3)
Master/Doctoral	5 (4.2)
Monthly income	
< Provincial minimum wage	94 (78.3)
≥ Provincial minimum wage	26 (21.7)
Employment status	
Unemployed	44 (36.7)
Employed	76 (63.3)
Marital status	
Unmarried	36 (30.0)
Married	49 (40.8)
Divorced	35 (29.2)
Source of family support	
Spouse/partner	35 (29.2)
Parents	21 (17.5)
Children	14 (11.7)
Siblings	40 (33.3)
Other relatives	10 (8.3)
Domicile	
East Jakarta	32 (26.7)
North Jakarta	10 (8.3)
West Jakarta	16 (13.3)
South Jakarta	37 (30.8)
Central Jakarta	23 (19.2)
Seribu Islands Administrative Regency	2 (1.7)

Table 2. Distribution of Family Support and Depression

Variable	Median (IQR)	Range
Family support	25.00 (IQR = 27)	0–54
Depression	8.00 (IQR = 12)	0–34

primarily came from siblings (33.3%) and spouses (29.2%). Refer to Table 1 for detailed sociodemographic characteristics of the respondents.

The respondents reported a median family support score of 25.00 and a median depression score of 8.00, as shown in Table 2. Given that the family support score ranged from 0 to 54, the median score suggests that most respondents experienced a moderate levels of family support. Meanwhile, the median depression score of 8.00, on a scale ranging from 0 to 34, indicates a generally lows level of depression. Correlation analysis between family support and depression revealed a significant moderate negative correlation ($r = -0.344$; p-value < 0.01).

Discussion

Family support plays a crucial role for individuals living with chronic diseases, including HIV infection, as it provides psychological, financial, and social stability to PLWHIV. The sources of family support vary for each person; in this study, support primarily came from siblings and spouses. This may be attributed to the marital status of the majority of the respondents, where family support typically comes from spouses. Another contributing factor is the comfort level of pre-elderly with HIV in disclosing their serostatus. Disclosing serostatus to family is essential for initiating family support (Knight & Schatz, 2022). In this study, pre-elderly with HIV felt more comfortable disclosing their serostatus to siblings or spouses rather than to their children. A study conducted in Tanzania showed similar results, where the majority of adults with HIV disclosed their status to their spouses, with only a few disclosing to their children (John & Chipwaza, 2022).

In this study, the family support reported by the respondents was relatively low, although there was a tendency toward better support. This finding slightly differs from a study conducted at Dr. Cipto Mangunkusumo Hospital in Jakarta, where most of the PLWHIV aged 18–55 reported high family support (Debby et al., 2019). This difference in results is attributable to variations in the measurement tools used and the observed age group. Sources of family support may differ across age groups, leading to variations in the type of support received. However, there is currently no research on this topic; thus, further studies are needed.

Conversely, a study conducted in central Java, more than half of PLWHIV received relatively low family support (Marni et al., 2020), which indicates a family's lack of willingness to assist a member living with HIV (Desalegn et al., 2022). Family support can take various forms, including emotional, instrumental, and informational. Among these, emotional and instrumental support are considered essential for PLWHIV who are over 50 years old (John & Chipwaza, 2022). Emotional support can be expressed through acts of attention, affection, and empathy, fostering a sense of acceptance for PLWHIV (Lin et al., 2015). Additionally, instrumental support, such as meeting the daily needs of pre-elderly with HIV, may be crucial, especially since most respondents reported low economic status.

Several factors may be associated with the low family support observed in this study. First, the low economic status of most respondents could impact the support received, particularly informational support. Economic status is closely linked to knowledge about HIV; when economic status is low, access to HIV-related inform-

ation tends to be limited. This limitation may arise from reduced exposure to information dissemination channels and lower education levels (Chirwa et al., 2019). Informational support, which focuses on providing guidance and knowledge about the disease, may become restricted due to these access barriers (Pachuau et al., 2021).

Stigma and discrimination against PLWHIV are the known barriers to obtaining family support, especially for older individuals (Tavares et al., 2019). In Indonesia, these barriers remain significant challenges for PLWHIV, sometimes originating from family members. Discrimination can manifest as the separation of personal belongings, outright rejection, or neglect. Insufficient family knowledge about HIV contributes to the underlying stigma and discrimination (Fauk et al., 2021). However, further research on the stigma and discrimination faced by pre-elderly with HIV is needed.

Despite depression being a common mental health issue among PLWHIV, with risk increasing with age, this study revealed a unique finding. Depression among pre-elderly with HIV was generally mild and tended to fall within a normal range. While the findings do not indicate a high prevalence of depression in this group, some respondents reported elevated levels of depression. The mild to normal levels of depression observed may be linked to the presence of various protective factors, such as gender, employment status, and family involvement. Depression is more common and severe in females (Aljassem et al., 2016), yet the majority of respondents in this study were male. This may be attributed to differences in coping mechanism between males and females, with females more commonly exhibit a maladaptive coping mechanism such as avoidance (Girgus et al., 2017). The presence of social support, particularly from family, may serve as a protective factor. Family support has been shown to reduce the incidence of depression in males over 40 living with HIV (Liu et al., 2018). Additionally, employment status is associated with lower depression rates in pre-elderly with HIV, with most respondents being employed. Employed males over 50 years old living with HIV have a lower risk of depression (AOR = 0.50) (Tan et al., 2022). Employment can alleviate financial stress and frustration arising from economic insecurity, which is believed to decrease the risk of depression in PLWHIV (Bhatia & Munjal, 2014).

Bivariate analysis indicated that family support has a significant negative correlation with depression in pre-elderly with HIV, suggesting that better family support is associated with lower levels of depression. Although family support reported was relatively low, the data imply that even minimal family support may contribute to reduced depression levels in pre-elderly with HIV. The presence of family support is thought to have a buffering effect when facing negative life events (Roohafza et al., 2014), helping to alleviate psychological stress through various mechanisms and positive changes.

Family support can make PLWHIV feel more valued, boosting their confidence and optimism in managing the disease. For instance, when families are actively involved in HIV treatment, pre-elderly with HIV may feel less alone in their struggle, which can enhance their optimism and resilience (Fang et al., 2015). Resilience is defined as an individual's ability to overcome negative situations. It is influenced by both internal and external factors, with the family environment and social support plays as an external factor. Previous theories highlight the family as an important external factors that significantly influences resilience (Wang et al., 2024). High resilience in people over 50 living with HIV is associated with fewer depressive symptoms (Rooney et al., 2019). Furthermore, family support in the form of encouragement positively correlates with self-efficacy in patients with chronic diseases (Septianingrum et al., 2023).

Self-efficacy, which refers to one's self-perceived ability to act effectively in a situation—such as initiating therapy and maintaining a

sense of control over one's life (Chan, 2021)—can significantly impact depression and overall quality of life. Furthermore, when pre-elderly with HIV receive adequate emotional support, it can enhance communication among family members. This phenomenon is also observed in elderly with chronic diseases, where improved family communication creates a better environment for expressing feelings about their condition, which can reduce the guilt associated with the disease (Luo et al., 2023). When sufficient instrumental support is provided, it can alleviate economic burden and reduce perceived stress (Luo et al., 2023). Conversely, low family support may lead to poor coping mechanisms in the face of illness, resulting in higher levels of depression among PLWHIV (Tavares et al., 2019).

This study also has some limitations. Potential bias due to factors such as duration of infection, socioeconomic status, and other comorbidities could not be controlled. Additionally, this study examined family support solely from the perspective of pre-elderly with HIV, without considering the family's viewpoint. There may also be other protective factors, aside from family support, that could reduce depression in this population. Further research is needed to analyze and control for these contributing factors.

Conclusion

This study confirms that family support serves as a protective factor against depression in pre-elderly with HIV. By alleviating depressive symptoms, it can facilitate better aging for this population. This underscores the importance of involving families in HIV treatment. Clinicians can encourage family members to provide support or conduct awareness campaigns about HIV, ensuring that everyone plays a role in helping pre-elderly with HIV recover and age well. Additionally, families should be educated about the disease to help diminish stigma towards their family members with HIV. Moreover, healthcare systems should adopt a holistic approach by integrating psychosocial interventions and family-based approach into routine HIV care. Policies that foster community and family engagement may further enhance the quality of life of pre-elderly with HIV.

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