

## Analysis of Family Support and Levels of Depression HIV/AIDS Patients in Adherence of Antiretroviral Medication in Kediri City

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### ABSTRACT

Antiretroviral (ARV) medication adherence is important because ARV can improve quality of life in HIV/AIDS patients. Adherence to ARV medication influenced many factors, including family support and levels of depression experienced by patients of HIV/AIDS. The purpose of this research is to analyze the effect of family support and levels of depression patients HIV/AIDS against the ARV medication adherence in Kediri. Research's design is quantitative research using the approach of cross sectional. The sampling technique used is proportional sampling with cluster random samples as much as 133 respondents who get ARV therapy in Gambiran Hospital, "Pesantren 1" Primary Health Centre, and Seroja Clinic. Data analysis techniques using logistic regression test. The results show that 133 of the respondents, 98 respondents (73.7%) get family support and adherence taking ARV medication, and 99 respondents (74.4%) are not depressed and adherence taking ARV medication. Adherence in this research is referred to take ARV by dosage and by time exactly in schedule. The results of the analysis using logistic regression test shows the value significance of  $0.000 < (\alpha = 0.05)$ , meaning that  $H_0$  is rejected and the  $H_1$  is accepted, this means that there is a relationship of family support and levels of depression HIV/AIDS patients against the ARV medication adherence. Family Support and levels of depression HIV/AIDS patients affect the ARV medication adherence 80.2%. Conclusion, to get adherence in ARV treatment, HIV's patient needs family support and get not in depression condition.

**Keywords :** adherence, ARV, depression, family support, HIV/AIDS

### INTRODUCTION

HIV/AIDS is an increasingly pressing global issue, especially with the increasing number of cases reported worldwide. In Indonesia, particularly in 2016, there was a significant spike in the number of new HIV/AIDS cases, making the disease one of the most serious public health challenges (Indonesia, 2017). East Java Province, including Kediri City, shows an alarming incidence rate, with a cumulative total of 860 cases until 2016.

The discovery of Antiretroviral (ARV) drugs brought new hope for improving the quality of life of HIV/AIDS patients. Although ARVs do not cure HIV/AIDS, the use of these drugs can reduce mortality from the disease (Sullivan et al., 2014; Uthman & Negin, 2016). However, new challenges arise related to side effects and adherence in ARV treatment. HIV/AIDS patients are required to take ARVs throughout their lives, according to the prescribed dosage and schedule (World Health Organization, 2016).

Adherence to ARV treatment is strongly influenced by various factors, including family support and the patient's level of depression. Family support is crucial for HIV/AIDS patients to deal with the complex issues associated with the disease, such as psychological distress, drug side effects, and the stigma and discrimination they often experience (Kumar et

al., 2016; Mugavero et al., 2015). Unfortunately, not all individuals living with HIV get the support they need, which may contribute to increased rates of depression among them (Tashkin & Roth, 2015).

Depression is a common problem faced by HIV/AIDS patients and can negatively impact their adherence to ARV treatment. Research shows that depressed individuals are more likely to not adhere to their treatment regimen, which in turn can worsen their health condition (Bing et al., 2013; Zullig & Shaw, 2013). Therefore, it is important to identify factors that influence adherence, including family support and patients' mental health.

Family support can serve as a source of motivation and stability for patients. Families who provide emotional and practical support can help patients overcome the challenges they face, thereby increasing their likelihood of remaining adherent to treatment (Mugavero et al., 2015). In this context, it is important to explore how family support can affect the level of depression and adherence of HIV/AIDS patients to ARV treatment.

Furthermore, this study aims to analyze the relationship between family support, depression level, and adherence to ARV treatment among HIV/AIDS patients in Kediri City. By understanding these dynamics, it is expected that appropriate interventions can be identified to improve the quality of life of HIV/AIDS patients and assist them in undergoing treatment effectively (Wawer & Gray, 2015).

Thus, this study not only contributes to the academic understanding of HIV/AIDS, but also provides practical insights that can be used by healthcare providers to better support patients. It is hoped that the results of this study can form the basis for better policies and programs in the management of HIV/AIDS patients in Indonesia.

## **METHODS**

This research aims to analyze the effect of family support and levels of depression patients were HIV/AIDS antiretroviral medication adherence against (ARVS) in Kediri city. Analytic observational research design with cross sectional approach. The dependent variable in this study is family support and levels of depression patients HIV/AIDS, independence variable was taking the medication ARV adherence. Data collection was done through a questionnaire, which consisted of a questionnaire about family support and a questionnaire about depression, whereas HIV/AIDS patient compliance in medication ARV measured using the pill count. The population in this research is the HIV/AIDS patients in Kediri city who undergo drug therapy ARV in Kediri, there are in Gambiran Hospitals, "Pesantren 1" Primary Health Centre, and "Seroja" Clinic. The respondents of this study as much as 133 people HIV/AIDS patients in Kediri city. Sampling method using proportional cluster random sampling, consists of 111 respondents who underwent ARV medication therapy in Gambiran Hospitals, 11 persons in "Pesantren 1" Primary Health Centre, and 11 people in "Seroja" Clinic. The research was carried out with the help of the Non-Governmental Organization "KDS Friendship-Plus" Kediri, on 16 – 21 September 2017. Data analysis techniques using logistic regression test.

## **RESULTS AND DISCUSSION**

The results showed that of the 133 respondents involved, the majority were women

(56%) with the largest age group being in the range of 36-45 years (60%). Most respondents were married (82%) and had a high school education (66%), while 83% were employed. Most respondents (84%) received ARV therapy at Gambiran Hospital and lived with their families (93%). The demographics of respondents in this study are presented in Figure 1.

Although globally more men are infected with HIV/AIDS, the results of your study show that female respondents are more dominant. This may be due to several factors, such as better access to health services by women, stigma that discourages men from seeking care, and women's social role as caregivers that encourages them to be more proactive in accessing treatment (Mugavero et al., 2015; Uthman & Negin, 2016). In addition, health programs that focus more on women and the specific characteristics of the community where the study was conducted may also contribute to the higher number of female respondents (World Health Organization, 2016).

The majority of people with HIV are usually in the 25 to 49 age group. This is the age range where risky behaviors, such as unsafe sexual intercourse and injecting drug use, are most common (UNAIDS, 2018). However, these trends may vary by region and social context. In some countries or communities, HIV infection is also increasing among adolescents and young adults (15-24 years old) (World Health Organization, 2020), while in other countries, the number of people with HIV among older people (50 years old and above) is also increasing, often as a result of increased life expectancy thanks to ARV therapy (Mugavero et al., 2015).

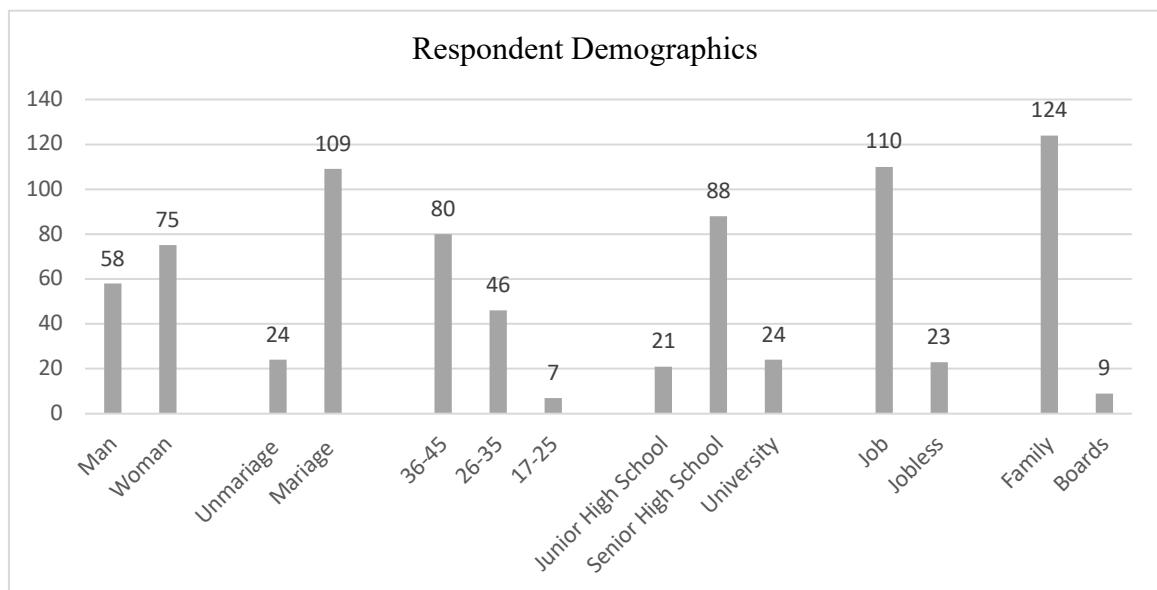
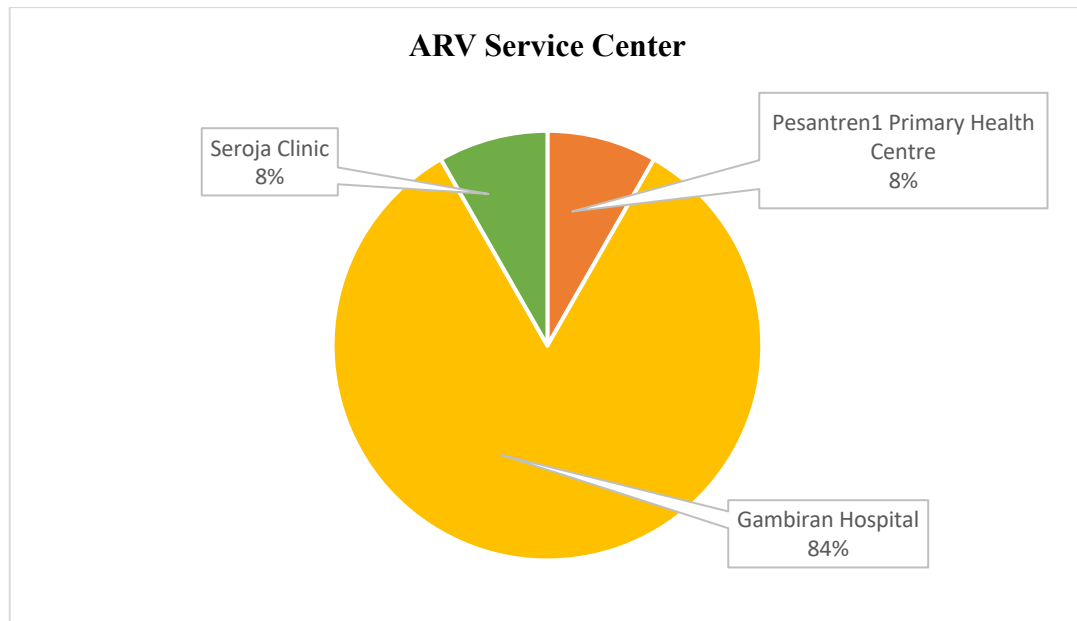


Figure 1. Respondent demographics

The relationship between HIV infection and age is significant and can be understood through several aspects. First, younger age groups, especially adolescents and young adults, are often more susceptible to HIV infection due to higher risk behaviors, such as unsafe sexual intercourse and injecting drug use. On the other hand, older individuals, usually above 50 years old, may face different challenges; they are often less informed about HIV risks and may not use appropriate prevention measures, thus increasing their risk of infection (Eaton et al., 2018).



**Figure 2.** Respondent ARV's service centre

In addition, age also affects HIV awareness and management. Older patients tend to have more experience in managing chronic diseases, and they may be more adherent to ARV treatment compared to younger ones (Mugavero et al., 2015). However, they may also face other health issues that can affect their HIV management, such as age-related comorbidities (Eaton et al., 2018).

People with HIV can come from a variety of marital status backgrounds, but in many populations, the majority of people with HIV are married. This is due to several factors including transmission within relationships, stigma and isolation, and family support. Many HIV infections occur in the context of intimate relationships, and if one partner is infected, the risk of transmission to the other partner increases, especially if there is no use of appropriate prevention methods (Uthman & Negin, 2016). In terms of stigma and isolation, individuals who are unmarried or separated from their partners may be more stigmatized and have difficulty accessing health services, leading to lower detection rates (Tashkin & Roth, 2015). Conversely, married couples may benefit from better emotional and financial support, which can positively impact their health management (World Health Organization, 2016). However, this proportion may vary depending on geographical, social, and cultural contexts. In some communities, people living with HIV may be more likely to be unmarried or from certain high-risk groups. Therefore, it is important to understand the local context when analyzing marital status among people living with HIV.

Higher education levels are often associated with better knowledge of HIV risks, modes of transmission and prevention measures. Individuals with higher education tend to be more aware of the importance of condom use and are more likely to proactively seek health services, including ARV testing and treatment (Mugavero et al., 2015). In contrast, HIV survivors with lower levels of education often come from backgrounds that have limited access to health information and services, and are more likely to engage in risky behaviours (Uthman & Negin, 2016). In addition, HIV stigma can be stronger among individuals with lower education, deterring them from necessary treatment and support (Tashkin & Roth, 2015). Therefore, increasing education levels can play an important role in HIV prevention and management, as well as in reducing infection rates in the community.

**Tabel 1.** The relationship of family support and depression level to ARV treatment adherence

|                     | Adherence |      |               |      | P    | OR      | IK (95%) |         |
|---------------------|-----------|------|---------------|------|------|---------|----------|---------|
|                     | Adherence |      | Non Adherence |      |      |         | Min      | Mak     |
|                     | f         | (%)  | f             | (%)  |      |         |          |         |
| Family support      |           |      |               |      |      |         |          |         |
| Supportife          | 9         | 73,7 | 15            | 11,3 | 0,00 | 19,600  | 6,21     | 61,825  |
| Non Supportif       | 8         | 3,8  | 15            | 11,3 | 0    |         | 4        |         |
|                     | 5         |      |               |      |      |         |          |         |
| Total               | 103       | 77,4 | 30            | 22,6 |      |         |          |         |
| Level of depression |           |      |               |      |      |         |          |         |
| No Depression       | 9         | 74,4 | 5             | 3,8  | 0,00 | 123,750 | 30,945   | 494,876 |
| Depression          | 9         | 3    | 25            | 18,8 | 0    |         |          |         |
|                     | 4         |      |               |      |      |         |          |         |
| Total               | 103       | 77,4 | 30            | 22,6 |      |         |          |         |

The results showed that 98 (73.7%) respondents who received family support were compliant in taking ARV drugs, and 99 (74.4%) respondents who did not experience depression were also compliant in ARV treatment. Adherence in this study refers to HIV/AIDS patients taking ARV drugs according to the agreed dose and schedule. Family support was shown to increase patient adherence ( $\alpha = 0.000$ ; OR = 19.600), while patients who did not experience depression were more adherent in ARV treatment ( $\alpha = 0.000$ ; OR = 123.750).

A total of 113 out of 133 respondents (85.0%) received family support. In addition, 104 respondents (78.2%) did not experience depression, and 103 respondents (77.4%) were compliant in ARV treatment. The cross-sectional results showed that 98 respondents (73.7%) who received family support were compliant in ARV treatment, with a significance of 0.000 ( $\alpha < 0.05$ ) and OR = 19.600. This means that HIV/AIDS patients who receive family support are more compliant in ARV treatment 19.6 times than patients who do not receive support.

Family support is needed by patients to deal with HIV/AIDS disease, drug side effects, and stigma in the community. This support makes patients feel more comfortable, thus increasing adherence to ARV treatment. Previous research shows that social support plays an important role in improving treatment adherence in HIV/AIDS patients (Mugavero et al., 2015; Uthman & Negin, 2016). In the interviews, some respondents were not open about their HIV/AIDS status to their families, for fear that their families would not accept their condition. However, even though the family did not know their HIV status, they still provided financial and emotional support.

Related to the level of depression, 99 respondents (74.4%) who did not experience depression were compliant with ARV treatment, with a significance of 0.000 ( $\alpha < 0.05$ ) and OR = 123.750. This indicates that patients who experience depression are at risk of not being compliant with ARV treatment 123.75 times compared to patients who do not experience depression. Symptoms of depression such as decreased appetite, laziness, weight loss, and feelings of sadness are often unrecognized by patients. Previous studies have also confirmed

that depression can interfere with patient adherence to ARV treatment (Tashkin & Roth, 2015; Zullig & Shaw, 2013).

The interview results showed that some respondents experienced symptoms of depression without realizing it. When these symptoms appear, patients become reluctant to take drugs, including ARVs, although some continue to take them but not on schedule. Adherence is very important in ARV therapy, because ARVs work to suppress the number of viruses in the body of HIV/AIDS patients. Patients are declared non-adherent if within 60 doses of therapy in one month, they do not take the drug more than 3 times. Non-adherence to ARV treatment can cause drug resistance, which has an impact on the deterioration of the patient's health condition (World Health Organization, 2016).

Non-adherence to ARV treatment can reduce patients' quality of life and increase morbidity and mortality from HIV/AIDS (Bing et al., 2013; Sullivan et al., 2014). Therefore, it is important to increase family support and address mental health issues to improve patient adherence to ARV treatment.

## **CONCLUSION**

The study reveals a significant relationship between family support, levels of depression, and adherence to antiretroviral therapy (ARV) among HIV/AIDS patients in Kediri. Among the 133 respondents, 113 (85.0%) reported receiving family support, which correlated with a higher adherence rate of 103 respondents (77.4%) who consistently took their ARV medications. Additionally, 104 respondents (78.2%) who did not experience depression adhered to their treatment, highlighting the importance of mental health in medication compliance. Notably, 98 respondents (73.7%) received family support and adhered to their ARV regimen, with a Chi-square test indicating a significant association ( $p = 0.000$ ;  $OR = 19.600$ ) between family support and ARV compliance. Furthermore, 74.4% of the 99 respondents without depression adhered to their medications, with a significant result ( $p = 0.000$ ;  $OR = 123.750$ ) showing that depression levels impact adherence. Overall, the findings underscore that both family support and depression are critical factors influencing ARV adherence among HIV/AIDS patients in Kediri, with statistical significance confirmed by the Wald statistic ( $p < 0.05$ ).

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