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Original Research

Profile of People With HIV-AIDS (PLWHA) During The Covid-19 Pandemic By Stress Levels

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ABSTRACT

The COVID-19 pandemic presents complex problems, especially in the health sector, especially for people with HIV-AIDS (PLWHA), who are one of the groups vulnerable to COVID-19 transmission. Psychological responses shown by PLWHA are anxiety and stress. Various factors allegedly affect stress in PLWHA. This study aimed to determine the factors influencing stress levels in PLWHA during the covid-19 pandemic. The research design is descriptive-analytic with a cross-sectional approach using primary data. The sample of 34 people living with HIV in the Kediri area was obtained by purposive sampling. Inclusion criteria were PLWHA aged 20-55 years and cooperative. Exclusion criteria included people living with HIV with advanced complications or severe opportunistic infections. The instrument measuring stress uses the Depression Anxiety Stress Scale 42 (DASS 42). Analysis of the Spearman rank correlation test data showed that there was no relationship between gender and age with stress levels (ρ-value = 0.428 > =0.05, -value = 0.131>α=0.05), and there was a relationship between education, knowledge , social support with stress levels in PLWHA in the Kediri area (ρ-value = 0.000 > =0.05, (r)=-600), -value = 0.000 < =0.05, (r)=-0.658 , p-value < d =0.05, (r)=-799). Respondents can actively increase knowledge related to COVID-19 through accountable information media and be open with families, communities, and health workers to get high support from families, communities and health workers as a priority for vulnerable groups in efforts to prevent COVID-19.

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Introduction

The COVID-19 pandemic has been declared a national disaster and impacted all communities. COVID-19 has spread almost all over the world. There have been 102,584,351 confirmed cases of Covid-19 worldwide, including 2,222,647 deaths (WHO, 2021). Meanwhile, Indonesia is one of the countries affected by Covid-19, with several cases of 1,099,687, recovered 896,530, and mortality of 30,581 cases (Satgascovid19, 2021).

People with HIV-AIDS (PLWHA) are one of the groups most affected during the pandemic (Sharren Joyceilin, 2020). The problems faced by PLWHA are increasingly complex due to the emergence of covid-9, which can aggravate the condition of PLWHA. Decreased immune status in PLWHA increases the risk of COVID-19 infection. PLWHA, who have decreased CD4 levels and advanced infections, are more susceptible to infection with bacteria, protozoa, fungi, and the SARS Cov 2 (covid-19) virus than the general public (Ministry of Health, 2020). The risk of complications from COVID-19 is higher in some vulnerable populations, the elderly, debilitated individuals, or individuals with chronic conditions. The population in vulnerable groups of concern is people with HIV-AIDS (Pradana, A.A., Casman, C., Nur'aini, 2020). The anxiety of people with HIV-AIDS is significantly increasing, caused by a lack of knowledge about information and prevention during the pandemic (Aritonang, J., Nugraeny, L., Siregar, 2020). High anxiety results in a decrease in immunity, so you are more susceptible to being infected with COVID-19 (Aritonang, J., Nugraeny, L., Siregar, 2020)

Various media convey information related to covid-9 and its transmission. This information causes PLWHA to experience high anxiety and worry. Lack of up-to-date information about the risk of COVID-19 among PLWHA can make PLWHA, especially those older and have psychological stress, where PLWHA feel stressed and less prepared to protect themselves from contracting COVID-19. Stress is when individuals respond to changes in their normal balance status (Berman, A.T., Snyder, S., & Frandsen, 2015). The dependent variable or outcome is the body's reaction to the source of stress (Lyon, 2012). Stress results from within the individual (Staal, 2004). Stress results include changes in psychological, emotional, and psychological conditions (Carr, D., & Umberson, 2013).

The research results indicate a correlation between SARS-CoV-2 infection and behavioral and psychological factors that potentially increase the risk of contracting a similar respiratory disease. According to the research article, researchers recruited 394 healthy respondents and measured stress levels, perceptions of stress, and emotions such as anxiety and depression. They also used a stress index to calculate their overall stress level and found that those with a high-stress index were 2.16 times more likely to catch the flu than those with a low-stress index. Moreover, 276 participants were interviewed about their most traumatic life events in another study. The researchers found that the longer they experienced interpersonal, educational, and financial stress, the higher their chances of catching a cold. Cohen et al. also assess that increased stress can predict disease risk. The study could not explain why stress increases the risk of colds. Excessive production of proinflammatory cytokines triggers disease symptoms, such as nasal congestion and runny nose. So the researchers concluded that a person who experiences stress has a greater potential to be exposed to SARS-CoV-2 infection (Sheldon Cohen, 2020).

The psychosocial-spiritual stress of HIV-infected patients continues, will accelerate the incidence of AIDS, and even increase the mortality rate. If stress reaches the exhaustion stage, it can cause a malfunction of the immune system, which worsens the patient condition and accelerates the incidence of AIDS. The modulation of the immune response will be significantly decreased, such as APC (macrophage) activity; Th1 (CD4); IFN; IL-2; Immunoglobulins A, G, E, and Anti-HIV. This decrease will impact decreasing the CD4 count to 180 cells/μL per year (Kurniawati, 2015). Based on the above, the researchers conducted a study to identify the factors influencing stress in PLWHA during the COVID-19 pandemic.

Method

The research design is descriptive-analytic with a cross-sectional approach using primary data. We sampled as many as 34 people living with HIV in the Kediri region using a purposive sampling technique. The

inclusion criteria in this study were PLWHA aged 20-55 years and cooperative. Exclusion criteria were PLWHA with advanced complications or severe opportunistic infections. The instrument for measuring stress used the Depression Anxiety Stress Scale 42 (DASS 42) while measuring the variables of knowledge and social support used a questionnaire tested for validity and reliability. DASS has a discriminant level of validity and a reliability of 0.91, which is processed based on Cronbach's Alpha assessment. Univariate data analysis is presented descriptively. Meanwhile, bivariate analysis to see the correlation of two variables using Spearman rank significance =0.05.

Data collection is done online using Whatsapp media. Before data collection, respondents filled out the informed consent and consent letter to become a respondent. After signing the respondent consent letter, it was continued by distributing questionnaires via google forms. The research results were then edited, scored, and continued with analysis. This research has passed the ethical test of the ethics committee of the University of Kadiri.

Results and Discussion

The result on 34 PLWHA in the Kediri area, the general data characteristics of the respondents, are presented in table 1 :

Table 1. Characteristics of Respondents

Characteristics of Respondents	N	%
Gender		
Male	14	41.2
Female	20	58.8
Age		
20-24 year old	9	26.5
25-35 year old	6	17.6
36-45 year old	15	44.1
46-55 year old	4	11.8
Education		
Base	18	52.9
Intermediate	15	44.1
High	1	2.9

Research data sources 2021

Table 2. Knowledge, Social Support, Stress Levels

Variable	N	%
Knowledge		
Not good	17	50
Enough	17	50
Good	0	0
Social Support		
Low	22	64.7
Middle	11	32.4
High	1	2.9
Stress Levels		
Light	15	44.1
Moderate	17	50
Heavy	2	5.9

Research data sources 2021

Based on table 1, it can be interpreted that most of the respondents (58.8%) are female, almost half of them (44.1%) are in the age range of 36-45 years, and most of the education (52.9%) is basic. Variables of Knowledge, social support, and stress levels are presented in table 2. Table 2 shows that half of the respondents (50%) have knowledge

about COVID-19 in the poor category, and a half (50%) in the good category. There were no respondents with knowledge in the excellent category. In comparison, the stress level variable is known that half of the respondents (50%) experience moderate stress.

Table 3. Gender Correlation With Stress Level

	Stress level							
Gender	**Light**		**Currently**		**Heavy**		**Total**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Male	5	4.7	8	23.5	1	2.9	14	41.2
Female	10	29.4	9	26.5	1	2.9	20	58.8
Total	15	44.1	17	50	2	5.8	34	100
p value=				α=0.05				

Research data sources 2021

Based on table 3, it can be interpreted that most of the respondents (29.4%) who experienced mild stress were female. The Table 3 shows the Results of statistical tests obtained p-value (ρ-value) = 0.428 so that > α = 0,05, which means Ho is accepted and H1 is rejected, meaning that there is no relationship between gender and stress levels in PLWHA in the Kediri area. The Influence of the hormone estrogen can make women more prone to stress. It is stated that women's stress levels are higher than men's (Ayca Sarialioglu Gungor, Nazmiye Donmez, 2021). Men do not easily experience stress even though they have many sources of stress (stressors). In terms of it can be understood that there is no difference in stress levels between women and men in this study due to how stress is handled. Women and men have the same adaptability in dealing with current stressors (Theresia Sunarni, Achmad Husaini, 2017); (Yoga P. D. Kountul, Febi K. Kolibu, 2018). Although some theories state that the female gender tends to experience stress more than men, the results of this study are in line with research conducted on 74 adolescents in Kediri, which showed no relationship between gender and stress levels (Arief Hakim Ramadhani, 2019).

Table 4. Correlation of Age With Stress Levels

	Stress Level							
Age	**Light**		**Currently**		**Heavy**		**Total**	
(year)	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
20-24	5	14.7	3	8.8	1	2.9	9	26.5
25-35	4	11.8	2	5.9	0	0	6	17.6
36-45	6	17.6	8	23.5	1	2.9	15	44.1
46-55	0	0	4	11.8	0	0	4	11.8
total	15	44.1	17	50	2	5.8	34	100
p-value =				α=0.05				

Research data sources 2021

Table 4 shows that a small proportion of respondents (23.5%) who experience moderate stress are in the age range of 36-45 years. Statistical test results obtained p-value (ρ-value) = 0.131 so that > = 0.05 which means and H0 is accepted. H1 is rejected, meaning no relationship between age and stress levels in PLWHA in the Kediri area. The age group is in the range of 36-45 years. This age is also included in the productive age group in sexual activity, so it has a big role in transmitting HIV/AIDS. This resulting study follows the Freeman & Anglewicz study (2012), which reported that 15-49 years old was the age with the highest HIV prevalence. This age group has not yet reached the peak of spirituality and is

still not ready to face death, so the anxiety and fear of contracting COVID-19 will exacerbate the disease.

Table 5. Correlation of Education With Stress Level

Education	Stress Level							
	Light		Currently		High		Total	
	f	%	f	%	f	%	f	%
Base	3	8.8	13	38.2	2	5.9	18	52.9
Intermediate	11	32.3	4	11.8	0	0	15	44.1
High	1	2.9	0	0	0	0	1	2.9
Total	15	44.1	17	50	2	5.9	34	100
p value=0.000			α=0.05				r=-0.600	

Research data sources 2021

Based on table 5, it can be interpreted that almost half of the respondents (38.2%) who experience stress have basic education. Statistical test results obtained p-value (ρ-value) = 0.000 so that < which means and H1 is accepted H0 is rejected, meaning that there is a relationship between education and stress levels in PLWHA with a strong correlation value (r = 0.600). The direction of the relationship is negative, where if low education, then the risk of high-stress levels. Formal education is correlated with one's knowledge. The higher a person's education, the easier it is to absorb information and vice versa. Information received by respondents with basic education often triggers incorrect issues related to COVID-19, which makes respondents even more stressed. Respondents with basic education cannot digest and analyze information, so they tend to be taken for granted, and make stress worse. Studies conducted in India showed a significant positive correlation between knowledge scores and educational status, i.e., participants with higher levels of education showed higher knowledge scores. Research A survey was conducted in Hong Kong (So WK, Chan SS, Lee AC, 2004) and one in Qatar (Bener A, 2004). During the SARS outbreak, it showed similar results.

Table 6. Knowledge Correlation With Stress Level

Knowledge	Stress Level							
	Light		Currently		Heavy		Total	
	f	%	f	%	f	%	f	%
Not good	2	5.9	13	38.2	2	5.9	17	26.5
Enough	13	38.2	4	11.8	0	0	17	17.6
Total	15	44.1	17	50	2	5.9	34	100
p value=0.000			α=0.05				r=-0658	

Research data sources 2021

Table 6 shows that almost half of the respondents (38.2%) who experience stress levels in the medium category do not have good knowledge. The results of statistical tests obtained a p-value = 0.000, so there is a relationship between the level of knowledge and stress levels in PLWHA in the Kediri area (a strong correlation value, r = -0.658). Additionally, the negative relationship's direction means that if the knowledge level is low, the stress level will be higher. Knowledge is the basis of a person in behavior. The psychological behavior shown by PLWHA in the Kediri area in dealing with the COVID-19 pandemic is stress related to the risk of transmission. Some respondents said they

never left the house for fear of contracting COVID-19 and did not even come to the service facility for examination and ARV. The impacts are increasingly complex, apart from the psychological, physical, economic, and social impacts. The results of a study conducted in Pakistan revealed that respondents with moderate mental disorders (M = 8.81, SD = 2.37) and those with severe mental disorders (M = 8.75, SD = 2.69) scored lower than participants who tended to be healthy (M = 9.49, SD = 1.71). Our study concludes that a higher knowledge base regarding the COVID-19 disease will help reduce mental stress (Areeb Khalid, Muhammad Waqar Younas, Hashim Khan, Muhammad Sarfraz Khan, Abdur Rehman Malik, Adam Umair Ashraf Butt, 2021).

Table 7. Correlation of Social Support With Stress Level

Social Support	Stress Level							
	Light		Currently		Heavy		Total	
	f	%	f	%	f	%	f	%
Low	3	8.8	17	50	2	5.9	22	64.7
Currently	11	32.3	0	0	0	0	11	32.3
High	1	2.9	0	0	0	0	1	2.9
Jumlah	15	44.1	17	50	2	5.9	34	100
p=0.000			α=0.005				r=-0.799	

Research data sources 2021

Table 7 shows that half of the respondents (50%) who experience moderate stress in the moderate category get low social support. Statistical test results obtained ρ-value = 0.000, so that < =0.05, which means there is a relationship between social support and stress levels in PLWHA in the Kediri area with a strong correlation value (r=- 0.799), as well as the direction of the negative relationship where the lower the social support, the higher the stress level. Indications of the emergence of stress symptoms can be in the form of a person's reaction to stress. According to Selye, a person has four reactions in dealing with stress. The reaction can be alert, namely a reaction that appears suddenly to a stressor that triggers a sudden reaction in someone. The resistance reaction happens when there is a reaction of defense against response in the face of prolonged stress. This reaction can also be said to be a person's adaptation stage in which the endocrine and sympathetic systems release stress hormones. There is a fatigue reaction, namely the body's reaction to stressors, where if the stressor continues later will worsen a person's mental and physical state and feedback on the problems faced by a person (Selye, 1980). Social support contributes to lowering stress levels. It is stated that the higher the social support provided by a person, the lower the level of stress experienced by a person (Lady, L., Susihono, W., Muslihati, 2017). Previous studies have shown that most of the self-concepts were positive (92.2%) and the majority were mildly stressed (51.3%) and p-value = 0.029 < 0.05. It was found that there was a significant relationship between self-concept and stress in PLWHA (Jek Amidos Pardede, Cut Inten Balqis, 2021).

Every individual needs social support without exception. Everyone needs support from people in their environment, both family and the social environment, because social support will help individuals deal with problems that trigger stress. This is reinforced by the research results, which state that social support, including informational support, will have a good impact on PLWHA and their families (Khammarko, K., & Myers, 2013). Consistent results show the relationship between social support and stress levels (p < 0.000, = 0.05) (Yona Kurnia Sari, 2017). Another congruent study showed a significant primary effect of emotional and social support (F=1.61, p<.001), functional social support (F=1.67, p<.001), and informational social support (F=3.67p<.001).) various coping strategies (Zhiwen Xiao, Xiaoming Li, Shan Qiao, Yuejiao Zhou, 2018).

Conclusion

It can be concluded that:

1. The sex of PLWHA in the Kediri area is mostly (58.8%) male.
2. The age of PLWHA in the Kediri area is almost half (44.1%) in the age range of 36-45 years (late adulthood).
3. Most PLWHA education in the Kediri area (52.9%) is basic education.
4. The knowledge of PLWHA in the Kediri area is half (50%) in the less category and half (50%) in the sufficient category.
5. Most of the social support for PLWHA in the Kediri area (64.7%) is low
6. The level of stress among PLWHA in the Kediri area is half of the respondents (50%) in the moderate stress category.
7. There is no relationship between gender and stress levels in people living with HIV in the Kediri area (p=0.428 < =0.05, r=-141).
8. There is no relationship between age and stress levels among people living with HIV in the Kediri area (p=0,31 < =0,05, r=265).
9. There is a strong relationship between education and stress levels among PLWHA in Kediri (p=0.000 < =0.05, r=-600).
10. There is a strong relationship between the level of knowledge and the level of stress in PLWHA in the Kediri area (p=0.000 > =0.05; r=-658).
11. There is a strong relationship between social support and stress levels in PLWHA in Kediri (p=0,000 < =0,005; r= 0,799).

It is suggested that respondents can actively increase knowledge related to COVID-19 through information media that can be accounted for and be open with families, communities, and health workers to get high support as a priority for vulnerable groups in efforts to prevent COVID-19.

Limitations of the study

This study was conducted online, so the approach to respondents was lacking. In addition, it allows respondents to answer questions even though they are not understood.

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