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Prevalence and Factors Associated Depression or Depressive Symptoms in Patients with HIV/AIDS

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ABSTRACT

HIV/AIDS is still a serious public health problem across the world. WHO reported that there were 37.7 million HIV positive patient in 2020. Patient HIV/AIDS are more prone to developing mental illnesses, including depression. Depression is more common in HIV-positive (HIV+) people than in HIV-negative (HIV-). The factor associated with depression in HIV/AIDS patients include age, gender, stigma, discrimination, social support, living alone, marital, educational, employment status, socioeconomic, the use of ART, CD4 count, and disease course. The high prevalence of depression and depressive symptom in HIV/AIDS patient emphasize the significance of delivering excellent mental health treatment, as well as the importance of long-term support and routine depression management.

1. Introduction

HIV/AIDS is still a serious public health problem across the world. In 2020, WHO reported that there were 37.7 million individuals living with HIV, 680000 deaths from HIV-related causes, 1.5 million persons acquired HIV, and antiretroviral therapy was delivered to 27.5 million patients. African Region is responsible for nearly two-thirds of all HIV-positive people (25.4 million).[1,2] The African continent has the world's greatest HIV-infected population (25.7 million people), followed by Southeast Asia (3.8 million), and USA (3.5 million). Although it tends to fluctuate, the number of HIV/AIDS cases in Indonesia continues to increase year after year. In Indonesia, Over the previous eleven years, the number of HIV diagnoses has continuously increased, reaching a high of 50,282 cases in 2019.[3]

Since the introduction of active antiretroviral medication in 1990, the number of people dying from HIV infection has decreased and Patients with HIV/AIDS are now living longer lifetimes. Moreover, people living with HIV/AIDS are more prone to developing mental illnesses, including depression and anxiety, due to social and perceived stigma, sexual-related issues, antiretroviral therapy side effects, neurophysiological alterations, and physical pain and disease lasting a long time. According to research, HIV-positive people experience depression at two to four times higher rates than HIV-negative people or the general population.[4,5]

Clinical outcomes are worse for HIV-positive people who are also depressed. Depression can effect on not

only individual satisfaction, relationships, and job but also diminish adherence to antiretroviral therapy and quality of life, impair physical function and therapeutic impact, and increase the likelihood of comorbid conditions. Furthermore, even after controlling for the effects of adherence, depression has been linked to greater viral loads and lower level of CD4, both of which are indicators of illness progression and mortality. Even depressive symptoms have been found as a key factor linked to poor health outcomes in persons living with HIV, such as decreased immune response and death.[4,5]

Therefore, depression or depressive symptoms are a major issue when it comes to identifying substantial risk factors for HIV/AIDS-related health outcomes. In this literature review, the author will discuss prevalence and factors that associated with depression in HIV patients.

HIV/AIDS

Human Immunodeficiency Virus (HIV) is RNA virus. It belongs to the lentivirus genus of the Retroviridae family. It causes progressive immunodeficiency illness by infecting immunocompetent cells (such as macrophages, CD4+ T cells, and dendritic cells). AIDS is the ultimate stage of HIV-related immunodeficiency illness, characterized by $CD4^+$ count fewer than 200 cells/mm3 or a $CD4^+$ T cell percentage of less than 14 or the presence of disease indicating a severe defect in cell-mediated immunity.[6-10]

Depression in patients with HIV/AIDS

In 2010, depression was estimated to have caused 2.2 million extra deaths worldwide due to suicide or the worsening of concomitant illnesses.[11] Depression affects roughly twenty five percent in women and one out of every six males in their lives, with the majority of people experiencing recurring episodes. However, many persons with depression are never diagnosed or treated, and with established therapeutic approaches, only about 30–35 percent of people achieve remission. leaving almost two-thirds of the illness burden unaddressed. As a result, depression is projected to be the fourth most common cause of total illness burden.[12]

Depression is much more frequent in HIV-positive persons, with prevalence estimates ranging from 13 percent to 78 percent, compared to 5% prevalence in the society. It's thought to be two to three times more frequent among HIV/AIDS patients than it is in the overall population.[5,11] However, it is difficult to detect depression in individual with HIV/AIDS because of the typical symptoms of HIV infection, such as cognitive impairment, pain, tiredness, sleeplessness, and anorexia. In United States, depression among HIV/AIDS's is under-diagnosed. Comorbid severe depression has an impact on HIV/AIDS clinical outcomes and is linked to a two-fold increased risk of death.[13]

Prevalence of depression in patients with HIV/AIDS

The existence of somatic or physical illness conditions is linked to an increased risk of depression, which is notably obvious in HIV infected person. HIV-positive (HIV+) persons are three to four fold more likely than HIV-negative (HIV-) people to suffer from major depression, with lifetime prevalence estimates ranging from 22 percent to 45 percent in HIV-positive people.[12]

In China, estimations of depression or depressed symptoms's total prevalence in the overall PLHA population were 50.8 percent on average.[5] Other cross-sectional study in China, 32.9% had symptoms of depression in general. The incidence of depression was found to be 36 percent among recently diagnosed males who have sex with men (MSM). Injecting drug users reported the greatest rates of depression and anxiety. Students exhibited greater rates of anxiety and depression, which persisted even after age was taken into account.[14] Other research result have different prevalence. More than 40% of respondents in Heilongjiang, China, experienced depressed symptoms, which was much higher than the national average.[(15)] Depressive symptoms were seen in 38.6% of HIV-positive MSM (men who have sex with men) in Nanjing, China.[16]

The prevalence of depression based on study that conducted in South Ethiopia was 32.0%.[4] In a research conducted at Hawassa University Comprehensive Specialized Hospital in Hawassa, Ethiopia, 48.6% of HIV-positive patients were depressed, which was greater than those conducted in rural South Africa (42.4%).[17] In persons living with HIV in Sub-Saharan Africa, the prevalence of major depression is 17 percent, while the prevalence of depressive symptoms is 26 percent. Between African nations, there are substantial variations in the frequency of depression among HIV-positive people for example 7% in Cameroon to 28% in Nigeria. These rates are up to two times greater than those found in non-HIV African populations.[11]

Depression was identified in 63.1 percent of Sudanese HIV/AIDS patients, mild depression in 19.3 percent, and moderate to severe depression in 43.8 percent of patients.[18] In Indonesia, between June and November 2018, researchers at the HIV Integrated Clinic Cipto Mangunkusumo hospital discovered that 50.9 percent of people exhibited depressive symptoms (BDI-II score 14), with mild, moderate, and severe depression prevalence of 30.4 percent, 15.6 percent, and 4.9 percent, respectively.[19]

The prevalence of depression or depressed symptoms in persons living with HV/AIDS varies considerably.(5) The varied tools used to diagnose depression, as well as other methodological discrepancies such as the cut-off points employed and variances in the research population, may explain these prevalence disparities. These discrepancies might be the result of variations in the techniques employed, sample size, and research population.(20) Other possible explanations for this disparity include social and political factors. More study into the prevalence of depression in many more countries would be required to obtain more precise data.[11]

Given the scarcity of mental health services and the high number of people living with HIV, the incidence of depression is alarming. Treatment of depression is critical, in addition to enhancing the quality of life of individuals living with HIV, since depression has been linked to poor HIV outcomes.[11] Efforts to avoid the development of depressed symptoms must be increased.[16]

Associated factors of depression in patients with HIV/AIDS

Antiretroviral therapy (ART), HIV replication control, and HIV viral load decreases do not reduce the incidence of depression in HIV patients. It is critical to discover variables that may be addressed to prevent and cure depression in HIV-positive people.(12) Due to their vulnerability to a variety of variables, patients with HIV/AIDS are more prone to suffer from severe depression. The following are factor that associated with depression in patients with HIV/AIDS include age, gender, stigma, discrimination, social support, living alone, marital, educational, employment status, socioeconomic, the use of ART, CD4 count, and disease course.

Age has been linked to differences in depression prevalence estimates, with younger individuals having a greater prevalence of present and lifetime depression than those over the age of 50 or 55. Although there was no statistically significant relationship between age and depression in overall society, age was related with a higher risk of depression. To some degree, this might support the favorable relationship between them in HIV+. [5] Depressive symptoms are more common among younger HIV-positive individuals, particularly those under the age of 40. The greater depression rate might be related to the stigma involved with finding an employment or the psychological distress caused by not having a lifetime relationship owing to their HIV status[20,21]. But other study shown there was no difference in prevalence of major depressive disorder by age[13]. Others point age older than 30 associated with increased odds of depression.[14]

Females were thought to be more sensitive to the development of depression than males, based on higher stated estimates of depression prevalence among females in the general community and elevated point prevalence of depressive symptoms.[5,21] Many

prior research has revealed that HIV/AIDS-positive women tend than males to suffer from depression.[11,15,18] Otherwise, being female was found to be protective against depression in a recent research of newly diagnosed HIV-patients, although it had little statistical significance.[5] Unlike other study, there was no statistically significant link between female sex and depression and There is no gender difference in the prevalence of MDD.[13,17] The majority of the study participants were females might be due to the fact that women have a higher HIV/AIDS prevalence than men. However, because males are less likely to seek assistance, several studies have found that fewer men suffer from depression. In addition, prior study has indicated that women seek social assistance more frequently than males in stressful situations.[18,15]

When compared to their peers, study participants with HIV-related self-felt stigma experienced 2.35 times greater depression. Attachment anxiety and the fear of unfavorable judgment are intrapersonal factor increase people's susceptibility to internalization of stigmatization. Internalizing stigmatizing experiences might lead to a fear of social rejection or prejudice, leads individuals to put off getting medical attention or disclosing their HIV+ condition to health-care professionals, or rely on others for help in dealing with their disease posing another barrier to the early identification and treatment of depression. They may become socially isolated and disengage from social networks or they may lack the vigor to be socially linked. Increased emotions of depression are frequently linked to social isolation. Stigma may create aspects of fatigue, diminished consideration, or emotions of helplessness on its own. Those who have less social support may have more difficulties coping with hardship and are more susceptible to depression. Self-esteem had an indirect effect on depressed symptoms as a result of HIV stigma. the severe scarcity and unequal in the allocation of mental health resources make it difficult to devote appropriate attention to those concerns. To minimize HIV stigma in the community, change at the community and system levels, interpersonal and structural interventions are required, which may lessen internalized stigma.[4,5,16,22,23]

Perceived discrimination has been related to depression. The relationship between discrimination and depression appears to be moderated by perceived stress. Prejudice, whether real or imagined, is a psychological burden that has been linked to depression, and eliminating discrimination necessitates deliberate actions at many levels. To enhance society's knowledge of AIDS, the Department of Health and the government should increase public awareness and understanding; on the other side, sufferers should deal with stress and proactively seek professional help care.[15]

When compared to patients who have a lot of public support, inadequate social support patient showed significant relationship with depressed symptoms and 2.5 times the likelihood of experiencing depressed symptoms statistically. That could be because social isolation lowers social support, which can have a detrimental effect on mental and physical health.[4,17] Family support was the most important element in preventing depression and communication is the key. Depressive symptoms were more common in those who reported less familial support.[15] Interventions aimed at increasing family and friend capacity to help newly diagnosed individuals accept their condition and develop positive coping skills may have psychological benefits.[14] A more recent longitudinal research, on the other hand, found evidence that perceived social support (PSS) is a result of major depressive disorder (MDD), contradicting social causation theories of depression. Negative stereotypes about persons with MDD making it harder for friends and family to offer social support, and a lack of ability to form and sustain relationships can lead to social avoidance.[13]

When compared to HIV/AIDS patients who lived with their family or relatives, people who lived alone were 1.94 times more likely to develop depressed symptoms, make it was shown to be a substantial independent predictor of severe depression symptoms.[(4)(24)] Because they have no one

to talk to and confide in, they are predisposed to feeling useless, having bad appetites, and having concentration issues.[20] Forlornness is a strong risk factor for depressive symptoms, much outweighing the proportions of goal social engagement. Similarly, because of societal stigma toward themselves, many patients opted not to seek help from others or open up about their health, which increased their isolation and loneliness.[4] Individuals who are hostile have higher psychological vulnerability and are more distressed as a result of recurrent incivility, resulting in social alienation and estrangement. Additionally, it has the potential to raise patients' psychological stress and their risk of developing depression.[15]

Depressive symptoms were more common in unmarried persons, especially divorced and widowed people. Because they have the added burden of raising their children alone while working, they are significantly more likely than married persons to encounter unfavorable social factors.[(20)] Married, divorced, or widowed patients were more likely to be depressed than single patients. It might be highlighted by the fact that singles patients are not stressed by taking care of kids or feeling bad about passing the virus on to their children or spouses, as well as religious problems. HIV/AIDS stigmatizes married individuals more than singles.[18]

According to earlier studies, depression was more prevalent among illiterate patients (73.3 percent) and less common among graduates.[18] Contrary to other research, depression is more common in those with a formal education, suggesting that education has a significant influence in the frequency of depression in patients.[20] Growing public awareness of AIDS-related knowledge helps to minimize prejudice towards people with HV/AIDS and, as a result, may contribute to a reduction in the prevalence of depression.[5]

Unemployment was correlated to the onset of depressive symptoms. This might be explained by the fact that economic insecurity causes stress, dissatisfaction, a dysfunctional family life, and a sense of worthlessness.[20] Depressive symptoms are more common among HIV-positive individuals who live in poorer housing circumstances. According to cross-sectional studies, poorer and more insecure living situation are important factors that explain poor mental health consequences in HIV-positive people. Participants who struggled to pay for home-related expenditures or were concerned about their housing status were more likely to acquire incident depressive symptoms. These findings also emphasize the need of include neighborhood conditions that are stable and of high quality in existing HIV policies and initiatives, which might help people living with HIV minimize depressive symptoms and enhance their general well-being over time.[21]

Several studies have discovered a greater risk of depression or depressed symptoms within persons with HV/AIDS who've already received ART vs those that never, although only two have demonstrated statistical significance. Nonetheless, several other researchers have indicated that individuals who have had ART have a lower frequency than those who have not. Only one research found statistical significance for the opposite finding. Study found a substantial protective impact of ART start on HIV-infected women's mortality, as well as a negative effect of depressed symptoms on mortality. Individual rates of depression dropped when people began ART, and as more people began ART earlier, population-level depression rates decreased over time. But other study show that most clinical factors and depression did not indicate a significant association.[5,18,20]

Participants with a CD4 cell count below 200 exhibited a strong relationship with depressed symptoms. This could be responsible for severe immunological depression and HIV infection as underlying reasons of depression, or it could be related to taking medication and having a low CD4 count or despite being on medication and having a low CD4 level, individuals get disappointed and lose interest[17,20]. However there is study that found The CD4 count exhibited no relationship with depressed symptoms.[15]

In certain persons living with HIV/AIDS, depression may be caused by the virus's neurotropic

effects on subcortical brain regions, according to a research. Given the high incidence of depression in relation to infection duration, providing mental health therapies at the time of diagnosis may be critical in controlling the risk of depression and anxiety in newly diagnosed individuals.[14,15] HIV infection causes an increase in inflammation. Inflammatory markers with greater levels in HIV+ people predict death and are considered to be linked to the increased rates of age-related comorbid seen in HIV+ people. Inflammatory depressive subtype might explain the increased prevalence of depression symptoms among HIV+ people, and our findings suggest that such a subtype exists. Inflammation in HIV infection occurs as a result of HIV viremia exposure and can continue even after effective ART is started. Maintaining for ART usages regardless of retroviruses suppression status aids in the decrease of correlations among both immune activation markers and important clinical depressive symptoms in HIV+ subjects, as expected given that ART is the main factor of viral suppression, which can reduce viremia-induced immune activation.[12]

The increased incidence of depression and depressed symptoms among HIV/AIDS patients emphasize the necessity of delivering excellent mental health treatment, as well as the need for long-term support and routine depression management, particularly for high-risk person. The necessity for integrating mental health treatment into conventional HIV clinic care, as well as the development of interventions aimed at preventing HIV-related stigma and bullying.[21,25]

2. Conclusion

Depression and depressive symptoms's magnitude among HIV patients are prevalent. The prevalence are varies greatly rely on how to diagnose, study population, sample size, and techniques employed. Persons with HIV/AIDS are more prone to having major depression. The following are associated factors of depression and depressive symptom in Patients with HIV/AIDS include age, gender, stigma, discrimination, social support, living alone, marital, educational, employment status, socioeconomic, the use of ART, CD4 count, and disease course.

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