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An Updated Review Of The Literature On The Factors Influencing The Health-Related Quality Of Life Of Those Living With Hiv

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ABSTRACT

Background : HIV(Human Immunosuficiency Virus)has evolved into a chronic disease and one of the important indicators assessed in chronic diseases is quality of life. Literature discusses various factors that influence quality of life, but there is currently no consensus on the main determinants.**Methods** : All studies published from….until 2023 that identified determinants factor of quality of life among peole living with HIV were considered in this narrative review. Pubmed, Web of Science, and Google Scholar using the keywords; ‘determinant’, ‘quality of life’ and ‘people living with HIV’. Validated measures must be utilized, and studies must report overall scores as well as physical or mental health scores. Additionally, mutivariate analysis must be performed to determine the factors that independently affect perceived quality of life.**Result**: A total of 14 studies using a range of HRQOL assessments were included for additional analysis: RAND Short Form 36 (SF-36), WHOQOL-HIV-BREF, Medical Outcomes Study-HIV, Euro QoL, and PROMIS Global 10. The review categorizes the discussed determinants into three themes: socio-demographic, clinical, and psychological components. **Conclusion**: Quality of life in PLHIV(People Living With HIV) is influenced by many concurrent factors. Various instruments can be used to assess quality of life and all have limitations. Based on the research examined here, we can reach the conclusion that clinical and disease-related factors, psychological factors, and sociodemographic factors all have an impact.

Keywords : HIV, Quality of life, Determinant Factors, Review

Introduction

According to estimates from the (World Health Organization, 2006) (WHO), 37.9 million persons globally are HIV positive at the moment. By 2030, the Global AIDS Strategy 2021–2026 of the Joint United Nations Programme on HIV/AIDS (UNAIDS) seeks to put an end to the pandemic as a hazard to public health(World Health Organization, 2006).With the advent of combination antiretroviral medication, among other significant advancements in HIV treatment, the virus is no longer considered a life-threatening illness but rather a chronic one. Nonetheless, there is still a great deal of stigma associated with being HIV positive(Xu et al., 2017)

The new approach takes a more comprehensive, multifaceted approach than the current response framework, which emphasizes testing, treatment, and viral suppression. A person-centered strategy to eliminate disparities and advance well-being. Although viral suppression is still a vital target, it shouldn't be the only primary endpoint. HIV care in a spiral. Numerous HIV-positive individuals (PLHIV), continued to feel symptoms despite being virologically suppressed HRQoL (Health-Related Quality Of Life) was considerably worse compared to the average populace(Xu et al., 2017). It is believed that comprehending HRQoL is crucial to comprehending the impact of HIV as a chronic illness(Miners et al., 2014). According to the World Health Organization, a person's view of their place in the culture and value systems in which they live, as well as in respect to their objectives, standards, expectations, and worries, constitutes their quality of life (QoL)(World Health Organization., 1997).Data on HRQoL can be utilized to pinpoint inequalities among various populations and to guide measures that will guarantee long-term care retention, ART adherence, and maintenance of excellent health(Lazarus et al., 2016)

The 90-90-90 targets, which are for HIV treatment, are that 90% of patients know their status, 90% of those on ART experience viral suppression, and 90% of those on ART receive treatment. These targets are set by the United Nations Programme on HIV/AIDS (UNAIDS) (Lazarus et al., 2016). Nonetheless, patients' psychological, social, and financial demands have received scant consideration (Mengistu et al., 2022). Diverse authors have presented differing findings about the incidence of HRQOL among HIV/AIDS patients in various parts of the world.

Method

A reviewof the narrative was performed with a global search strategy through Pubmed, Web of Science, and Google Scholar using the (Mesh) terms; ‘determinant* AND quality of life OR HRQOL Or Health-related quality of life AND HIV OR people living with HIV’. The reviewed articles are :

1. Examining the HRQOL of adults with HIV infection
2. Release prior to August 2023
3. English text available in its entirety
4. Reporting HRQOL as a combined score, a physical and mental score, or both
5. Making use of a verified HRQoL tool
6. Using multivariate regression analysis and quantitative technique to determine the factors that influence HRQoL

We checked the abstract and title to make sure those standards were met. If all inclusion requirements were met, the paper was thoroughly read; if not, this was still not clear. By looking through the references in the manuscripts, further material was found (snowball approach).

Four kinds of variables were created a priori: behavioral, psychological, sociodemographic, and clinical determinants. These criteria were selected through comparison with HRQoL research that was conducted. Manuscript results and conclusions were assigned to one or more determinants. By addressing each determinant independently and reviewing all papers that were pertinent to the determinant, the review was further elaborated.

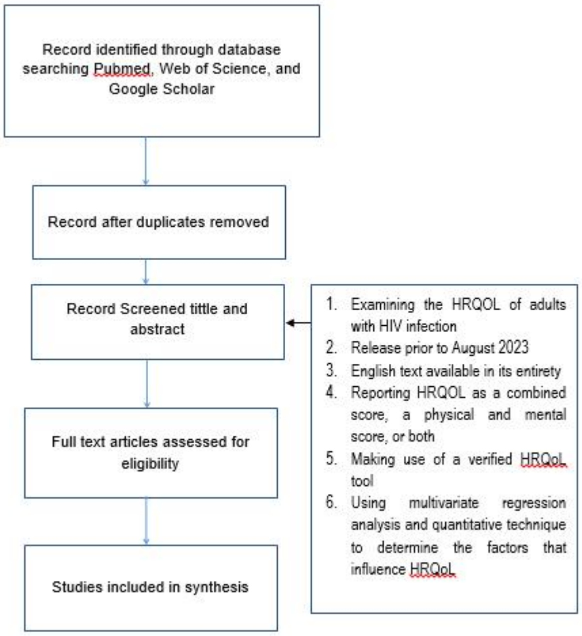

Fig 1. A flow chart of Narative Review

Result

In total 14 studies were included for further analysis shown in table 1. These studies were conducted between 2017 And 2023 in countries such as the United Kingdom (UK), Pakistan, Finland, Nigeria, China, Romania, Spain, Indonesia, India and Ethiopia. The instruments used to measure Medical Outcomes Study HIV Health Survey, HRQoL, and WHOQOL-HIV Bref. Determinants in each country are different based on Economic Stability, Healthcare Access and Quality Education and Health Literacy Environmental Determinants Social and Cultural Factors.

Table 1. Results 14 studies were included for further analysis

No	Authors	Country	Year	Sample Size	Study Design	Instrument For measuring QoL	Result of Determinant Factor
1	Jose Catalan, et al.	London, UK	2017	100 PLHIV	Cross Sectional	WHOQOL-HIV-BREF	• Everyday memory difficulties • Anxiety and depression
2	C.Shriharsha, et al	Karnataka, India	2019	450 PLHIV	Cross Sectional	WHOQOL-HIV-BREF	• Male Gender • Being Graduated • Not Knowing the mode of

							transmission positively
3	Abel Legesse Tesemma, et al	Ethiopia	2019	391 PLWH	Cross Sectional	WHOQOL-HIV-BREF	• CD4 Count • Absence depression • Normal Body Mass Index • Social Support • No Perceived stigma
4	Leonard Emuren, et al	USA	2020	812 PLHIV	Nested Cohort	RAND Short Form 36 (SF-36)	• CD4 Count • Medical and Mental comorbidities
5	Hua Zhong, et al	Sichuan, China	2022	401 PLHIV	Cross Sectional	MOS-HIV	• Education level • Younger age • CD4 Count • Symptom Counts • Health BMI level
6	Nancy Indriyani Dida, et al	Kupang, Indonesia	2021	120 PLHIV	Cross Sectional	WHOQOL-BREF	• Stigma • Stress level
7	Nuno Nobre, et al	Finland	2017	453 HIV infected patient	Cross Sectional	WHOQOL HIV-BREF	• Male gender • Being Married • Being employed • Not Having depression • Medical Commorbidities
8	Bello Abdullahi Suleiman, et al	Zaria, Nigeria	2020	353 HIV-Positive adults	Cross Sectional	WHOQOL HIV-BREF	• Spousal HIV-Positive status • High Family Function
9	Ali Ahmed, et al	Pakistan	2021	602 PLHIV	Corss Sectional	Euro QOL	• Female Gender • Age • Education Level

							• HIV Serostatus AIDS-Converted • CD4 Count • Viral Load • Increase time to ART
10	Delelegn Yilma G, et al	Ethiopia	2018	520 HIV Patients	Cross sectional	WHOQOL-HIV BREF	• Family support • Educational Occupation
11	Solomon Ahmed Mohammed, et al	East Ethiopia	2020	235 PLHIV	Cross Sectional	MOS-HIV Health Survey	• Self Employment • CD4 Counts • 6 – 10 years disease duration
12	Sri Sunaringsih Ika W, et al	Malang, Indonesia	2021	634 PLHIV	Cross Sectional	WHOQOL HIV-BREF	• Being older • Having a job • Having better acces to health service • Adhering medication • ART program • Stigma • Social support
13	Fikadu Tadese Nigusso, et al	South Africa	2021	390 PLHIV	Cross Sectional	PROMIS Global 10	• Age • Employment status • Comorbidities

Socio-demographic characteristics

There was no consensus regarding the disparities in life quality between genders(Degroote et al., 2014). Women mostly reported lower HRQoL than men (Lowther et al., 2018). Women reported a high number and severity of adverse events, higher pill burden, and lower scores in all three domain QOL domains than men (Mokgethi et al., 2022). One possible explanation for the fact that women with HIV often had to shoulder the load of raising children could be the reason why they scored worse than men(Mrus et al., 2005). Gender variations in mental diseases may potentially contribute to variances in HRQoL between the sexes. The higher prevalence of mood, anxiety, and psychosomatic problems in women may be a factor in the disparity in HRQoL. On the other hand, some research indicated that women reported superior general or mental health. The results were explained by suggesting that the sample had a higher percentage of worried men and better coping mechanisms in women(Mrus et al., 2005).

Physical health was generally worse in older adults(A. Ahmed et al., 2021). Age-related declines in HRQoL are consistent with findings from research conducted in France, the United States, and Brazil(Castro et al., 2019)(Emuren et al., 2017). Memory problems, anxiety and despair, gender, ethnicity, family dynamics, and economic circumstances have all been linked to a lower quality of life in people over 50 (Catalan et al., 2017). As they get older, HIV patients are more prone to experience comorbidities, opportunistic infections, and medication non-adherence, all of which lower their overall quality of life(Devlin & Brooks, 2017).

Socio economic: Employment and education

The result of this study is unemployed individuals had poor quality of life (S. Ahmed et al., 2021; Mrus et al., 2005; Wardojo et al., 2021a). Employment could boost social networking and support, as well as providing more financial resources. One likely needs to be in better health in order to be employed, and therefore(Wardojo et al., 2021a). Having a job may help one integrate more socially and achieve a higher socioeconomic standing, which in turn supports better possibilities for social environment and health promotion and maintenance(Igulot & Magadi, 2018)

HRQOL and education have also been related, however the relationship is weaker(A. Ahmed et al., 2021). It is not unexpected that higher educational status may result in a worse quality of life because patients with formal education may know more about their illness, linked opportunistic infections, medication, and how to take It(Arrey et al., 2016). Greater levels of education may improve a person's ability to deal with HIV and increase patient awareness of the illness (Nobre et al., 2018)

Family situation

The HRQOL was low for the dysfungsional family (non-supportive). Numerous studies have documented the importance of family support in enhancing the quality of life for individuals living with HIV/AIDS(Gebremichael et al., 2018; Suleiman et al., 2020). This outcome could be explained by the possibility that psychological support increases personal happiness and has a beneficial overall impact on healthy eating, self-care, and overall health(Gebremichael et al., 2018)

A healthy, loving family can help the patient in many ways, including socially, mentally, physically, emotionally, and spiritually(Suleiman et al., 2020). The family environment offers security, stability, and financial support. Living with their family, therefore, is likely to result in greater social support, tighter interpersonal relationships, and satisfying sexual activity—all of which have a beneficial effect on HRQOL(Suleiman et al., 2020).

Factors connected to clinical and disease statesImmunological and virological condition

An increase in CD4 lymphocytes and an improvement in physical HRQoL. In a similar vein, other research has indicated that the count of CD4 cells is a significant predictor of other aspects of quality of life(Chatterjee et al., 2016; Cooper et al., 2017). However, because their baseline physical state was worse, patients who started ART at CD4 <200 cell/µl saw a greater improvement in their physical health than patients who started at 200–350 cell/µl or >350 cell/µl(Degroote et al., 2014). Cd4 cells are a strong marker for disease progression(S. Ahmed et al., 2021) and can reflect the impact of theraupetic efforts(Zhong et al., 2023). Due to their low CD4 count and weakened immunity, PLWH are more likely to be afflicted by numerous opportunistic infections, which ultimately lowers their quality of life(Tesemma et al., 2019).

Sympton counts

HIV symptoms have also been linked to a lower quality of life, and more severe problems may worsen this relationship(Zhong et al., 2023). The symptoms that were most frequently described were joint discomfort, weariness, sleep difficulties, amnesiaand dry mouth(Zuñiga et al., 2020)(Huang et al., 2019). The symptoms are influenced by numerous circumstances, including the impact of AIDS on the immune system(Zuñiga et al., 2020), adverse effect of medication(Bruno et al., 2023) and psychosocial factor(Voss et al., 2021).

ART and Having Better Access to Health Service

Most recent research has demonstrated that ART improves quality of life. It has been said that the impact of antiretroviral therapy (ART) on quality of life is a trade-off between less HIV-related symptoms and longer life expectancy on the one hand, and adverse drug reactions on the other(Degroote et al., 2014). The QoL of PLHIV is greatly influenced by medication adherence and access to healthcare services(García-Goñi et al., 2015). In a similar vein, people who had been on antiretroviral therapy (ART) for more than a year and who had not missed any doses also seemed to be in better health(Wardojo et al., 2021).

Comorbidity

Two studies (Emuren et al., 2017; Nobre et al., 2018) examined the impact of co-morbidities on PLHIV QoL. These studies were done in Finland and USA at 2017 to 2020. Cross-sectional design was adopted in each of the investigations.Medical co-morbidities was further subcatagorized to diabetes, cardiovascular disease, cancer and other chronic medical conditions(Emuren et al., 2017).Other medical co-morbidities add to the strain and have a detrimental effect on social relationships and quality of life(Serrão et al., 2019).

Psychological Factors

Two studies examined the impact of the anxiety and depression on PLHIV’s QoL. These studies were done in, Ethiopia and UK. According to an Ethiopian study, participants without depression had a 10.59-fold higher likelihood of having a good quality of life than those with depression(Tesemma et al., 2019). PLHIV experience anxiety issues more frequently than the general population doesand anxiety is known to be linked to symptoms of depression(Catalan et al., 2017).

According to our research, four studies examined how PLHIV's partner's HIV status affected their quality of life.These studies were done in Indonesia, Nigeria, Ethiopia and Pakistan. The findings demonstrate that the high domain scores obtained in the areas of social, environmental, and degree of independence are indicative of the excellent caliber of care provided to these patients. Study Research conducted in Ethiopia indicates that individuals with strong social support were 6.18 times more likely to report a high quality of life compared to those without such support (Tesemma et al., 2019). Discrimination and stigmatization usually make it difficult for PLHIV to get the assistance and support they need(Wardojo et al., 2021b). Compared to people who sensed stigma, those without stigma had a 2.75-fold greater odds ratio of having a good quality of life(Tesemma et al., 2019). PLWH will be subject to stigma from both the community and their family, which is manifest in the form rejection, neglect and discrimination(Dida, 2019).

Discussion

The concept of quality of life is multifaceted and contingent on socio-demographic, clinical and psychological factor that associated with quality of life on PLWH. The majority of cross-sectional studies using a variety of instruments to measure quality of life comprised the literature about quality in PLHIV.

Individuals who are HIV positive frequently face a variety of issues related to their health and social standing(Aidala et al., 2016). Gender, age, employment and education, family situation are four of the most important sociodemographic determinant factor of quality of life among PLHIV. A minimun level of income because unemployment showed a negative impact on quality of life. The impoverished PLHIV are typically thought to be less educated, and their lack of access to social networks and support systems may provide a number of difficulties. People with less education and experience are less equipped to deal with the consequences of HIV/AIDS infection and adopt healthy coping mechanisms(Ghiasvand et al., 2019). Demographically, being under 35 years old was positively and directly correlated with PLHIV QoL. This could be associated with younger people having higher levels of physical stamina and strength. Factors like age may have an impact on physical health as a component of quality of life(Degroote et al., 2014). It's unclear if age and mental health or other aspects of QoL among PLHIV are related, and more research may be necessary.

Ensuring therapy is available and accessible along with appropriate counseling strategies is necessary to ensure adherence and motivate individuals using ART to complete their treatment (Mutabazi-Mwesigire et al., 2015). The impact of antiretroviral therapy (ART) on quality of life has been presented as a balance between drug side effects and improved life expectancy and reduced HIV-related symptoms in one area (Liu et al., 2006). ART treatment was independently linked to improved physical health, while stopping ART treatment was linked to worse mental health. People with CD4 counts this low are typically diagnosed with HIV/AIDS. When the CD4 count is less than 200 at this point, the infection shows clear symptoms. When the infection reaches stage 4, with physical and visible manifestations, the asymptomatic stage of the infection transforms into the symptomatic stage, and The WHO's HIV/AIDS infection stage system states that we can watch the progression of an HIV infection turningllness(Bettmann & Hunink, 2018).

Higher CD4 counts were found to have a beneficial effect on quality of life in another review study, however the researcher noted that this link might not be causal. They also concluded that starting antiretroviral therapy (ART) in patients with lower CD4 counts results in improved outcomes and that medication adherence lasting more than a year may enhance quality of life(Degroote et al., 2014).

Medical professionals must take the patients' needs into account at this time, and ART should proceed with a greater emphasis on the other co-morbidities and disorders that the patients are dealing with. Controlling esophageal and oral infections, tuberculosis, sarcoma, and other concurrent diseases is essential for treating patients at this stage. This treatment strategy could greatly benefit the patients by assisting in managing their health state and, in turn, their quality of life (Owiti et al., 2014). Comorbidity and opportunistic infections are two difficult features of maintaining and controlling HIV among the diagnosed population. These infections could worsen patients' health issues and lower their quality of life. According to our study, the availability of services and the timing of diagnosis have a beneficial impact on PWLHs' quality of life. Early HIV/AIDS diagnosis and the development of timely therapy with patients may help in managing and controlling the condition. By empowering them with practical coping mechanisms and boosting their resilience, this can improve PWLHs' quality of life.

This study's key finding is that stigma connected to HIV is linked to higher degrees of melancholy and poorer levels of social support. These findings corroborate those of a previous meta-analysis regarding the relationship between HIV-positive individuals' health, demographics, and stigma(Rueda et al., 2016). Fewer research, meanwhile, has been done on the long-term relationships between HIV-related stigma and social support or depression. Additionally, there was some research looking at how stigma connected to HIV and depression may interact with other types of stigma, like homophobia, racism, and gender discrimination. Previous research on the interaction between HIV-related stigma and social support suggests that disclosing one's HIV status to family, friends, or healthcare professionals may be a stigmatizing social process that might induce fear of rejection or isolation and exclusion by support networks(Rueda et al., 2016). This review also found evidence of a connection between HIV-related stigma and poor health outcomes, including noncompliance with antiretroviral therapy and utilization of social and health services.

This is a narrative review, and there are certain restrictions on the approach. There was inadequate documentation of the literature search, and there's a chance that some research were included out of personal bias. However, we have reported transparently on the research methodology and have sought to write as comprehensive and coherent a review as possible.

Conclusion

PLHIV's quality of life is impacted by numerous interrelated variables. There are several tools available for evaluating life quality, but each has its own set of drawbacks. Based on the research examined here, we can draw the conclusion that clinical and disease-related factors, psychological factors, and sociodemographic factors all have an impact. Effort should be made for a comprehensive treatment in PLHIV to enchance their QoL. We therefore recommended to routine counselling, strengthening the peer support , ease of access to healtcare facilities and developing theraupetic actions regarding their illness to improve PLHIV’s QoL.

Conflict Of Interest

All authors declare that they have no conflicts of interest.

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