

Impact of HIV on Quality of Life: An Overview

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Human Immuno-deficiency Virus (HIV) infection is now considered a chronic disease with the prospect of long-term survival. The disease targets people during their most productive years, causing impact on socio-economic status of the individual, family, community, and the country. On the other hand, the disease affects the Quality of Life (QOL) of the individual to a great measure.

Quality of Life refers to the satisfaction or dissatisfaction of life experienced by the persons living with HIV/AIDS (PLHIVs) as compared to the state before illness in physical, psychological, social, and environmental domains. Physical domain includes nutrition, elimination, sleep, rest, and comfort. Psychological domain includes feelings, learning, memory, concentration and perception about self. Social domain includes individual's relationship with others, support system, and sexual life. Environmental domain includes finance, freedom, physical safety and security, health and social care availability and participation in leisure activities.

HIV - The Global and Indian Scenario

According to the UNAIDS 2008 report, 33 million people were living with HIV world wide in 2007. Nearly six million people are estimated to be living with HIV/AIDS in South-East Asia which is the second most affected region in the world. HIV cases are now in all states of India and approximately 2.5 million PLHIVs in India. The prevalence is highest in Mumbai, Karnataka, Nagpur, Tamil Nadu, Andhra Pradesh, Manipur and Nagaland.

Factors affecting the QOL of PLHIVs

Quality of life of PLHIVs is commonly affected by the symptoms of HIV disease, side effects of anti-retroviral therapy (ART), and opportunistic infections. PLHIVs experience a wide array of physical and psychological symptoms. The top five symptoms reported to be correlating with QOL include muscle aches, depression, weakness or fatigue, fear/worries and difficulty in concentration. Anaemia, extreme fatigue and lipodystrophy are the common

side effects of ART that can affect the QOL. The side effects of ART can worsen the QOL which further leads to non-adherence and rapid progression of disease into acquired immune deficiency syndrome (AIDS). The most common opportunistic infection causing decreased QOL is tuberculosis.

These factors can limit physical and social activities and lower self-esteem that can lead to depression, discontinuation of work, and dependence on others. Limited social support and poor coping skills also can negatively affect QOL.

Review of literature

Quality of Life of PLHIVs has close relationship with socio-demographic and clinical factors. There have been several studies done to find out the association of QOL of PLHIVs with their socio-demographic and clinical factors, a few of them have been outlined in Table 1.

Discussion

The studies mentioned in the Table 1 bring out the relationship between QOL and socio-demographic variables such as gender, education, employment, income, and the family support regardless of their nationality. In almost all studies, the scores of environmental domain has been influenced by family support significantly which poses greater demand or challenges on family in order to keep environment healthier for PLHIVs.

Women with HIV/AIDS had lower scores than men in almost all the domains of QOL which may indicate that women have lack of positive perception of their role in the society, being passive from social and economic point of view and also the impact of factors such as sex inequality, violence against women, lack of social and family support, cultural beliefs and stigma of the disease.

As far as the relationship between QOL and clinical status is concerned, most of the studies show a significant association. Among other studies done to determine the relationship of QOL of PLHIVs with and without co-infection and symptom management, Deribew et al reported that in PLHIVs with tuberculosis, individuals with depression were 8.8 times more likely to have poor physical health as

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Table 1: Studies done on Quality of Life of PLHIVs

SNo	Authors & year	Topic of the study	Design, setting, sample size , sampling technique, clinical status of subjects & instrument used	Results
1.	Nirmal et al. (2008)	Assessment of QOL in HIV/AIDS patients	➤ Cross sectional design ➤ ART clinic, Chennai ➤ Sample size- 60 ➤ Convenience sampling technique ➤ PLHIVs in all clinical stages who were on ART included in the study ➤ WHO QOL-BREF scale which covers physical, psychological, social and environmental domains was used	Women had statistically significant lower QOL scores compared to men despite having less advanced disease. There was a significant relationship between QOL and education, social support and clinical status. QOL scores were significantly lower among persons with lower CD4 count ($p<0.001$).
2.	Wig et al. (2006)	Assessment of impact of HIV/AIDS on QOL at AIIMS in New Delhi	➤ Cross sectional design ➤ Sample size- 68 ➤ Consecutive sampling technique ➤ Subjects with category I, II, III, & IV according to WHO staging were included ➤ WHO QOL- BREF scale was used	Better QOL scores in the physical and psychological domains with respect to occupation, good family support, high income, and high education. There was a significant difference of QOL in the physical domain between clinical stage I and II ($p=0.014$) and between stage I and stage IV (AIDS) ($p<0.001$). In the psychological domain, the QOL score was significantly poorer in stage II ($p<0.05$), & in stage IV ($p<0.006$) as compared to stage I.
3.	Folasire et al. (2012)	Assessment of QOL of PLHIVs	➤ Cross-sectional design ➤ ART clinic, University Hospital, Nigeria ➤ Sample size-150 ➤ Random sampling technique ➤ PLHIVs with asymptomatic, symptomatic and AIDS status were included for the study ➤ WHOQOL-BREF scale was used⁷	Asymptomatic (clinical stage I) PLHIVs had significant better scores compared to symptomatic patients (stage II, III, IV) in the psychological domains ($p=0.015$) and physical domains ($p=0.005$). Male study participants had similar mean QOL scores as female participants in all four domains.
4.	Rivero-Mendez et al. (2009)	Symptoms and quality of life of PLHIVs in Puerto Rico	➤ Cross sectional design ➤ Puerto Rico ➤ Sample size-44 ➤ Convenience sampling technique. ➤ Subjects with all clinical stages were included in the study ➤ HIV/AIDS Targeted QOL instrument was used	The overall symptom frequency was significantly related to four domains of QOL.
5.	Valencia et al. (2010)	Measurement of QOL of PLHIVs in Colombia	➤ Cross-sectional design ➤ PLHIVs attending ambulatory services in 3 health care institutions, Colombia ➤ Sample size-137 ➤ Non random sampling technique ➤ PLHIVs with all the clinical stage with and / without antiretroviral therapy were the study subjects ➤ HIV/AIDS-Targeted QOL scale was used	The highest QOL scores were obtained by PLHIVs who were on antiretroviral therapy (ART). PLHIVs with greater number of symptoms had lower QOL scores. This study did not reveal any significant association between QOL and gender.
6.	Najomi et al. (2008)	Determination of Health-related QOL in PLHIVs in Iran	➤ Cross-sectional design ➤ Disease Behavioral Consulting Center in west of Tehran. ➤ Sample size-139 ➤ Convenience sampling technique ➤ PLHIVs with all clinical stages were included in this study ➤ WHOQOL-BREF scale was used	Scores of all domains were correlated with the total measure of the quality of life significantly ($p<0.05$). The most significant positive correlation was observed for the social and environmental domains (0.85 and 0.87 respectively). Gender, marital status, level of education and occupation had significant association with QOL. Subjects with severe symptoms had lower QOL scores.

compared to individuals who had no depression, OR=8.8 (95% CI:3.2,23). Among co-infected, depressed individuals were five times more likely to have poor social relationships as compared to individuals without depression [OR=5.3 (95% CI:2.3, 14.2)].

Chiou et al evaluated the symptom management program in improving QOL of PLHIVs and found that there was statistically significant difference i.e. QOL scores were higher among those who received symptom management program compared to control group (p=0.011)

Nursing measures to improve QOL

Having known about the major causes of decreased QOL in PLHIVs, the nurses who look after PLHIVs in hospitals, Out Patient Departments (OPDs), ART clinics or in the community settings need to focus on measures pertaining to each domain to improve QOL of patients.

Physical domain

PLHIVs with good physical health are found to have better QOL. Hence, the emphasis should be focused on education on compliance to ART, good nutrition, prevention of opportunistic infections & self care management of minor discomforts due to side effects of ART or HIV disease itself.

Psychological domain

The interventions should be aimed at alleviating depression, enhancing the patient's understanding of effective coping patterns, increasing self-efficacy, and developing strategies to foster communication with a support system and with health care providers which may result in higher QOL outcomes.

Social domain

PLHIVs with good family and social support are found to have higher QOL scores. Therefore, nursing measures need to focus on encouraging PLHIVs to participate in diversional activities, promoting positive living, encouraging them to express their feelings to their friends, family members, or well-wishers, and encouraging the care givers to extend their love and care in every aspect of their lives.

Environmental domain

Studies have shown that PLHIVs with better occupation and income have better QOL. Providing education and employment, financial self-sufficiency, financial assistance for patients particularly for women, and making appropriate job safety are the

interventions that can improve QOL.

Health care workers need to create awareness about availability of community-based services / programmes offered by Governmental or non-governmental organisations which will go a long way in improving environmental scores.

Conclusion

Quality of life of persons living with HIV infection varies from individual to individual. Therefore, repeated assessment of perceived QOL and the factors affecting their QOL is of paramount importance for nurses in order to plan their care in the hospital or in the community settings. Better management of symptoms may have an impact on perceived QOL for people living with HIV infection.

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