

Original Research Article

GENDER VARIATIONS IN QUALITY OF LIFE AMONG PEOPLE LIVING WITH HIV/AIDS (PLWHA) IN NORTHERN INDIAN TERTIARY CARE HOSPITAL: A CROSS-SECTIONAL STUDY

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ABSTRACT

Background: As ART continues to improve, ensuring that individuals living with HIV can enjoy a high quality of life is becoming a key goal in HIV care. This means not only ensuring viral suppression and longevity but also addressing the psychosocial, emotional, and economic challenges that people living with HIV face. Numerous factors have been associated with quality of life (QOL), including employment, socioeconomic level, education, and gender. Thus, the goal of the current study is to investigate how the quality of life of people living with HIV/AIDS (PLWHA) varies by gender.

Material and Methods: From year 2013 to 2014, 211 HIV-positive individuals who were receiving antiretroviral treatment at Rajindra Hospital, GMC Patiala, participated in a cross-sectional study. Patients' sociodemographic traits were examined, and the WHOQOL-HIVBREF questionnaire was used to gauge their quality of life. ANOVA, the student's t-test (independent sample), and the chi-square test were employed for analysis.

Results: Of the 211 participants in the study, 106 (50.2%) were male and 105 (49.8%) were female. Women tended to have less advanced HIV disease, as indicated by their CD4 counts; 40.0% of females and 25.5% of males had CD4 counts greater than 500 cells/mm³. However, females had lower overall quality of life (QOL) scores compared to males. Women scored significantly lower than men in several domains: physical (14.16 ± 3.07 , $p < 0.001$), psychological (13.07 ± 2.18 , $p < 0.000$), level of independence (12.47 ± 2.03 , $p < 0.001$), social relationships (14.61 ± 1.89 , $p < 0.005$), and environment (13.25 ± 1.64 , $p < 0.000$).

Conclusion: Women had a poor quality of life as compared to men. As women are most economically, culturally, and socially disadvantaged and lack equal treatment acceptance and empowerment, gender sensitive approaches should be enhanced in treatment, care, and support in dealing with PLWHA.

Key words: HIV, AIDS, Quality of life, Gender, PLWHA.

INTRODUCTION

The Human Immunodeficiency Virus (HIV) infection and its related pandemic, Acquired Immune Deficiency Syndrome (AIDS), have imposed significant public health and socioeconomic challenges on the population over the years.^[1] The disease impacts not only the patients' physical health but also their social relationships, mental well-being, and financial

stability.^[2,3] With the extended lifespan possible through current Antiretroviral Therapy (ART) for people living with HIV/AIDS, quality of life (QOL) has become an important indicator of health outcomes. Quality of life (QOL) is a widely used term that reflects a general sense of well-being, encompassing factors such as happiness and life satisfaction. The World Health Organization defines QOL as "individuals' perceptions of their position in life, within the context of their culture and value

systems, and in relation to their goals, standards, expectations, and concerns. It has a broad horizon embedded in a multidimensional cultural, social and environmental context the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationships to salient features of the environment. QOL assessment helps in making judgments about areas of need and the planning of interventions in the management of PLHIV. Numerous studies in the global literature have highlighted that male gender, younger age, higher socioeconomic status, and employment are linked to better quality of life.^[4-9] Hence, the present study has made an attempt to determine the gender variations in QOL among People living with HIV/AIDS (PLWHA) in northern India.

MATERIALS AND METHODS

There were about 4844 patients registered at the ART centre, of these only 1907 were on ART. Among these 1,059 were male, 746 were female, 2 were transgender, 68 were male children, and 32 were female children. The remaining patients were either deceased, transferred, or lost to follow-up. This data was collected as part of a cross-sectional study involving HIV-positive individuals attending the Anti-Retroviral Treatment Centre at Rajindra Hospital, GMC Patiala, from April 2013 to February 2014. The sample size was calculated using the formula (required for estimating population mean – one population):

$$\left[\frac{Z_{\alpha/2} \sigma}{d} \right]^2$$

n = Sample Size

Z = 95% Level of confidence

d = allowable error

σ = Standard deviation

Taking the estimate to be within 0.5 of the true mean and the level of significance as 0.05, standard deviation for the Quality of life mean domain score was taken to be 3.7 from the preliminary study of WHOQOL-HIV.^[10] A sample size of present study is determined to be 211.

Patients attending the ART centre were interviewed after obtaining ethical approval from institutional ethical committee and written informed consent, using a convenient sampling method. The inclusion criteria were: HIV-diagnosed patients above 18 years of age, receiving clinical care and follow-up at the ART centre, giving consent. The exclusion criteria being patients under 18 years of age, mentally & physically unstable patients due to illness, and individuals who did not consent to participate in the study. The interview was conducted using the WHOQOL-HIV BREF questionnaire, which consists of two parts: **Part 1:** This section includes a pre-designed, pre-tested, and semi-structured questionnaire that collects the ART

center registration number, the interview date, personal information (kept confidential), and relevant clinical and treatment history. **Part 2:** This part contains the WHOQOL-HIV BREF questionnaire. There are 31 items representing 30 facets and contains five extra items specific to PLWHA grouped under 6 domains such as physical, psychological, independence, social relationships, environmental, and personal beliefs domain. In this study, face-to-face interviews were conducted with all participants, regardless of their educational level. The Chi-square test, Student's t-test (independent sample) and ANOVA were used for analysis and analysed by software Epi info version 7. The p value <0.05 was considered significant at the 95% Confidence Interval.^[11]

RESULTS

Out of 211 participants in present study 106 (50.2%) participants were male and 105 (49.8%) were female. The male to female ratio in present study was almost 1:1. The mean age of participants in the present study was 38.40 (SD=9.43). A majority, 84% (178), belong to the rural areas. The table 1 shows that among 105 female participants, only 23 (21.9%) were employed, while 82 (78.1%) were unemployed. The majority of females were illiterate, with 47 (44.8%), 43 (41.0%) having completed primary or high school, and 15 (14.3%) having secondary education or higher. Additionally, 47.6% of females were widows, compared to 11.3% of males. There were 42 (40.0%) females in category A as compare to 27 (25.5%) males. This suggests that females had a higher CD4 count than males. Table 1 further shows that females despite of having less advanced disease, 66 (62.9%) asymptomatic as compared to 58 (54.7%) males, only 42 (40 %) females perceived their health as good as compared to 67 (63.2%) males. Furthermore, 52 (49.5%) of females reported having no family support, whereas 92 (86.8%) of males had family support.

Table 2 compares mean domain scores of male and female participants. Males had the lowest scores in the independence domain, with a mean of 13.39 (SD=2.03), followed by the environment domain (14.18, SD=1.76), psychological domain (14.32, SD=2.39), social relationship domain (15.36, SD=1.76), SRBP (spirituality/religion/personal beliefs) domain (15.50, SD=3.06), and the highest in the physical domain (15.63, SD=3.08). For females, the lowest scores were in the independence domain (12.47, SD=2.03), followed by the psychological domain (13.07, SD=2.18), environment domain (13.25, SD=1.64), physical domain (14.16, SD=3.07), and social relationship domain (14.61, SD=1.89), with the highest score in the SRBP domain (15.00, SD=2.84). Overall, males scored higher than females across all six quality of life domains.

Table 1: Clinico-social parameters of study participants

S.No	Characters	Males (106)	%	Females (105)	%	P – value *	
1.	Employment status	Employed	100	94.3	23	21.9	<0.001
		Unemployed	6	5.7	82	78.1	
2.	Education Status	Illiterate	31	29.2%	47	44.8%	0.043
		Primary and High School	50	47.2%	43	41%	
		Secondary and above	25	23.6%	15	14.3%	
3.	Marital status	Divorced	2	1.9%	0	0	<0.001
		Married	80	75.5%	51	48.6%	
		Single	12	11.3%	2	1.9%	
		Separated	0	0	2	1.9%	
		Widowed	12	11.3%	50	47.6%	
4.	CD4 Count	A (>500cells/mm ³)	27	25.5%	42	40%	0.080
		B (200-500 cells/mm ³)	60	56.6%	48	45.7%	
		C (<200) cells/mm ³)	19	17.9%	15	14.3%	
5.	Clinical status	AIDS converted	2	1.9%	1	1%	0.448
		symptomatic	46	43.4%	38	36.2%	
		asymptomatic	58	54.7%	66	62.9%	
6.	Self-perceived health status	Very poor	3	2.8%	0	0	0.001
		poor	6	5.7%	18	17.1%	
		Neither Good nor Poor	27	25.5%	44	41.9%	
		Good	67	63.2%	42	40%	
		Very good	3	2.85	1	1%	
7.	Family support	Yes	92	86.8%	53	50.5%	<0.001
		No	14	13.2%	52	49.5%	

* Chi-square test

Table 2: Gender and domain wise quality of life scores

Domains	Male (n=106) Mean ± SD	Female (n=105) Mean ± SD	*p-value
Physical	15.63±3.08	14.16±3.07	0.001
Psychological	14.32±2.39	13.07±2.18	<0.001
Level of independence	13.39±2.03	12.47±2.03	0.001
Social relationship	15.36±1.97	14.61±1.89	0.005
Environment	14.18±1.76	13.25±1.64	<0.001
Spiritual /religion/personal beliefs	15.50±3.06	15.00±2.85	0.221

*Students's t-test (independent sample) p<0.05

DISCUSSION

The QoL is essential for determining the impact of chronic disease on a patient and often correlate with the overall outcome of a disease.^[25] The increasing life expectancy of PLWHA makes it imperative to measure and monitor their QoL and identify its determinants. In our study, males scored the highest in the physical domain, while females had the highest scores in the Spiritual/Religion/Personal Beliefs (SRPB) domain. Both genders had the lowest scores in the level of independence domain. The physical domain assesses factors such as pain and discomfort, energy and fatigue, as well as sleep and rest, while the SRPB domain addresses concerns like worries about the future, and fears related to death and dying. Better scores in the physical domain in males may stem from the fact that men are often more physically active or work in jobs that require physical labour, which helps maintain their fitness and health. Men may also have greater access to healthcare, support systems, and financial resources, enabling them to manage their

health and treatment more effectively. In some cultural contexts, men may experience less emotional distress than women, allowing them to focus more on maintaining their physical health. Additionally, societal expectations around male resilience could encourage men to seek care promptly, further promoting their physical well-being. These findings were consistent with the Arjun et al,^[22] Akuthota et al,^[23] however some studies show different results Chandra et al,^[12] Anand et al.^[13] This difference may be attributed to the superior care and treatment provided at our ART center, which contributed to the patient's positive perception of their physical well-being.

The high scores of females in the SRPB domain may be attributed to the fact that many women living with HIV draw comfort and strength from their faith or spiritual beliefs. Religion and spirituality often offer a sense of hope, purpose, and a supportive community, all of which contribute to enhanced well-being and higher scores in the SRPB domain. Additionally, spirituality and personal beliefs can foster resilience, helping women manage

the emotional and psychological challenges of living with HIV. These findings were consistent with the Anand et al,^[13] Akinboro et al,^[14] and Anusuya et al.^[15]

Domain III (Level of Independence) primarily assesses the ability of people living with HIV/AIDS (PLHAs) to move freely, engage in daily activities, dependence on medication or treatment, and maintain work capacity. In the current study, this domain was most significantly affected, as many respondents choose to stay mostly at home after learning their HIV status. Additionally, there was a high reliance on medication, as all participants were undergoing antiretroviral therapy. These findings were consistent with Arya et al.^[24] HIV can cause both physical and mental health issues that limit an individual's ability to perform daily tasks independently, including fatigue, weakness, pain, and cognitive difficulties, all of which can reduce autonomy. Antiretroviral therapy (ART) and other medications used for managing HIV may also bring side effects like nausea, dizziness, or muscle pain, further restricting independence. Moreover, the stigma and discrimination surrounding HIV can hinder opportunities for PLHAs to fully participate in society, such as securing or retaining employment, which negatively impacts their level of independence.^[11]

In the present study males had better scores as compare to females in all six domains of quality of life which was comparable to studies by Chandra et al,^[12] except SRBP domain, Anand et al,^[13] except SRBP domain, Akinboro et al,^[14] and Anusuya et al.^[15] In this study, females had a higher CD4 count and less advanced disease compared to males. It was also observed that males received better family support than females and had higher quality of life domain scores when compared to participants without family support. These results align with the findings of studies conducted by Nirmal et al,^[20] Rajeev et al,^[16] Anusuya et al,^[15] Akinboro et al,^[14], Tran et al,^[17] and Folasire et al.^[21] Family support plays a significant role in influencing the scores of the environmental domain, suggesting that a supportive family helps maintain a healthier living environment for the patient. It is widely recognized that a family setting offers safety, security, financial assistance, social support, close interpersonal relationships, and fulfilling sexual activity, all of which positively impact the quality of life. Participants with general health perception as very good and good had significantly higher scores in all domains of quality of life as compare to those whose perception was neither good nor poor, poor and very poor. Findings of present study were similar to studies done by Belak Kovacevic et al,^[18] and Akinboro et al.^[14]

The negative effects on the quality of life for people living with HIV/AIDS appear to be more severe for women due to factors such as lower income and education, financial dependence on their partners, heavy domestic responsibilities, and caring for

children and other family members. Even though women have less severe illness and higher CD4 counts, their QOL scores remain significantly lower than those of men. As the disease advances, their socioeconomic situation worsens, and many women were infected by their partners, which may lead to deep feelings of sorrow, anger, and disappointment. As women strive to balance home, family, and work obligations, they may neglect their healthcare, prioritizing other responsibilities instead. In essence, gender inequalities significantly affect women's quality of life.

CONCLUSION

In conclusion, this study highlights a gender disparity in the quality of life among individuals living with HIV. The underlying reasons for this difference may stem from the fact that female participants were living in poverty, had limited education, and were without a partner, suggesting a lack of social support. These factors significantly diminished women's quality of life, compounded by the harsh reality of being infected with HIV. A holistic approach is crucial when providing care for individuals with HIV/AIDS. Healthcare professionals must continuously assess each patient's condition and take into account all dimensions of their quality of life. Further research is necessary to fully understand the connection—or absence of one—between gender and quality of life. Family and vocational counselling should be fundamental components of care for people living with HIV (PLWH). Peer and individual counselling should be encouraged during every encounter with healthcare providers, particularly for those at high risk.

Declaration of Conflicting Interests

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