

Cross-sectional study for assessment of quality of life of AIDS patients attending link ART centers in relation to their age and marital status, in Haryana

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Abstract

Background: The number of HIV/AIDS patients is increasing worldwide. Development of various tests and antiretroviral therapy has increased the survival of these patients, but their quality of life still remains a major global concern.

Objectives: This was a cross-sectional study to evaluate the health-related quality of life of patients attending link ART centers in Haryana, in relation to their age and marital status.

Materials and Methods: It was a cross-sectional study done on 502 patients attending the link ART centers at Ambala, Hisar and Bhiwani, after approval of Institutional Ethics Committee. Quality of life was assessed using WHOQOL-BREF questionnaire during the period of January 2013 to December 2013. Statistical analysis was done using SPSS version 21.

Results: Mean scores of physical domain (53.00 ± 8.023) were maximum for younger patients, i.e., 15–24 years age group, while psychological (56.33 ± 5.499) and social domain scores (68.67 ± 10.567) were highest in 55–64 years age group. Environmental domain scores (65.50 ± 10.014) were highest in 65–74 years age group patients. As per marital status, mean scores of physical (54.75 ± 11.275), social (63.03 ± 18.668), and environmental domains (68.39 ± 11.083) were maximum for those who were unmarried, while mean scores of psychological domain (50.62 ± 11.995) were maximum for married patients.

Conclusions: Younger age group patients showed better physical domain scores, while psychological, social, and environmental domain scores were better in older patients. Married patients showed better psychological domain scores, while physical, social, and environmental domain scores were better in unmarried patients.

KEY WORDS: HIV/AIDS, quality of life, age, marital status

Introduction

The increasing pandemic of HIV/AIDS at present is a major global concern and a significant development issue. With the recent advances in clinical tests and treatments for

those suffering from HIV/AIDS, the survival of these patients has been increased and their quality of life has become an important focus for researchers and healthcare providers. Many of these patients struggle with numerous social problems such as stigma, poverty, depression, substance abuse, and cultural beliefs, which can affect their quality of life not only from physical health aspect, but also from mental and social health point of view, and cause numerous problems in useful activities and interests of the patients.^[1]

Quality of life is a term that is popularly used to convey an overall sense of well-being and includes aspects such as happiness and satisfaction with life as a whole. According to the world health organization, quality of life (QOL) is defined as individuals' perceptions of their position in life in the

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context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns. This definition reflects the view that QOL refers to a subjective evaluation, which is embedded in a cultural, social, and environmental context. Because this definition of QOL focuses upon respondents' "perceived" QOL, it is not expected to provide a means of measuring in any detailed fashion symptoms, diseases, or conditions, but rather the effects of disease and health interventions on QOL. As such, QOL cannot be equated simply with the terms "health status", "life style", "life satisfaction", "mental state," or "well-being".^[2] There are many different tools for measuring QOL such as WHOQOL-HIV, WHOQOL-HIV BREF, WHOQOL, and WHOQOL-BREF.

The development of antiretroviral drugs has significantly changed the perception of HIV/AIDS from a very fatal to a chronic and potentially manageable disease, and the availability and administration of antiretroviral therapy (ART) has significantly reduced mortality and morbidity associated with HIV and AIDS. There is a relationship between ART and QOL of people living with HIV and AIDS, and several studies have reported a strong positive association between ART and improved QOL in different domains among people living with HIV and AIDS in both developed and developing countries.^[3]

There are various studies conducted across the globe which report that as the HIV infection progresses, it affects the QOL of the individual. Various factors apart from physical and mental health such as employment status, age, gender, income, education, HIV stage, severity of HIV infection, and others are found to impinge on the QOL of people living with HIV. Also, QOL is identified as a useful medium to measure or determine the efficacy of treatment or interventions. So, we designed this study to evaluate the effect of age and marital status on QOL of the patients suffering from HIV/AIDS.

Materials and Methods

This cross-sectional study was conducted in three link ART centers (LAC) of Haryana. These centers were Ambala, Hisar, and Bhiwani. Study population was HIV positive patients registered in the chosen link ART centers. Patients aged less than 15 years and patients who were not willing to participate were excluded from the study. The study was done during the period of January 2013 to December 2013. A sample size of 502 was taken. There were 170–200 patients enrolled in each LAC. Hence, all patients reporting to the study center during the period of study were included till the completion of required sample size. QOL was evaluated using the World Health Organization Quality of Life (WHOQOL) Brief instrument.^[4] The WHOQOL Brief consists of 26 items. Each item uses a Likert-type five-point scale. These items are distributed in four domains. The four domains of QOL are:

1. **physical health** and level of independence (seven items assessing areas such as presence of pain and discomfort; dependence on substances or treatments; energy and

fatigue; mobility; sleep and rest; activities of daily living; perceived working capacity);

2. **Psychological well-being** (eight items assessing areas such as affect, both positive and negative self-concept; higher cognitive functions; body image; spirituality);
3. **Social relationships** (three items assessing areas such as social contacts; family support and ability to look after family; sexual activity); and
4. **Environment** (eight items assessing areas such as freedom; quality of home environment; physical safety and security; financial status; involvement in recreational activity; health and social care; quality; accessibility).

Patients registered in the center were considered for participation to cover the required sample size. The subjects were explained about the objective of the study and invited to participate. Those not willing were excluded from the study.

Statistical analysis: The data were analyzed using SPSS version 21. Qualitative variables, i.e., age and marital status were expressed as proportions in percentages and quantitative variable, i.e., pertaining to QOL were expressed as means and standard deviation. Finally χ^2 -test was used to analyze qualitative variables, and QOL scores were analyzed using t-test. *p*-value < 0.05 was considered to be significant.

Ethical considerations: The study was approved by Institutional Ethics Committee. The study did not impose any financial burden on the patients. Written informed consent was taken from the study participants in Hindi or English language as per their understanding. Those not willing were excluded from the study. Confidentiality was assessed and maintained throughout the study.

Results

Table 1 shows that maximum number (40.6%) of study subjects were in the age group of 25–34 years; 28.9% in the age group of 35–44 years; and 18.5% in the age group of 15–24 years. The rest 7% were in age group of 45–54 years,

Table 1: Distribution of study subjects as per their age and marital status

Age (in years)	Male	Female	Total
15–24	19 (7.6%)	74 (29.2%)	93 (18.5%)
25–34	115 (46.2%)	89 (35.2%)	204 (40.6%)
35–44	70 (28.1%)	75 (29.6%)	145 (28.9%)
45–54	25 (10.0%)	10 (4.0%)	35 (7.0%)
55–64	10 (4.0%)	5 (2.0%)	15 (3.0%)
65–74	10 (4.0%)	0 (0%)	10 (2.0%)
Total	249 (100%)	253 (100%)	502 (100%)
Marital status			
Married	180 (72.3%)	151 (59.7%)	331 (65.9%)
Widowed	15 (6%)	80 (31.6%)	95 (18.9%)
Divorced	10 (4%)	22 (8.7%)	32 (6.4%)
Unmarried	44 (17.7%)	0 (0%)	44 (8.8%)
Total	249 (100%)	253 (100%)	502 (100%)

3% in age group of 55–64 years, and 2% in age group of 65–74 years.

Table 1 also shows that out of the total (502) study subjects, the majority 65.9% (331) were married, 18.9% (95) were widowed, and 6.4% (32) were divorced. The difference in the number was statistically significant. Only 8.8% of all the subjects were unmarried and all of them were males. No female reported to have unmarried status.

Table 2 shows that mean scores of physical domain were maximum for those patients who were in 15–24 years age group (53.00 ± 8.023). The difference was statistically significant. Mean scores of psychological domain were maximum for those patients who were in 55–64 years age group (56.33 ± 5.499). The difference was statistically significant. Mean scores of social domain were maximum (68.67 ± 10.567) for the patients of age group 55–64 years, and this difference was also statistically significant. Scores of environmental domain were highest (65.50 ± 10.014) in patients of age group 65–74 years, but results were not significant statistically.

Table 3 shows that mean scores of physical domain were maximum for those patients who were unmarried (54.75 ± 11.275). Rest of the participant had almost equal scores. The difference was statistically insignificant. Mean scores of psychological domain were maximum for those patients who were married (50.62 ± 11.995). The difference was also statistically significant. Mean scores of social domain were maximum (63.03 ± 18.668) for the patients who were unmarried, and this difference was highly statistically significant. Mean scores of environmental domain also were highest (68.39 ± 11.083) in patients who were unmarried, and these results were also highly significant statistically.

Discussion

Age Distribution

In our study, 18.5% patients were in age group of 15–24 years, 40.6% in age group of 25–34 years, 25.9% in the age group of 35–44 years, and 7% in age group of 45–54 years. Similarly, in a study done by Subramaniam et al.^[5], 47% patients were below 37 years age, 41% were in age of 30–39 years, and 12% were above 40 years. Every study including this study has shown higher number of patients in age group of 25–44 years, which demands more IEC activities for behavioral change in this age group.

Marital Status

In our study, 65.9% subjects were married, 7.8% were single, 5.4 were divorced, and 18.9% were widowed and were having live-in relationship status. Similarly, in the study done by Subramaniam et al.^[5] in Chennai, 60% of the subjects were married, 16% were single, 10% were divorced, and 14% were widowed. In another study done by Mahalakshmy et al.^[6] in Puducherry, 63% subject were married, 23% were widowed, and 28% were unmarried.

Quality of Life

Physical domain had better scores in younger age group and there was consistent decrease in physical domain scores after 40 years of life, and these results were significant. However, rest of the domains had maximum scores in age group of 55–64 years. The findings were consistent with the study by Najomi et al.^[7] where they found that Domain I was better in younger population and rest three domains were better in older age population.

Table 2: Average scores of different QOL domains in various age groups

Age (in years)	Physical	Psychological	Social	Environmental
15–24	53.00 ± 8.023	47.14 ± 13.734	62.25 ± 16.280	59.67 ± 14.134
25–34	51.38 ± 2.268	51.39 ± 11.496	58.14 ± 17.918	61.39 ± 14.329
35–44	52.28 ± 0.688	47.69 ± 12.794	56.48 ± 16.830	59.10 ± 12.781
45–54	50.14 ± 1.825	50.00 ± 7.276	57.14 ± 22.225	63.43 ± 7.896
55–64	43.67 ± 8.054	56.33 ± 5.499	68.67 ± 10.567	65.00 ± 2.928
65–74	41.00 ± 3.162	43.5 ± 13.176	50.00 ± 0.000	65.50 ± 10.014
Total	51.41 ± 1.365	49.43 ± 12.180	58.51 ± 17.473	60.74 ± 13.261
<i>p-value</i>	0.002	0.002	0.015	0.180

Table 3: Average scores as per the marital status

Status	Physical	Psychological	Social	Environmental
Married	51.08 ± 10.596	50.62 ± 11.995	59.68 ± 17.912	61.66 ± 13.680
Widowed	51.16 ± 13.874	47.79 ± 11.404	54.95 ± 16.760	53.32 ± 6.912
Separated	51.09 ± 10.726	43.97 ± 12.119	54.07 ± 12.474	62.81 ± 16.458
Unmarried	54.75 ± 11.275	47.95 ± 13.890	63.03 ± 18.668	68.39 ± 11.083
Total	51.41 ± 11.36	49.43 ± 12.180	58.51 ± 17.473	60.74 ± 13.261
<i>p-value</i>	0.245	0.007	0.015	<0.001

This study showed significant association between marital status of the patients and QOL scores of all domains ($p < 0.05$). Scores were higher where patients were unmarried and least scores were observed among those who had history of broken marriage. Married people had scores in between the two groups. Similar findings were observed by Rajeev et al.^[6] that unmarried and married people have better scores than who had experienced divorce or separated from their life partner. However, Najomi et al.^[7] found significantly higher scores among married population except the physical domain.

Conclusions

As per age, scores of physical domain were maximum in younger age group, while rest of the domains had maximum scores in 55–64 years age group. As per marital status, mean scores of physical, social, and environmental domain were maximum for those who were living as married, while the psychological domain scores were maximum for those who were married.

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