Health-related quality of life of patients attending link ART centers in Haryana, in relation to their employment and socioeconomic class

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Abstract

Background: Human immunodeficiency virus/acquired immunodeficiency syndrome cases are increasing tremendously, and, for its symptomatic treatment, drug therapy is available, which has increased survival of these patients, but the quality of life is still a major concern.

Objective: To evaluate the health-related quality of life of patients attending link ART centers in Haryana, in relation to their employment and socioeconomic class.

Materials and Methods: This cross-sectional study was 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 the WHO Quality of Life-BREF questionnaire during the period of January 2013–December 2013. Statistical analysis was done using SPSS software, version 21.

Result: Mean scores of physical (62.75 ± 4.723), psychological (54.54 ± 5.257), social (75.00 ± 16.40), and environmental domains (75.00 ± 13.784) were maximum for those who were in government jobs. As per socioeconomic class, physical (62.75 + 4.723), psychological (53.74 + 7.887), social (79.75 + 20.005), and environmental domains (84.50 + 9.747) showed higher scores for the upper class.

Conclusion: Patients engaged in government jobs and belonging to higher socioeconomic class showed significantly higher scores.

KEY WORDS: HIV/AIDS, quality of life, employment, socioeconomic class

Introduction

Because people with (human immunodeficiency virus/acquired immunodeficiency syndrome) HIV/AIDS modify to existing with a prolonged illness, many new challenges arise; among them are problems of occupational working and employment. For people who are employed, occupation offers not only monetary benefits but may also be a source of structure, social support, role identity, and sense.[1]

Adults with HIV infection and AIDS often struggle with vocational dilemmas. Unlike severe medical illnesses in which patients may get back to predisease levels of functioning following treatment, patients with HIV infection must regularly acclimatize to an unpredictable illness course.[2] Even when physical health is steady, anxiety and doubt about how HIV disease will affect economic, occupational, and health-care security cause difficulty in vocational decision-making.[3] Whereas some quit the workforce and obtain incapacity welfares, others remain employed to varying degrees. People who are employed often find their occupational functioning

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restricted by HIV-specific factors such as episodic illness, tiredness, physical and mental limitations, medication schedules and side effects, and recurrent medical appointments.[4]

Nationally and globally, HIV is an illness that is fixed in social and economic inequity,[5] as it disturbs those of lower socioeconomic status (SES) at a disproportionately high rate. Studies on SES and HIV/AIDS put forward that a person's socioeconomic standing may upset his or her possibility of contracting HIV and developing AIDS. Furthermore, SES is an important aspect in determining the quality of life (QOL) for people after they are affected by the virus. Those with less resources are frequently left with limited treatment choices.

Research shows that up to 45% of persons existing with HIV are jobless.[6] The effects of HIV on physical and emotional working can make continuing steady occupation tough. Patients with HIV infection may also find that their work duties race with their health-care needs. Individuals infected with HIV are often differentiated against in the workplace, resulting in their termination or forced resignation.[7] SES status often decides access to HIV treatment. Individuals of low SES undergo late treatment commencement relative to more well-to-do patients, dropping their probabilities of existence.[8]

Newer developments in tests and treatments for HIV have increased the survival of these patients, but the QOL remains a major concern. QOL is a term that is commonly used to deliver a complete sense of well-being and includes aspects such as joy and contentment with life as a whole. According to the WHO,[9] QOL is defined as individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns. This description reflects the opinion that QOL denotes a subjective evaluation, which is fixed in a cultural, social, and environmental context. As such, QOL cannot be equated simply with the terms "health status," "lifestyle," "life satisfaction," "mental state," or "well-being."[9] There are many different tools for measuring QOL such as World Health Organization Quality of life (WHOQOL) WHOQOL-HIV, WHOQOL-HIV BREF, and WHOQOL-BREF.

There are several studies done across the world, which report that, as the HIV infection advances, it affects the QOL of the individual. Several causes apart from physical and mental health such as employment status, age, gender, income, education, HIV stage, and severity of HIV infection are found to affect the QOL of people living with HIV. Moreover, QOL is identified as a useful medium to measure or determine the efficiency of treatment or interventions. Therefore, this study investigated the QOL of Indian people living with HIV/AIDS in relation to their employment and SES.

Materials and Methods

This cross-sectional study was conducted in three Link ART Centers of Haryana namely Ambala, Hisar, and Bhiwani.

Study population was HIV-positive patients registered in the chosen Link ART Centers. Patients aged younger 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–December 2013. A sample size of 500 was taken. There were 170–200 patients enrolled in each Link ART Center. Hence, all patients (>15 years of age) reporting to the study center during the period of study were included till the completion of required sample size.

QOL was evaluated using the WHOQOL Brief instrument.[9] 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:

(a) 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, and perceived working capacity);

(b) psychological well-being (eight items assessing areas such as affect, both positive and negative self-concept, higher cognitive functions, body image, and spirituality);

(c) social relationships (three items assessing areas such as social contacts, family support and ability to look after family, and sexual activity); and

(d) environment (eight items assessing areas such as freedom, quality of home environment, physical safety and security and financial status, involvement in recreational activity, and health and social care: quality and accessibility).

There are also two items that are examined separately: one that asks about the individual's overall perception of QOL and the other that asked about the individual's overall perception of his or her health. Domain scores are scaled in a positive direction (higher scores denote higher QOL). The scores thus obtained were added for each domain and further transformed to a new score, which ranged from 0 (minimum) to 100 (maximum), with a higher score indicating better QOL, for every domain separately.

Statistical Analysis

The data were analyzed using SPSS software, version 21. Quantitative variables (i.e., pertaining to QOL) were expressed as means and standard deviation. The χ^2-test was used to analyze qualitative variables, and QOL scores were analyzed using *t*-test. $P < 0.05$ 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 understanding of the patient. Those not willing were excluded from the study. Confidentiality was assured and maintained throughout the study.

Result

Table 1 shows that, of the total study subjects, maximum (i.e., 28.1%) were educated up to secondary standard. The rest (26.75%) were educated up to primary standard, 19.3%

Table 1: Distribution of study subjects as per their education status

Education	Male, *n* (%)	Female, *n* (%)	Total, *n* (%)
Illiterate	19 (8.0)	71 (27.7)	90 (17.9)
Primary	75 (30.1)	59 (23.3)	134 (26.75)
High	60 (24.1)	37 (14.6)	97 (19.3)
Secondary	64 (25.7)	77 (30.4)	141 (28.1)
Graduate	31 (12.0)	9 (4)	40 (8.0)
Total	249 (100)	253 (100)	502 (100)

$\chi^2 = 50.68$, $p < 0.001$.

Table 2: Distribution of study subjects as per their occupation

Occupation	Male, *n* (%)	Female, *n* (%)	Total, *n* (%)
Unemployed	24 (9.65)	55 (21.7)	79 (15.7)
Government	20 (8.0)	0 (0)	20 (4)
Private	70 (28.1)	35 (13.8)	105 (20.9)
Business	85 (34.1)	117 (46.2)	202 (40.2)
Daily wager	50 (20.1)	46 (18.2)	96 (19.1)
Total	249 (100)	253 (100)	502 (100)

$\chi^2 = 49.038$, $p < 0.001$.

Table 3: Distribution of subjects as per their socioeconomic status

Socioeconomic class	Male, *n* (%)	Female, *n* (%)	Total, *n* (%)
I	15 (6.0)	5 (2.0)	20 (4.0)
II	40 (16.1)	5 (2.0)	45 (9.0)
III	90 (36.1)	59 (23.3)	149 (29.7)
IV	34 (13.7)	12 (4.7)	46 (9.2)
V	70 (28.1)	172 (68.0)	242 (48.2)
Total	249 (100)	253 (100)	502 (100)

$\chi^2 = 92.159$, $p < 0.001$.

educated up to high standard, 17.9 % illiterate, and only 8% educated up to graduate class. The difference in number was statistically significant. Male subjects were better educated than female subjects as only 8% were illiterate against 27.7% among female subjects. The difference was statistically significant.

Table 2 shows that, of the total study subjects, a major number (i.e., 40.2%) was having their own business, 20.9% in private jobs, 19.1% daily wagers, 8% in government jobs, and 15.7% unemployed. The difference in number was statistically significant.

Table 3 shows that majority of the subjects (48.2%) belonged to low income group (i.e., class V), followed by class III (29.7%). Similar trend was seen in female subjects (i.e., 68.0% of female subjects belonged to low income group), followed by class III group (23.3%)]. However, maximum male subjects belonged to class III (36.1%), followed by class V (28.1%).

Table 4 shows that mean scores of physical domain were maximum for those patients who were government employees (62.75 ± 4.723). The difference was statistically significant. Mean scores of psychological domain were also maximum for those patients who were in government jobs (54.54 ± 5.257), followed by patients who were unemployed. The difference was also statistically significant. Similarly, mean scores of social domain were maximum (75.00 ± 16.400) for the patients who were government employees, and this difference was highly statistically significant. Mean scores of environmental domain also were highest (75.00 ± 13.784) in patients who were government employees, followed by patients who were in private jobs, and these results were also highly statistically significant.

People employed in government job showed the highest scores in all the four domains. All the scores were lowest or were the lowest among the daily wagers.

Table 5 shows the association of QOL scores of various domains with income of patients. All the domains showed

Table 4: Average scores as per the type of employment

Type of employment	Physical	Psychological	Social	Environmental
Unemployment	50.87 ± 14.961	50.44 ± 13.048	59.73 ± 16.538	59.04 ± 13.798
Government	62.75 ± 4.723	54.54 ± 5.257	75.00 ± 16.400	75.00 ± 13.784
Private	52.48 ± 11.183	49.29 ± 12.842	67.57 ± 18.552	65.81 ± 13.695
Business	50.27 ± 11.085	46.77 ± 12.768	56.27 ± 15.84	60.84 ± 13.514
Daily wages	50.74 ± 8.017	48.50 ± 15.330	48.84 ± 13.031	53.43 ± 3.701
Total	51.41 ± 11.365	49.43 ± 12.180	58.51 ± 17.473	60.74 ± 13.26
P	<0.001	<0.001	<0.001	<0.001

Table 5: Average scores as per socioeconomic class

Socioeconomic class	Physical	Psychological	Social	Environmental
I	62.75 ± 4.723	53.74 ± 7.887	79.75 ± 20.005	84.50 ± 9.747
II	54.33 ± 10.713	43.78 ± 15.335	61.78 ± 16.451	63.89 ± 14.298
III	49.50 ± 10.233	50.06 ± 10.616	58.26 ± 18.351	62.01 ± 11.962
IV	55.30 ± 7.023	51.75 ± 4.414	56.78 ± 13.191	58.67 ± 9.163
V	50.37 ± 12.402	49.08 ± 12.936	56.62 ± 16.457	57.81 ± 12.573
Total	51.41 ± 11.365	49.43 ± 12.180	58.51 ± 17.473	60.74 ± 13.26
P	<0.001	0.002	<0.001	<0.001

higher scores for the upper class. The results were statistically significant.

Discussion

Mean scores of physical (62.75 ± 4.723), psychological (54.54 ± 5.257), social (75.00 ± 16.40), and environmental domains (75.00 ± 13.784) were maximum for those who were in government jobs. As per socioeconomic class, physical (62.75 + 4.723), psychological (53.74 + 7.887), social (79.75 + 20.005), and environmental domains (84.50 + 9.747) showed higher scores for the upper class.

In our study, 28.1% subjects were educated up to secondary class, 26.7% educated up to primary class, 19.3% educated up to high class, only 8% subjects graduate, and 17.9% of the subjects illiterate. This uniform distribution of patients among various levels of education suggests that even education plays no role in prevention of HIV infection. Similar results were found in the study done by Subramanian et al.[10] in Chennai. In the study, 28% subjects were educated up to primary class, 38% educated up to high class, only 4% graduate, and 30% of the subjects illiterate. In another study done by Vigneshwaran et al.[11] in Andhra Pradesh, it was found that 21.7% were educated up to secondary level, and another 34.2% had primary level education. In our study, 40.2% subjects were in their own business, 20.9% doing private jobs, 4% in government service, and 15.7% unemployed. Similarly, in another study done by Marashi et al.[12] in New Delhi, 27.22% subjects were in business, 38.3% in private jobs, 5.00% in government service, and 24.45% unemployed. In our study, maximum number of subjects (48.2%) belonged to lower income group, followed by 29.7% subjects belonging to middle income group. In a study conducted by Gowda et al.[13] in Mysore, it was found that majority of the patients belonged to middle income group (43.5%) in class II and 29.0% in class III. As per QOL, this study showed that all the domains showed better scores among people who were in government job, followed by private jobs. The scores were of minimum among daily wagers in all the domains. These results were found to be highly significant ($P < 0.001$). Study done by Najomi et al.[14] also found that employment significantly affects QOL scores in all the domains ($P < 0.05$), whereas Imam et al.[15] found no significant association between scores and employment. This study illustrated that all the domains showed better scores in the higher income group. The results were significant for all the domains ($P < 0.001$).

Maximum number of study subjects (i.e., 28.1%) was educated up to secondary standard. Major number of subjects (i.e., 40.2%) was having their own business. Employment-wise mean scores of physical (62.75 ± 4.723), psychological (54.54 ± 5.257), social (75.00 ± 16.400), and environmental domains (75.00 ± 13.784) were maximum for those patients who were government employees. Patients engaged in government job and belonging to higher SES had significantly higher scores.

Conclusion

Patients engaged in government jobs and belonging to higher SES had significantly higher scores.

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