Assessment of quality of Life of HIV-Positive People on Antiretroviral Therapy

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Abstract

Background: HIV/AIDS has adverse impact not only on physical but also mental, social, and financial aspects of the infected individual. Quality of life (QOL) among these individuals is therefore becoming crucial for measuring commonly used endpoints.
Objective: To study the quality of life (QOL) of HIV-positive people on antiretroviral therapy.
Material and Methods: A hospital-based cross-sectional study was conducted among 100 adult HIV-positive patients at two tertiary care hospitals of Lucknow. Systematic random sampling was used to recruit patients. Quality of Life was assessed using WHOQOL-BREF scale.
Results: Mean age of the PLHAs was 39.08±9.72 and majority (73.0%) of the study participants were male. QOL score were highest for physical health domain (10.45±1.35) followed by psychological domain (9.38±1.33), environmental domain (8.73±1.11) and social relationship domain (8.05±1.90) respectively. A significant difference ($p<0.05$) was observed in mean score for social relationship domain with subjects counselled within the last three months and those who were adherent to the treatment had a higher mean score of QOL mean score.
Conclusions: The present study revealed intermediate level scores for quality of life for PLHAs. Therefore for improving each and every facet of quality of life all the psychological, emotional and medical needs should be properly addressed through combined efforts by health care providers as well as the community.

Keywords: HIV/ AIDS, Quality of life, WHOQOL-HIV BREF

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Introduction

World Health Organization has defined QOL 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, standards, expectations and concerns.[1] Since the HIV was discovered in beginning 1980s, HIV/AIDS has been identified as one of the utmost health problems worldwide.[2] India has third-largest population of people infected with the HIV globally, after South Africa and Nigeria with about 2.1 million infected individuals.[3] It is estimated that over 34 million people are infected globally and these individuals use to suffer from the syndrome with deterioration in their quality of life (QOL).[4] Health related quality of life has been accepted widely for evaluating the preventive and therapeutic services provided by the state, rather than the traditional outcomes of mortality, number of survival, occurrence of opportunistic infections CD4 count and viral load.[5] Therefore the present study was conducted to study the quality of life (QOL) of HIV-positive people on antiretroviral therapy.

Material and Methods

Study design and sampling: The presented cross sectional study was conducted at ART centre of two tertiary care hospitals in Lucknow amongst 100 PLHAs using convenient sampling. PLHAs aged 18 years and above on antiretroviral therapy for more than three months were included in the study after obtaining informed consent. PLHAs that presented with any acute medical condition and unable to participate in the interview were excluded. Ethical clearance was obtained from the institutional ethical committee.
Data collection tools: To assess quality of life WHOQOL – BREF questionnaire was used having four domains *viz.* physical health domain, psychological health domain, social relationships domain and environmental domain Each item using 5 point Likert scale, where 1 indicates lowest (negative) perceptions and 5 indicates highest (positive) perceptions. The mean score were transformed to 4 – 20 range.[6]

Results

Mean age of the PLHAs in the study was 39.08 years (SD=9.72). Majority (73.0%) of the participants were male, with almost equal distribution in urban and rural residence (41.0% and 59.0% respectively). Only 15% of the study participant gave history of any side effect. About 71% of the PLHAs were on treatment for more than one year and about two-third were married. Majority (84%) of PLHAs were educated up to high

school or below and about one-fourth were unemployed. Most of the PLHAs belonged to upper lower or lower socioeconomic status. About 89% of the participants were satisfied with their health status, but 3% of them were dissatisfied while 8% were likely confused regarding satisfaction with their health status. **[Table 1]** QOL score were highest for physical health domain (10.45±1.35) followed by psychological domain (9.38±1.33), environmental domain (8.73±1.11) and social relationship domain (8.05±1.90) respectively. **[Table 2]**

Table 3 describes the mean domain scores with various bio-social and clinical profile variables. There was a significant difference of QOL mean score in social relationship domain, between two groups, with subjects counselled within the last three months and those who were adherent to the treatment had a higher mean score. Other than that no significant difference was observed between various biosocial and clinical profile variables with respect to their mean scores of various domains. **[Table 3]**

Table 1: Mean domain scores of Quality of life (N=100)

Domain	Score (Mean±SD)
Physical health domain	10.45±1.35
Psychological domain	9.38±1.33
Social relationship domain	8.05±1.90
Environmental domain	8.73±1.11

Table 2: Distribution of PLHAs on the basis of perception about their health (N=100)

Perception about their health	Number	Percentage
Dissatisfied	3	3.0
Satisfied	89	89.0
Neither Satisfied nor Dissatisfied	8	8.0

Table 3: Factor associated with various domains of Quality of Life

Bio – Social Characteristic			Physical Domain		Psychological Domain		Social relationships domain		Environment domain	
Variables		**No.**	**Mean±SD**	**p**	**Mean±SD**	**p**	**Mean±SD**	**p**	**Mean±SD**	**p**
Age group	≤35	47	10.38±1.49	0.09	9.10±1.25	0.14	8.25±1.85	0.88	8.70±1.17	0.41
	≥35	53	10.52±1.21		9.62±1.36		7.86±1.94		8.75±1.07	
Gender	Male	73	10.53±1.34	0.30	9.26±1.28	0.14	7.97±1.74	0.06	8.75±1.07	0.60
	Female	27	10.22±1.36		9.70±1.28		8.25±2.29		8.66±1.24	
Religion	Hindu	80	10.30±1.27	0.37	9.35±1.35	0.66	8.02±1.88	0.76	8.77±1.10	0.65
	Non Hindu	20	11.05±1.50		9.50±1.27		8.15±2.03		8.55±1.19	
Residence	Urban	41	10.26±1.18	0.28	9.17±1.37	0.53	8.43±1.78	0.94	8.60±1.11	0.50
	Rural	59	10.57±1.45		9.52±1.29		7.71±1.94		8.81±1.12	
Type of Family	Nuclear	54	10.51±1.32	0.33	9.56±1.36	0.33	8.05±2.05	0.21	8.53±1.17	0.16
	Joint	46	10.36±1.38		9.17±1.27		8.04±1.72		8.95±1.01	
Perceived side effect	Present	15	10.33±1.54	0.49	10.13±1.50	0.31	7.93±2.18	0.37	9.00±0.92	0.05
	Absent	85	10.47±1.32		9.24±1.26		8.07±1.86		8.68±1.14	
Employment status	Employed	75	10.49±1.39	0.50	9.29±1.34	0.99	8.04±1.75	0.08	8.77±1.07	0.34
	Unemployed	25	10.32±1.21		9.64±1.28		8.08±2.32		8.60±1.25	
Duration of Treatment	≤ 1 Year	21	10.38±1.56	0.23	9.33±1.19	0.56	7.19±1.91	0.46	8.66±0.96	0.38
	>1 Year	79	10.46±1.29		9.39±1.37		8.27±1.84		8.74±1.15	
Time elapsed since last counselling	Within 3 months	81	10.32±1.36	0.30	9.33±1.30	0.47	8.10±2.74	**0.00***	8.77±1.09	0.51
	More than 3 months	19	11.00±1.15		9.57±1.46		8.03±1.66		8.57±1.21	
Socio economic status[#]	Lower middle and above	32	10.46±1.36	0.63	9.59±1.41	0.28	7.65±1.55	0.19	9.09±0.99	0.12
	Upper lower and below	68	10.44±1.35		9.32±1.29		8.23±2.03		8.55±1.13	
Marital Status	Married	66	10.57±1.39	0.94	9.51±1.41	0.018	8.03±2.03	0.18	8.65±1.01	0.27
	Others[##]	34	10.20±1.24		9.11±1.21		8.08±1.63		8.88±1.29	
Educational Status	Up to high school	84	10.54±1.37	0.26	9.36±1.33	0.73	8.03±1.94	0.99	8.66±1.13	0.314
	More than high school	16	9.93±1.12		9.43±1.36		8.12±1.74		9.06±0.99	
Adherence to treatment	Adherent	95	10.43±1.37	0.43	9.31±1.33	0.17	8.06±1.77	**0.00***	8.76±1.10	0.70
	Non-Adherent	4	10.75±0.95		10.50±0.57		7.00±4.00		8.0±1.41	

[#] Modified B G Prasad socioeconomic scale 2013

[##] Includes divorced, separated, unmarried, widow/widower

***p value significant**

Discussion

The study was aimed to assess the quality of life of PLHAs on ART. The mean score in all four domains were intermediate (9 to 11). However the mean respective scores were quite less as compared to a study conducted by Rajeev et al.[7] and Aswin Kumar *et al.*[8] in Karnataka. Similar to a study conducted by Santos *et al.*[9] the mean scores were highest for the physical domain followed by psychological environment & social relationship domain. In contradiction to previous Indian studies[8,10,11] the mean scores for environmental domain were quite less. This indicates the suboptimal feeling of physical safety, and leisurely activities. Social relationship domains were least among all the four domains. Aswin Kumar *et al.*[8] opined that since HIV infection largely alters the sexual desire mentally & socially; this might be the reason for low score in this domain. Among the independent variables studied, time gap since last counselling & adherence to treatment showed statistically significant difference in social relationship domain. Rajeev et al.[7] reported quality of life to increase with adherence. Since counselling play a big role in problem sorting and also provide a kind of social support, this might be reason for better QOL scores in social relationship domain among those who counselled within the last three months. In contrast to previous studies no significant difference was observed in respect to age of PLHAs.[8,12,13] Apart from that as reported by Rajeev et al.[7] and Aswin Kumar *et al.*[8], no significant difference was observed with residence, educational status, marital and employment status of PLHAs. This might be due to difference in baseline characteristic of the study population in various studies. However the mean score for psychological, social relationship and environment domain were comparatively higher among those who were educated more than high school, but there was no statistically significant difference between two groups. Similar to the findings as reported by Mannheimer *et al.*[14]; the mean scores of all the four domains were higher among the groups with duration of treatment more than one year.

Conclusion

Since many factors determine the quality of life, different facets of various domains have been studied in the present study. Significant difference was observed in mean score of social relationship domain, with subjects counselled within the last three months and those who were adherent to the treatment having a relatively higher mean score of QOL mean score. As evident in the present study, overall quality of life of PLHAs was reported to be of intermediate level. Therefore all the efforts must be directed to increase social and emotional support perceived by PLHAs and newer innovative supporting policy should be implemented so as to improve the quality of life of PLHAs. The study has proved that counselling as an effective tool in enhancing the QOL of subjects with HIV/AIDS.

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