Assessment of Quality of Life of People Living with HIV and AIDS Receiving Anti-Retroviral Therapy in Kathmandu Valley

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Abstract

Introduction: Quality of Life (QOL) of people living with HIV and AIDS is a great concern. The impact of HIV on QOL falls under four major domains referred to as physical, psychological, social and environment domain. The objective of this study was to assess the quality of life of people living with HIV and AIDS taking antiretroviral therapy and its association with socio demographic and disease related variables.

Methods: Descriptive cross sectional study design was used. 128 randomly selected participants enrolled at Tribhuwan University Teaching Hospital (TUTH) ART center above 15 years were interviewed. QOL was evaluated using the World Health Organization Quality of Life (WHOQOL) Bref instrument. Data was entered in Epi Data and analyzed using SPSS version 16.

Results: The median scores with interquartile range (IQR) in four domains of QOL was highest in social domain i.e. 69 (56 to 75) and lowest in psychological domain i.e. 56 (50 to 69). All the domains were positively correlated with the overall QOL with Spearman's rho ranging from .31 to .63. Strongest correlation was observed between psychological domain and overall QOL.Age, sex and marital status were significantly associated with the overall QOL whereas level of education and disease related variables i.e. CD4 counts and WHO clinical stage have no significant association with overall QOL.

Conclusion: The study concludes the need for psychological support and community based interventions for PLHIV and AIDS to enhance their QOL. Social support to women living with HIV and AIDs is also required to help them better cope with the disease.

Key Words: HIV and AIDS, QOL, WHOQOL, CD4

Introduction

Globally, there were approximately 34.2 million people living with HIV in 2011.[1] HIV/ AIDS remains one of the world's most significant public health challenges, particularly in low- and middle-income countries.[2] According to the WHO Progress Report on HIV/AIDS in South-East Asia 2011, an estimated 3.5 million people were living with HIV/AIDS in 2010, including 140 000 children.[3]In Nepal, HIV prevalence in general population is <1% and it is 0.39% in adults (15-49).[4]

The recent advance in knowledge about the disease, better diagnostic methods, new treatments and strengthened HIV programs have provided great hope for HIV positive people

to live a long life. For this reason the Quality of Life (QoL) of this large number of people becomes a great concern. WHO has defined QOL as an individual's perception 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. The impact of HIV on QOL falls under four major domains referred to as physical domain, psychological domain, social domain and environment domain.

Unfortunately there is still relatively little empirical research in understanding the QoL in PLWHA in developing countries. Most of the studies have been conducted in developed and non Asian countries. Findings of these studies may not be always relevant to Asian developing countries. Thus it is important documenting the patients' perceived burden of chronic disease, tracking changes in health over time, assessing the effects of treatment and quantifying the return on health care investment. The objective of this study is to assess the quality of life of people living with HIV and AIDS taking antiretroviral therapy and its association with socio demographic and disease related variables.

Methods

Descriptive cross sectional study design was used.128 randomly selected participants enrolled at Tribhuwan University Teaching Hospital (TUTH) ART center above 15 years who consented to participate in the study were interviewed. The primary measure of this study was based on the standard quality-of-life questionnaire. QOL was evaluated using the World Health Organization Quality of life (WHOQOL) Bref instrument. The WHOQOL Bref 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 with seven items (b) psychological well-being with eight items (c) social relationships with three items and (d) environment with eight items. There are also two items that were examined separately: one which asked about the individual's overall perception of QOL and the other which asked about the individual's overall perception of his or her health. Domain scores are scaled in a positive direction (Higher scores denote higher quality of life).

Data was entered in Epi data and analyzed using SPSS version 16. Independent variables were reported as number and percent among participants. Domain scores were presented as median (ICR), and the Mann Whitney U test or Kruskal Wallis test was used to compare means due to the non-normal distribution of the data. The level of significance chosen was 5%.Inter-domain correlation coefficients between the various domain scores and the overall QOL score were calculated using Spearman's rho.

Results

The mean age of the respondents was 34.53 years. More than fifty percent of the respondents were female i.e. 53.1% and remaining 46.9% were male. Similarly, majority of the respondents were literate i.e. 88.3%. Also 52.3% respondents were married, 30.55% were widow/ widower and 17.2% were unmarried.Highest proportion of the respondents had CD4 counts below 350 i.e.56.2%. Similarly 35.9% of the respondents were in second WHO stage, 32.8% were in third WHO stage, 30.5% in fourth WHO stage and less than 1 % of the respondents were in first WHO stage.

Kolmogorov Smirnov test was done to test the normality of the scores in each domain. Scores were found to be distributed non-normal ($p<0.001$). Thus the median of the scores are presented with their inter quartile range (Table 1). Also the correlations of the scores with the overall QOL are presented.Highest median score was observed in the social domain i.e. 69 with interquartile range 56 to 75. Strongest correlation was observed between psychological domain and overall QOL.

Table 1: Scores of domains of quality of life and their correlation with overall QOL

Domains	Median (IQR)	Correlation with overall QOL
Overall QOL	4 (3-4)	
Physical	63 (56-69)	.27
Psychological	56 (50-69)	.63
Social	69 (56-75)	.31
Environment	63 (56-69)	.49

The median QOL domain scores and their interquartile range based on various socio demographic and disease related variables have been summarized in Table 2. Mann Whitney U test or Krushal Wallis test was applied to test the significance of the observed differences between the socio demographic variables and the overall QOL. Age, sex and marital status were significantly associated with the overall QOL whereas level of education and disease related variables i.e. CD4 counts and WHO clinical stage have no significant association with overall QOL.

Table 2: Distribution of respondents according to socio demographic characteristics and median scores of domains of quality of life

Domains	Overall QOL	Physical	Psychological	Social	Environment	p-value*
Age						**0.049**
<35	3 (3-4)	63 (56-69)	56 (56-63)	69 (56-75)	56 (56-69)	
>35	4 (3-4)	63 (50-63)	56 (44-69)	75 (69-75)	63 (63-69)	
Sex						**0.008**
Male	4 (3-4)	63 (56-69)	63 (56-69)	75 (69-75)	63 (56-69)	
Female	3 (3-4)	63 (50-63)	56 (44-56)	69 (56-75)	63 (51-69)	
Education						0.630
Illiterate	3 (3-4)	50 (31-63)	44 (44-63)	56 (56-75)	63 (50-81)	
Primary	4 (3-4)	63 (56-63)	56 (47-56)	69 (56-75)	69 (56-69)	
Secondary	3 (1-5)	56 (50-63)	56 (56-63)	59 (56-75)	56 (53-56)	
Higher secondary or above	4 (2-4)	69 (63-69)	69 (56-75)	75 (69-81)	63 (56-69)	
Marital						**0.007**
status	4 (2-4)	63 (63-69)	63 (56-69)	72 (69-76)	69 (67-69)	
Unmarried	3 (1-5)	63 (56-63)	56 (44-63)	69 (56-75)	63 (56-69)	
Married						
Widow/	3 (2-4)	56 (44-63)	56 (56-56)	69 (56-75)	56 (50-63)	
widower						
CD4						0.975
<350	3(3-4)	63(50-63)	56(51-67)	69(56-75)	63(56-69)	
>350	4(3-4)	63(56-69)	65(50-69)	69(56-75)	63(56-69)	
WHO stage						0.812
I**	4	63	44	75	38	
II	3.5(3-4)	63(50-63)	56(56-63)	69(56-75)	63(56-69)	
III	4(2.75-4)	63(56-69)	56(44-69)	69(56-75)	63(56-69)	
IV	4(3-4)	63(56-69)	56(56-69)	69(69-75)	63(56-69)	

*Mann-Whitney U test or Kruskal Wallis test applied

**ICR not presented due to single response received in the category

Discussion

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. Several studies have reported a strong positive association between ART and improved quality of life in different domains among people living with HIV and AIDS in both developed and developing countries. [13]

In our study, highest median score was observed in the social domain. This could be explained in terms of strong social set up in our part. This is also an indication of diminishing stigma and discrimination towards people living with HIV and AIDS. Lowest median score was observed in psychological domain. All the domains were positively correlated with the overall QOL with strongest correlation was observed between psychological domain and overall QOL. This is in coherence with a study done in Nepal.[14]The study had explained a low score in the psychological domain in relation with increased morbidity, negative feelings, and low self-esteem due to the perception of acquiring incurable disease. This emphasizes the need for psychological interventions for this group.

This finding is contrary to findings from a study done in Jakrata using the WHO BREF.[15] The study found the mean score in four domains of QOL in descending order of psychological, physical health, environment, and social relationships. The low value in the social relationships domain was explained in terms of respondent's shyness away from the environment as well as their friends, the persistence of social stigma against PLWHA and decreased friends support for them. Highest psychological domain was because respondents in this study had received their condition of disease, so that negative feelings, sad, and disappointed had reduced, increased self-esteem, and more belief in God.

Overall QOL was significantly higher in the respondents above age 35 years than below 35 years. This may be due to the acceptance of the disease by the elder people due to their life experiences. Younger people's lower overall QOL might be due to the fear associated with being infected with incurable disease early in life.By sex, the overall QOL was significantly higher in male than in female. However the median scores of three domains physical, psychological and environmental were same in both sexes. This reflects the hardship of the HIV and AIDS are more on the female than on male in terms of lack of social support.

The results of this study need to be considered in relation to its limitations. The major limitation of the study was its small sample size which prevented us from doing multiple linear regressions. So only bivariate analyses could be performed and its findings need to be considered cautiously.

Despite these limitations, this study has offered useful information on quality of life of people living with HIV and AIDS.

Conclusion

Highest median score was observed in the social domain. physical and environmental domains had equal median score. Lowest median score was observed in psychological domain. All the domains were positively correlated with the overall QOL. Strongest correlation was observed between psychological domain and overall QOL. Older age, male and unmarried people living with HIV and AIDS have significantly higheroverall QOL.

The study concludes the need for psychological support and community based interventions for PLHIV to enhance their Quality of Life. Social support to women living with HIV and AIDs is also required to help them better cope with the disease.

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