Original Article

DO GENDER DIFFERENCES INFLUENCE THE QUALITY OF LIFE OF PEOPLE LIVING WITH HIV/AIDS?

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ABSTRACT

Introduction: Given the longevity achievable with the current Antiretroviral Therapy (ART) for People Living with HIV/AIDS, quality of life (QOL) has emerged as a significant measure of health outcome. Also, younger age, higher socioeconomic status and employment have been associated with improvement in QOL. Hence, the present study has made an attempt to examine gender differences in QOL of People living with HIV/AIDS (PLWHA).

Material and methods: It was a cross sectional study carried out on 754 HIV positive patients attending the anti-retroviral treatment clinic of the IGGMC, Nagpur from March 2010 to June 2011 .Socio-demographic characteristics of the patients were studied and quality of life was assessed by WHOQOL-HIVBREF scale. Chi-square test, z-test and multiple logistic regressions were used for analysis.

Results: Out of 754 study subjects, 461(61.1%) were male and 293(38.9%) were female patients. It was observed that92.2% males and 80.2%females were literate, 50.8%females were widowed, divorced or separated and only 41.6% females were employed. Females had poor nutritional status as indicated by haemoglobin levels (9.3 gm% ± 1.33) and Body Mass Indices (19.3 Kg/m^2 ± 2.95). They had lower total QOL score than male patients. Women had significantly lower scores in social relationships (11.5±3.55) and environmental domains (10.6 ± 2.19), ($p<0.001$) of Quality of Life.

Conclusions: Women had a poor quality of life as compared to men. Poor living conditions, lack of social support, illiteracy are the factors along with the fact of being HIV positive which could be incriminated towards these findings.

Keywords: HIV, AIDS, Quality of life, Gender

INTRODUCTION

The pandemic of the Human Immunodeficiency Virus and Acquired Immunodeficiency Syndrome (HIV/AIDS) has become a serious health and economic problem with 33.3 million people living with HIV virus globally.[1,2]Given the longevity achievable with the current prophylactic and therapeutic strategies for PLWHA, quality of life has emerged as a significant measure of health outcome and quality of life enhancement as an important goal. Many authors in the international literature have reported that male gender, younger age, higher socioeconomic status and employment have been associated with improvement in Quality of Life.[3-6]

But there are few studies of quality of life among people living with HIV/AIDS in developing countries, including India. Hence, in the present study, an attempt has been made to study the epidemiological profile gender differences in Quality of Life of PLWHA.

MATERIAL AND METHODS

The present cross-sectional study was carried out at the Anti Retroviral Therapy (ART) centre of Indira Gandhi Government Medical College and Mayo Hospital, Nagpur, Maharashtra from March 2010 to June 2011. Patients more than 18 years of age who had

completed 6 months of their treatment were included in the study as first six months of ART are critical. Some patients may not respond as expected or may even deteriorate clinically at first which might affect their Quality of Life.[7] Approval from institutional Ethics Committee was sought and written informed consent of each study participant was taken before starting the interview.

Total 1181 patients were registered for treatment at the centre before starting the study. 45-50 patients attended the ART centre daily for counselling, treatment and follow-up. Out of these 10-12 patients visited the centre for collecting their monthly ART. Every alternate patient fulfilling the inclusion criteria of our study (age more than 18 years and treatment duration of 6 months or more) was approached for interview after having collected his/her ART. Thus, total 754 patients were interviewed during the study period. Data collection was done using a pre-designed and pre-tested proforma which included questions on socio-demographic profile of the patient such as age, sex, place of residence, religion, education, occupation, marital status and family income. History regarding mode of transmission of infection was asked. Complete general and systemic examination was conducted and a presumptive diagnosis was made. Quality of life (QOL) of the patients was assessed using WHO QOL HIV BREF questionnaire which has 31 items grouped under 6 domains such as, Physical, Psychological, Independence, Social relationships, Environment and Personal beliefs domains.[3,8] The instrument uses a five-point-interval response-Likert-Scale where higher scores indicate better quality of life.

Domain scores were calculated by computing the mean of the facet scores for each domain. The mean scores were then multiplied by four so that the domain scores range between four (lowest possible quality of life) to 20 (highest possible quality of life). Thus, WHOQOL-HIV BREF scale produced a quality of life profile of a patient.[8]

The domain scores were summed and divided by number of domains to obtain the total quality of life score. According to W.H.O., Cronbach alpha values for each of the domain scores ranged from 0.66 (for domain 3) to 0.84 (for domain 1), demonstrating good internal consistency. Test-retest reliability using Pearson r correlation test- ranged from 0.68-0.95 and the instrument discriminated well between ill and well (using t test- $p<0.01$) showing good discriminant validity.[3]

Statistical analysis: Z-test and Chi-square test were used for analysis. Multiple Logistic Regression (MLR) analysis was performed to obtain adjusted estimates of Odds ratio, to find association between QOL and exposure accounting for role of other co-variates. Data was dichotomized. The total mean score of QOL was graded as poor (5-9.9) and better (≥ 10) for MLR analysis.(9) Stata, 10.1 version, 2009 was used for analysis.

RESULTS

Out of total 754 patients included in the study, 61.1% were males and 38.9% were females. The overall mean age of the patients was 38.01 ± 8.8 years with a median of 36 years and a range of 20-67 years. The mean age of females (36.05 ± 8.73 years) was found to be significantly less than males (39.23 ± 8.24 years), i.e. females were younger than males. ($Z= 5.78$, $p<0.001$).

Out of total 754 patients included in the study, 77.5% of our patients belonged to urban area and 22.5% to the rural area. Their monthly income was 3493.9 ± 3563 rupees with a median of 2500 rupees and a range of 0-35,000 rupees. The most common mode of transmission of infection was found to be heterosexual sex in 94.8% followed by blood transfusion in 2.0%. It was also found that 1.8 % subjects were Men having Sex with Men and 0.4% subjects were intravenous drug users. Other modes of transmission were unsafe injections (0.9%) and mother to child transmission (0.1%)

As seen in Table 1, there was a significant association between the educational levels and sex of the patients. Significantly more number of males (92.2%) were literate than females (80.2%) ($\chi^2=22.42$,df=1, $p<0.001$).Significantly more females were widowed, divorced or separated than males ($\chi^2=141.90$,df=1, $p<0.001$). Also, maximum female patients i.e., 58.4% were unemployed.

Table 1: Gender and sociodemographic factors of PLWHA

Socio-demographic factors	Male (n=461)	Female (n=293)	P value*
Education			
Literate	425 (92.2)	235 (80.2)	0.0001
Illiterate	36 (7.8)	58 (19.8)	
Marital status			
Unmarried	59 (12.8)	9 (3.1)	0.0001
Married	358 (77.7)	135 (46.1)	
Widowed/separated/ divorced	44 (9.5)	149 (50.8)	
Occupational status			
Employed	416 (90.2)	122 (41.6)	0.0001
Unemployed	45 (9.8)	171 (58.4)	

*χ^2 test applied to calculate significance;
Figure in parenthesis indicate percentage

Table 2 shows that female patients also had lower Haemoglobin levels and Body Mass Index than male patients and this difference was found to be significant ($p<0.001$).

Assessment of quality of life showed that female patients had lower total quality of life score than male patients, but this difference was not statistically significant. Similarly, women had lower scores in all the domains than men, except for personal beliefs domain, where women had significantly higher scores than men ($p<0.001$). Women had significantly lower scores in social relationships ($p<0.001$) and environmental ($p<0.001$) domains than men. (Table 3)

Table 2: Clinical parameters of the study subjects

Clinical parameters	Males (Mean ± SD)	Females (Mean±SD)	Z- value, p-value
Time elapsed since diagnosis (months)	39.03 ± 25.24	43.23 ± 28.97	2.04, 0.0207
Duration of ART (months)	16.6 ± 6.53	16.03 ± 6.69	1.15, 0.1251
Haemoglobin levels (gm%)	9.8 ± 1.60	9.3 ± 1.33	4.64, <0.001
Body Mass Index (Kg/m^2)	20.23 ± 2.61	19.3 ± 2.95	4.41, <0.001
CD4 cell count (cells/mm^3)	328.25 ± 175.39	379.53 ± 212.91	3.45, <0.001

Table 3: Gender and domain-wise Quality of Life scores (Mean ± SD)

Domain	Male	Female	Z value	p value
	461 (61.1)	293 (38.9)		
PHY-physical domain	10.8 ± 1.71	10.8± 1.65	0.16	0.5636
PSY-psychological domain	11.3 ± 1.85	11.1± 1.80	1.47	0.0708
IND-independence	12.7 ± 2.20	12.5± 2.05	1.4	0.0808
SOC-social relationships	12.5 ± 2.97	11.5± 3.11	4.17	<0.001
ENV-environmental domain	11.2± 2.16	10.6 ± 2.19	3.75	<0.001
PER-personal beliefs domain	10.5± 3.10	11.3± 3.38	3.56	<0.001
Total QOL score	11.5± 1.51	11.3± 1.57	1.74	0.0409

Multiple Logistic Regression (MLR) analysis was performed to obtain adjusted estimates of Odds ratio which showed that females were twice at risk of having poor quality of life as compared to males (O.R 2.1, 95% CI:1.2-3.6, p=0.010).

DISCUSSION

The prevalence of HIV may also be considered an indicator of uneven and dysfunctional social development, with the highest prevalence found in poor societies, societies in turmoil, among the displaced, the powerless and the marginalised.

It was found in our study that females were younger than males yet exhibited lower Quality Of Life (QOL) scores in all the domains as compared to males. This gender difference was significant in the environmental domain ($p<0.05$) indicating that females were not satisfied with the conditions of their living places or the physical environment in their locality, had poor financial resources, did not feel safe, felt oppressed and were unhappy with the transport and access to health care. Females also had lower scores in social relationships domain ($p<0.05$) which indicated that they were not happy with their social relationships, felt dependent, were not able to concentrate on their work, felt dissatisfied with themselves which could be well explained as females in our study were less educate, widows or divorced and unemployed. Only in personal beliefs domain females scored higher than men.

Also, MLR showed that females are twice at risk of poor QOL. Similar findings were reported by Santos ECM et al [9], Tiwari MK et al[10], Campos LN et al [11]. In our study we found that females were younger, less educated, were widowed, only few had spouse support, were more underweight and anaemic. Females were weak physically and socially, hence could not cope up well. This could be also explained on the fact that women are financially dependent on their partners; they are overwhelmed with home chores and caring for their children and other relatives; their socioeconomic condition deteriorates as disease progresses; and because the majority were infected by their (current or former) partners, which could arouse feelings of great sorrow, anger, and disappointment. As women try to meet all their home, family and work commitments, they may disregard their health care and prioritize all other activities. In other words, gender inequalities have an impact on women's quality of life. In contrast to our findings, Fatiregun AA et al[12]reported higher QOL scores for women in all the domains with significant difference in independence domain. Reason for higher scores for women in this study was that special efforts were being taken in that region to uplift women like constant visits and counseling.

CONCLUSION

In conclusion, this study depicts a gender difference in quality of life in HIV positive individuals. Rationale for the presence of this gender difference could lie in the fact that female subjects were living in poverty, had insufficient education and were living without a partner, possibly indicating lack of social support. All these factors dramatically decreased women's quality of life along with the bitter fact of being infected with HIV.

RECOMMENDATIONS

In caring for the HIV/AIDS population, holistic care is necessitated. Healthcare providers must continue to assess each patient's case and take into account all aspects of his/her QOL. Further research is needed in the area of QOL and gender to better understand the relationship or lack thereof.

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