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Original Research Article

Quality of life factors affecting quality of life in people living with HIV/AIDS in an urban area

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ABSTRACT

Background: The aims and objectives were to study socio-demographic profile of people living with HIV/ AIDS; to assess quality of life of people living with HIV/AIDS (PLHA); to study factors affecting Quality of life (QOL) in people living with HIV/AIDS.
Methods: A cross-sectional study was conducted which included 319 study subjects. Data on socio-demographic profile was collected using questionnaire and quality of life was assessed using WHO - brief questionnaire. Data was analysed using SPSS software and MS–Excel.
Results: Majority of study population 52% were female & 40.8%belonged to 35-45 yrs age group. Out of 319 study subjects, 80.88% were literate and 19.1% were illiterates, 75.9% were married. 65.83% of the study subjects belonged to socio-economic class- II, 27.9% of the study subjects belong to class–I. Majority 52.98% study population had CD4 less than 300 and 47.02% had CD4 count more than 300 cells/mm^3. Female have better QOl in comparison to male. Subjects >55 age group, illiterate, unemployed and CD4 count <300cells/mm^3 have lower QOL ($p<0.05$) in comparison to their respective group.
Conclusions: The most factors significantly associated with decreased quality of life of people living with HIV/AIDS in the present study include gender, literacy status, age group, employment status and CD4 count ($p<0.05$).

Keywords: HIV/AIDS, QOL, PLHA, B J Prasad's classification

INTRODUCTION

HIV/AIDS (Acquired Immunodeficiency Syndrome) also known as "SLIM "disease. It is fatal illness caused by retro virus known as Human immunodeficiency virus. It affect body's immune system making patient vulnerable to life threatening opportunistic infections, neurological disorder and unusual malignancies. It was recognized as emerging disease only in 1980, has progress from mysterious illness to global pandemic. It is known to affect individual not only physically but also mental, socially and financially. HIV/AIDS has been having a great impact on society both as an illness & as a source of discrimination and stigma. HIV/AIDS is a serious public health, economic, and social problem with about 34 million people living with HIV/AIDS (PLHA) virus globally and 2.1 million people in India at the end of the year 2011.[1]

With the advent of highly active antiretroviral drugs, the HIV/AIDS which is a fatal infectious disease has now become a chronic manageable disorder. QOL is an

important component in the evaluation of the well-being of HIV infected patients.[2] India is estimated to have around 20.9 lakh PLHA in 2011 which has decreased from 23.2 lakh in 2006.[3] Adult HIV prevalence has decreased from 0.41% in 2001 through 0.35% in 2006 to 0.27% in 2011. Children less than 15 years of age account for 7% (1.45 lakh) of all HIV infections; while 86% are in the age-group of 15-49 years. Of all HIV infections, 39% (8.16 lakh) are among women.[4]

World Health Organisation (WHO) has defined quality of life (QOL) as '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'.[5]

Objectives

1. To study demographic profile of people living with HIV/ AIDS.
2. To assess quality of life (QOL)of people living with HIV/ AIDS.
3. To study factors affecting QOL in people living with HIV/AIDS.

METHODS

It is a cross sectional type of observational descriptive study. Sample size is 319.

Selection of subjects

The Study was carried between the period January 2014 to March 2014. A total of 319 newly registered HIV positive patients (age group 18-60 yrs) attending antiretroviral therapy centre (ART centre) consenting for studies were included in the studies while pregnant and lactating women on ART, seriously ill patient on ART were excluded. WHO BREF questionnaire was used to assess quality of life.[6] WHO BREF questionnaire has 26 questions related QOL pertaining to 4 domains namely-physical (7 questions), psychological (6 questions), social (3 questions), environmental (8 questions), one question regarding the rating of the perceived QOL and one question regarding the level of satisfaction about their health.[6] Data was analyzed using software SPSS 20 and Microsoft Excel 2010. One way ANOVA and t test were applied to find statistical significance.

Ethics

Institutional Ethics Committee approval was taken prior to the study.

Risk involved Nil

RESULTS

Demographic factors

Majority of study population, 166 (52%) were female and 153 (48%) were male. 130 (40.8%) of the total study population belonged to 35-45 yrs age group followed by 107 (33.5%) 25-35 yrs age group, 52 (16.30%) belonged to age group 45-55 yrs, 26 (8.15%) and 4 (1.25%) belonged to age group <25 yrs and >55 yrs respectively. 75.9% were married, 17.9% were widowed, 4.7% were unmarried while 1.6% of study subjects were divorced. 252 (80.6%) subjects were Hindu followed by Muslims religion 50 (15.7%), Buddhists 9 (2.8%) Christians 1 (0.3%) and other constitute 2 (0.6%).

Table 1: Demographic factors of people living with HIV/AIDS.

Variables		No. of workers		Total (%)
		Male (%)	Female (%)	
Age group (Years)	<25	10 (6.5)	16 (9.6)	26 (8.2)
	25–35	39 (25.5)	68 (41)	107 (33.5)
	35–45	68 (44.4)	62 (37.3)	130 (40.8)
	45-55	33 (21.57)	19 (11.45)	52 (16.30)
	>55	3 (1.96)	1 (0.6)	4 (1.25)
Marital status	Unmarried	13 (8.5)	2 (1.2)	15 (4.7)
	Married	129 (84.3)	113 (68.1)	242 (75.9)
	Widowed	10 (6.5)	47 (28.3)	57 (17.9)
	Divorced	1 (0.7)	4 (2.4)	5 (1.6)
Religion	Hindu	126 (82.35)	131 (78.92)	257 (80.56)
	Muslim	22 (14.38)	28 (16.87)	50 (15.67)
	Buddhists	4 (2.61)	5 (3.01)	9 (2.82)
	Christain	1 (0.65)	0 (0)	1 (0.31)
	Others	0 (0)	2 (1.2)	2 (0.63)
Literacy status	Illiterate	24 (15.7)	37 (22.3)	61 (19.1)
	Primary	43 (28.1)	46 (27.7)	89 (27.9)
	Secondary	55 (35.9)	61 (36.7)	116 (36.4)
	Higher Secondary	28 (18.3)	22 (13.3)	50 (15.7)
	Graduate	3 (2)	0 (0)	3 (0.9)

Occupation skills	Unemployed	15 (9.2)	2 (1.2)	17 (5.3)
	Unskilled	35 (22.9)	34 (20.5)	69 (21.6)
	Semi-skilled	31 (20.3)	0	31 (9.7)
	Skilled	72 (47.05)	17 (10.2)	89 (27.9)
	Housewife	0	113 (66.9)	113 (35.4)
SES	Upper	40 (26.14)	49 (29.52)	89 (27.90)
	Upper middle	109 (71.24)	101 (60.84)	210 (65.83)
	Middle	1 (0.65)	9 (5.42)	10 (3.13)
	Lower Middle	2 (1.31)	7 (4.22)	9 (2.82)
	Lower	1 (0.65)	0 (0)	1 (0.31)
CD4 count	<300	85 (55.56)	84 (50.60)	169 (52.98)
	>300	68 (44.44)	82 (49.40)	150 (47.02)
Total		153	166	319 (100)

Table 2: Quality of life in different domain.

Domain	Mean	Standard deviation
General QOL	2.35	0.68
Physical	2.68	0.39
Psychological	2.89	0.21
Social	3.25	0.53
Environmental	2.95	0.16

Table 3: Factors affecting quality of life in people living with HIV/AIDS.

Variable		N	Mean	Standard deviation	P value
Gender	Male	153	72.804	5.254	0.016*
	Female	166	74.223	5.163	
Literacy status	Illiterate	61	65.738	3.265	0.000*
	Literate	258	75.388	3.702	
Age group	<25	26	74.192	5.123	0.007*
	25-35	107	73.813	4.802	
	35-45	130	73.285	5.663	
	45-55	52	74.019	4.676	
	>55	4	64.250	2.50	
Marital status	Unmarried	15	73.267	4.044	0.248
	Married	242	73.864	5.270	
	Divorced	5	72.20	3.421	
	Widowed	57	72.368	5.463	
Employment status	Unemployed	130	68.546	3.725	0.000*
	Employed	189	76.979	2.813	
Religion	Hindu	257	73.665	5.282	0.631
	Muslim	50	72.920	5.178	
	Buddhist	9	73.889	5.326	
	Christian	1	67.0	0.00	
	Others	2	75.0	1.414	
Socioeconomic status	I. Upper	89	72.348	5.404	0.110
	II. Upper middle	210	74.095	5.179	
	III. Middle	10	72.6	5.4	
	IV. Lower middle	9	73.778	3.701	
	V. Lower	1	71	0.00	
CD4 count	<300	169	69.90	3.927	0.000
	>300	150	77.65	3.059	

Of the total study subjects of 319, 19.1% were illiterates and among the literate, 27.9% of the study subjects completed primary school education, followed by 36.4% who completed Secondary school education, 15.7% studied up to Higher secondary while 0.9% of them completed Graduation. 113 (35.4%) were housewife and 17 (5.3%) were unemployed, unskilled workers accounted for 69 (21.6%), followed by semi-skilled workers 31 (9.7%) and skilled workers 89 (17.6%). Among the skilled workers 24 (26.97%) were drivers.

According to modified B J Prasad's classification, 210 (65.83%) of the study subjects belonged to socio-economic class II followed by 89 (27.9%) class I, 10 (3.13%) class III, 9 (2.82%) class IV and only 1 (0.31%) of the subject belonged to class V.[7] Majority 169(52.98%) subjects had CD4 less than 300 and 150 (47.02%) had CD4 count more than 300 cells/mm^3 (Table 1).

Table 2 shows descriptive statistics of various domains of quality of life measured in the patients. The mean±SD of quality of life was lowest for physical domain (2.68±0.39) followed by psychological domain (2.89±0.21). The quality of life score was highest for social domain (3.25±0.53) followed by environmental domain (2.95±0.16).

Table 3 shows that the factors significantly affecting quality of life of people living with HIV/AIDS include gender, literacy status, age group >55 years, employment status and CD4 count <300 cells/mm^3 ($p<0.05$). Comparing the total QOL score, male reported poor QOL than female, Illiterate subjects reported poor QOL than literate, subjects above 55 years of age, had poor QOL than other age groups while unemployed and those with CD4 count <300 cells/mm^3 have poor QOL.

DISCUSSION

Socio demographic factors

In this present study, out of 319 study population, 52% are women and 48% are men.

According to the NACO annual report 2012-2013, of all HIV infections in our country, 39% are among women.[4] Nirmal et al in their study in Chennai in 2007 reported that there were equal number of men and women in their study population.[8] A study conducted in Nigeria by Folasire et al in 2008 found that out of total study population 62% were female and 38% were male.[9]

130 (40.8%) of the total study population belonged to 35-45 yrs age group followed by 107 (33.5%) 25-35 yrs age group. The mean age of the study population is 37.90±8.33 years ranging from 18 to 60 years. In a study, Nojomi et al observed that mean age of the patients was 35.4±6.4 (range: 22–54) years and majority of study subjects belonged to 30–39 years age group (57.6%).[10] Nirmal et al in their study observed that mean age of study population was 35.7 yrs (range: 26-60yrs).[8] In a study conducted by Folasire et al in Nigeria in 2008, the mean age of the respondents was 38.1±9.0 years.[9] This confirms that most of the HIV cases occur among the sexually active and economically productive population who are responsible for child bearing and bread winning for the family. Hence this problem results in economic loss to the country.

Out of the total study population 319, 75.9% were married, 17.9% were widowed, 4.7% were unmarried while 1.6% of study subjects were divorced. Nirmal et al in their study reported that out of total study population, 60% were married, 13.33% were widowed, 13.33% were separated, 10% were single and 3.33% were divorced.[8] In a study Gowda et al found the marital status were as follows: married (60.4%), unmarried (9%), divorced (5.9%) and widowed (24.7%).[11] The result of present study is in line with Nirmal et al and Gowda et al studies.[8,11]

In the present study majority of the study subjects were Hindus (80.6%) followed by Muslim (15.7%), Buddhist (2.8%) Christians constitute 0.3% and 0.6% were others. In a study done in Karnataka by Basavarajaiah et al, they found that patients registered for HIV care belonged to different religions were as follows Hindus 81.87%, Muslims 12.75% and Christians 5.37%.[12] According to Indian census data, the proportion of Hindus in the Indian population is 80.50% and that of Muslims 13.43% and that of Buddhists is 0.8%.[13]

In the current study, majority (80.9%) of the study population is literates and 19.1% study populations are illiterate. Among the literate, 36.4% of the study population studied up to secondary school, 27.9% studied up to primary school, 15.7% of the study population studied up to higher secondary school and only 0.9% were graduate. In a study, Nojomi et al, 21.5% had pursued primary education and 45.3% had pursued secondary education.[10] 18.7% had pursued higher secondary school 11.5% have studied up to academic and education status of 2.8% patients was unknown. In a study, Fatiregun et al concluded that out of total study population 17.5% were illiterate, 28.6% patients had primary education, 38.9% had secondary education and 15.1% had tertiary education.[14]

Majority of the study subjects were 59.25% employed and 40.75% were unemployed. Majority of the subjects 27.9% were skilled worker, (21.6%) were unskilled workers i.e., mainly daily wage earners, 9.7% were semi-skilled workers and 34.8% are housewife. Among the skilled worker 24 (26.97%) were driver by. Study done by Anand et al in 2012 found that unemployment was more among females than in males as majority of the females were housewives.[15] In a study Gowda et al in 2011 found that, 75.3% were employed and 24.7% were

unemployed.[11] In the present study 210 (65.83%) of the study subjects belonged to socio-economic class II followed by 89(27.9%) class I, 10 (3.13%) class III, 9(2.82%) class IV and 1 (0.31%) of the study subject belonged to class V. In a study Gowda et al in 2011, 2.4% of the study population belong to Class I, 13.7% belong to Class II, 29.0% belong to Class III, 43.5% belong to Class IV and 11.4% belong to Class V.[11]

Out of total study population, 169 (52.98%) study population had CD4 less than 300 and 150 (47.02%) had CD4 count more than 300. Nirmal et al in their study found that 26.67% had CD4 count <200 cells /mm^3, 50% had CD4 count between 200 -500 cells/mm^3 and 23.33% had CD4 count>500 cells/mm^3.[8] In a study Gowda et al found that 149 patients had CD4 count <350 cells/mm^3 and 106 patients had CD4 count >350cells/mm^3.[11] The result of present study is consensus with Nirmal et al and Gowda et al studies.[8,11]

Quality of life

The quality of life score was highest for social domain (3.25±0.53) which measures aspects such as social contacts, family support and ability to look after family and satisfaction with sexual activity followed by environmental domain which measures the patient's freedom, quality of home environment, financial status, quality and accessibility of health and social care. The quality of life was lowest for physical domain (2.68±0.39) which assess presence of pain and discomfort, dependence on medication, energy and fatigue, mobility, sleep and rest, activities of daily living and perceived work capacity followed by psychological domain (2.89±0.21) which assess patient's affect positive and negative self-concepts, higher cognitive functions, body image and spirituality. Fatiregun et al in their study documented mean QOL score was highest and similar in psychological, physical, spirituality/ religion/ personal belief domain however lower score was recorded in social n environmental domain.[14] In a study by Folasire et al in Nigeria, found QOL score was highest in Psychological domain followed by physical, environmental domain.[9] Lowest score was noted in social domain. Study done by Anand et al documented highest QOL score in spirituality/religion/personal belief domain and similar mean QOL in physical, psychological, social, level of independence domains.[15] The highest score in social and environmental domain in the present study might be due to good social support and quality and accessibility of health and social care. The low score in physical domain implies counseling for drug adherence, good nutritional care and overall care similarly poor score in psychological domain implies counseling to enhance assertive approach toward life.

Factors affecting QOL

In the present study the factors significantly affecting quality of life of people living with HIV/AIDS include gender, literacy status, higher age group, employment status and CD4 ($p<0.05$). The mean of total score of male, illiterate, subjects above 55 years of age, unemployed and those with CD4 count <300 cells/mm^3 were less than other groups. When comparison between gender were made male reported poor quality of life in comparison to female, similarly illiterate, subjects >55yrs of age, patients with CD4 count <300 cells/mm^3 reported poor quality of life when comparison were made among the respective group. Nojomi et al in their study reported female, separated or divorced, patients having less CD4 count and being at severe stage of disease significantly affected the QOL of patients with HIV/AIDS.[10] Study done by Anand et al reported poor QOL in female in comparison male.[15] CD4 count didn't had profound effect on QOL of people living with HIV/AIDS. Fatiregun et al in their study documented female showed higher QOL score in comparison to men in all domains.[14] In a study Folasire et al, found mean QOL score was similar in male and female.[9] Nirmal et al in their study found women had lower mean QOL score than men, patients with better educational background had higher QOL score. Patients with lower CD4count has significantly lower QOL score.[8] In the study conducted by Gowda et al in 2011 documented that patients with higher CD4count had better QOl in comparison to patients with lower CD4 count.[11] The finding in present study shows gender, literacy status, higher age group, employment status, less CD4 count has profound impact on QOL.

CONCLUSION

Majority of study subjects were female, belonged to age group 35-45 yrs of age. Majority of subjects were literate belonged to Hindu religion, employed and among employed majority were skilled worker. Majority of study subjects were belonging to upper middle class socioeconomic stratum. Gender, Literacy status, Employment status, higher age group significantly influence the quality of life.

Recommendations

1. HIV is a devastagisting illness having profound impact on various dimensions of life, evaluation of QOl is should be m and atory along with medical modality of treatment
2. Quality of life (QOL) should be assessed as routine and in subsequent follow-up of HIV-infected patients.
3. Optimization of quality of life (QOL) is particularly important now that HIV infection can be considered a chronic disease with the prospect of long-term survival.
4. Capacity building of counseler to assess the QOL should be undertaken.
5. Engagement of community health worker, volunteers and people living with HIV for peer support, patient education and community level support to overcome barrier to improving access and retention in care.

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