

ASSESSMENT OF QUALITY OF LIFE AMONG PEOPLE LIVING WITH HIV/AIDS IN A TERTIARY CARE CENTER – A CROSS-SECTIONAL STUDY

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Abstract

Background: Human Immuno Deficiency Virus infection is a stigmatizing illness and its diagnosis in any one causes a devastating stress and leads to major catastrophic changes. Assessing health-related quality of life (HRQOL) is helpful for documenting the patient's alleged burden of chronic disease, tracking changes in health over time, assessing the effects of treatment and quantifying the return on health care investment. In the current study we aimed at assessing the quality of life among people living with HIV/AIDS. **Materials and Methods:** A Cross-sectional study done at the ART Centre at Government Chengalpattu Medical College & Hospital for a period of one year from April 2019 - March 2020. 100 consecutive consenting Outpatients of above 18 years of age with the diagnosis of people living with HIV/AIDS were included. Terminally ill patients were excluded from the study. Institutional ethical committee approval was obtained and informed written consent was obtained from all patients. Semi structured proforma was used to collect the Socio demographic profile. Quality of life was assessed by using WHOQOL-BREF Questionnaire. **Results:** In the current study, 53% were male and 47% were female. Illiterates were only 11%. 37% of the sample were in the age group of 31- 40yrs. 70% were employed. 57% was married, excluding widow (17%) and separated (8%). 70% had the infection through heterosexual mode. The Mean T-scores of the sample was more in Environmental Domain (64.09 ± 15.810) followed by Physical Domain (60.85 ± 11.781), Psychological Domain (57.67 ± 15.706) and Social Domain (52.97 ± 24.857). **Conclusion:** WHOQOLBREF showed the Mean T-Scores was more in Environmental Domain and less in Social Domain. These findings implies that there is a need for enhanced social support and interpersonal relationships for better social functioning and for better quality of life.

INTRODUCTION

Human Immuno Deficiency Virus infection is a stigmatizing illness and its diagnosis in any one, causes a devastating stress and leads to major catastrophic changes.^[1] 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.”^[2] Assessing health-related quality of life (HRQOL) is helpful for documenting the patient's alleged burden of chronic disease, tracking changes in health over time, assessing the effects of treatment and quantifying the return on health care investment.^[3]

Socio demographic characteristics such as male gender,^[4] younger age,^[5] higher socioeconomic status and employment,^[6] have been related with improvement in QOL. Other variables such as lower HIV viral load,^[7] greater CD4+ cell count,^[5,7,8] fewer or less bothersome HIV symptoms,^[9] and higher hemoglobin levels,^[10] have been shown to be significant clinical/immunological indicators of better QOL. Swindells et al found that employment was one of several factors allied with improved QOL.^[6] In the current study we aimed at assessing the quality of life among people living with HIV/AIDS.

Objectives are to study the socio demographic factors of people living with HIV/AIDS and to study

the quality of life among people living with HIV/AIDS.

MATERIALS AND METHODS

This is a Cross-sectional study done at the ART Centre at Government Chengalpattu Medical College & Hospital for a period of one year from April 2019 - March 2020. 100 consecutive consenting Outpatients of above 18 years of age with the diagnosis of people living with HIV/AIDS were included. Terminally ill patients were excluded from the study. Institutional ethical committee approval was obtained and informed written consent was obtained from all patients.

Semi-structured proforma was used to collect the Socio demographic profile. Quality of life was assessed by using WHOQOL-BREF Questionnaire. Statistical Analysis was done by using software SPSS Version 20.

One sample test was used to compare the association between drug compliance and within the CD4 Count groups

ANOVA (ANalysis of VAriance) was used to compare the association between the Mean T scores of WHOQOL –BREF domains and within the groups of duration of illness.

RESULTS

In the current study, 30% were unemployed, 50% were semiskilled in occupation, 18% had skilled occupation and 2% had professional occupation. 57% was married, excluding widow (17%) and separated (8%). 60% have the history of HIV/AIDS in one of their family members. 49% had the history of high-risk behaviour like extramarital sexual affairs /sex with commercial workers /male to male sex etc. Past history of Psychiatric illness after the acquisition of HIV infection was present in only 3% in the form of organic mood disorder, psychosis NOS and Panic attacks. Family history of Psychiatric illness was present in only 3% in the form of Mental retardation, Organic Psychosis, and unknown Psychiatric illness. The Mean age at the time of diagnosis of HIV infection was 31.11 years \pm 10.589. The Mean duration of HIV illness was found to be 7.765 years \pm 4.7036. The Mean CD4 Count at the time of Diagnosis of HIV infection was found to be 293.53 cells/mm³ \pm 238.081. At the

time of diagnosis of HIV Infection, 47% had the CD4 Count of < 200 cells/mm³, 25% had CD4 Count of 200-349 cells/ mm³, 11% had CD4Count of 350 to 499 cells/ mm³, and >499 cells/ mm³ was present in 17%. At present the Mean CD4 Count was 660.37 cells/mm³ \pm 275.182. At the time of diagnosis of HIV infection, 43% have the stage 1 AIDS followed by 34% in stage-3 ,13% in stage 2 and 10% were in stage-4 of AIDS. At present 98% were in T1 Stage and 2% were in T4 stage of AIDS. Currently various physical co-morbidities were seen in 11% like CAD, Diabetes, Hypertension, Thyroid cancer, physically challenged, CVA. At present 95% were on the first line drugs like first line drugs (ZLN, TLN, ZLE, TLE) and 5% were on second line drugs like: (TL+ATV+r), ZL+ATV+r, (TL+ Lopinavir+ r) [Z=Zidovudine, L=Lamivudine, E=Efavirenz, T=Tenofovir, N=Nevirapine, ATV= Atazanavir, r=Ritonavir]. Currently, the Mean drug compliance in various CD4 category was found to be 97.28 \pm 7.885 % in CD4 count of >499 cells/mm³ followed by 95.57 \pm 5.682 % in CD4 Count 200 to 349 cells/mm³, 90.37 \pm 16.125 in 350 to 499 cells/mm³ and 88.40 \pm 5.727 in less than 200 cells/mm³. Pill counts were calculated as the number of pills taken (the number of pills dispensed – the number of pills counted). The number of pills expected to have been taken was calculated by multiplying the daily dose (1/2, 1 or 2 tablets) by the number of days since the date dispensed. Successful adherence was defined as on pill counts as 85–100% of the pills taken during each follow-up period (66). currently 71 % have the duration of HIV illness of > 4yrs followed by 15 % with the duration of 2.1 to 4 years and 14 % have the duration of HIV illness of less than 2years.

Table 1: Shows that on one sample test, there was a statistically significance ($p < 0.05$) was seen between the drug compliance and within the Current CD4 Count groups. [Table 1]

Table 2: Shows that the Mean T-scores of the sample was more in Environmental Domain (64.09 \pm 15.810) followed by Physical Domain (60.85 \pm 11.781), Psychological Domain (57.67 \pm 15.706) and Social Domain (52.97 \pm 24.857). [Table 2]

Table 4: Shows there was no significant difference was seen in the duration of HIV illness and Mean T scores of WHOQOL-BREF Domains. [Table 4]

Table 1: Comparing Current CD4 Groups with drug compliance (One Sample Test)

SNO	Current CD4 group cells/mm ³	Test Value = 0				Mean Difference
			t	Df	Sig.(2-tailed)	
1	More than 499	Drug compliance in percentage	102.477	68	0.001	97.275
2	350 to 499	Drug compliance in percentage	24.428	18	0.001	90.368
3	200 to 349	Drug compliance in percentage	44.501	6	0.001	95.571
4	Less than 200	Drug compliance in percentage	34.514	4	0.001	88.400

Table 2: Mean t-scores of various domains of the total study sample

SNO		Physical Domain T-score	Psychological Domain T-score	Social Domain T-score	Environmental Domain T-score
1	Mean	60.85	57.67	52.97	64.09
2	Std. Deviation	11.781	15.706	24.857	15.810

Table 3: Mean T-scores of WHOQOL-BREF Domains in different duration of HIV illness groups

SNO	Duration of HIV illness Group	Physical Domain T-score	Psychological Domain T-score	Social Domain T-score	Environmental Domain T-score	
1	Upto 2yrs	Mean	63.57	59.43	67.00	63.14
		Std. Deviation	5.598	16.732	21.057	17.069
2	2.1 to 4yrs	Mean	59.33	57.27	53.20	65.60
		Std. Deviation	15.239	17.950	33.707	22.598
3	>4 yrs	Mean	60.63	57.41	50.15	63.96
		Std. Deviation	11.917	15.223	22.734	14.021

Table 4: Anova: Comparison Between the Duration of Illness and Mean T-Scores of WHOQOL Bref Domains

SNO			Sum of Squares	Df	Mean Square	F	Sig.
1	Physical Domain	Between Groups	141.509	2	70.755	0.505	0.605
	Mean	Within Groups	13599.2	97	140.198		
	T-scores	Total	13740.8	99			
2	Psychological Domain	Between Groups	50.593	2	25.297	0.101	0.904
	Mean	Within Groups	24371.5	97	251.253		
	T-scores	Total	24422.1	99			
3	Social Domain Mean T-scores	Between Groups	3319.21	2	1659.61	2.783	0.067
		Within Groups	57849.7	97	596.389		
		Total	61168.9	99			
4	Environmental Domain	Between Groups	48.002	2	24.001	0.094	0.91
	Mean	Within Groups	24698.2	97	254.62		
	T-scores	Total	24746.2	99			

DISCUSSION

Our study results showed slight male preponderance of 53% Male vs. 47% female in contrast to the Ng'ang'a et al,^[11] study where 3/4th (75.9%) of participants were females and Karkashadze et al study,^[12] where 72.1% were male participants 70% of our participants were employed which was in contrast to 61.1% of Adeoti et al. study,^[13] and unemployed in our study was 30% which was in contrast to 19.5% of Sarkar T et al. study.^[14] In our study 57% were married (excluding widow and separated) in contrast to 47.7% of Sarkar T et al,^[14] study and 76.2% of Adeoti et al study.^[13] In our study 72% had received a high school or above education which was in similar to 72.46% of Liping M et al study.^[15]

In our study 37% belongs to the age group of 31-40 years of age followed by 34% in the age group of 41-50 years and least (2%) in > 60 years which was similar to Sarkar T et al,^[14] study with 40.5% belong to the age group of 31-40 years followed by 24.1% in the age group of 41-50 years and least (0.9%) in >60 years of age and in contrast to the Van Copenhagen B et al,^[16] study of about 44.6% of patients was in the 31- 40 years age group.

The mean age of our participants was 31.11yrs (SD 10.58) which was in contrast to Ng'ang'a et al,^[11] study which was 37.3yrs (SD 9.2) , 38.9yrs in Van Copenhagen B et al (16), 40.3yrs of Karkashadze et al,^[12] and 42.2 ± 9.5yrs of Adeoti et al. study,^[13] .The mean duration of HIV illness in our study sample was around 7.76 yrs (SD: 4.7) which was in contrast to Ng'ang'a et al (11) study which was 5 yrs of duration and 2.9 yrs (SD: 3.5 yrs) of Karkashadze et al,^[12]

In our study, Heterosexual and Homosexual mode of infection was 70% and 12 % respectively which was in contrast to 57.7 % and 5% of Karkashadze et al. (12) study. The current Mean CD4 count of our study was 660.37 cells/mm³ (SD: 275.182) which was in contrast to Karkashadze et al,^[12] 358.5 ± 200. In our study, the Mean T-scores (in 0-100 score) was more in Environmental Domain (64.09 ± 15.81) > Physical Domain (60.85 ± 11.78) > Psychological Domain (57.67 ± 15.70) > Social Domain (52.97 ± 24.85) which conclude that the Mean T Scores was more in Environmental Domain and less in Social Domain which was in contrast to Sarkar T et al study,^[14] where psychological domain (63.1 ± 8.7) achieved the highest mean score followed by physical health (56.2 ± 9.8) . Like Sarkar T et al

study,^[14] our study results also showed the lowest score with social relationship domain (48.9 ± 14.8 , Sarkar T et al vs. 52.97 ± 24.85 of our study).

In our study QOL Score was more in Environmental Domain which was in contrast to Mukesh Shukla et al,^[17] study where QOL score were highest for physical health domain (10.45 ± 1.35) followed by psychological in domain (9.38 ± 1.33), environmental domain (8.73 ± 1.11) respectively in 4-20 score and social relationship domain scores the lowest score (8.05 ± 1.90) of all domains similar to our study.

In our study, more score in environmental domain may be due to improvement in Employment and financial security, increase in Health and social care in terms of accessibility and quality, increase in Opportunities for acquiring new information and skills and also by improvement in transport facilities while less score in social domain may be due to decrease in Personal relationships, social support and Sexual activity.

Limitations of the study

1. Our study had a small sample size and the study was conducted in a tertiary care centre, so the results could not be generalized.
2. No specific tool was used to assess the drug adherence except the pill count.

CONCLUSION

Our study results concluded that most of the participants were employed. The most common mode of HIV infection was found to be heterosexual. WHOQOLBREF showed the Mean T-Scores was more in Environmental Domain and less in Social Domain. Regular Psychiatric screening among People Living with HIV/AIDS is essential to improve the quality of life. There is a need for enhanced social support and interpersonal relationships for better social functioning. It is important to increase social networks between HIV/AIDS people and general society, especially for those with less family support for better quality of life.

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