

# Assessing the Quality of Life of HIV/AIDS Patients attending Anti-Retroviral Clinic: A Cross-sectional Study

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DOI: 10.29322/IJSRP.10.06.2020.p10266  
<http://dx.doi.org/10.29322/IJSRP.10.06.2020.p10266>

**Abstract-** Context: Acquired immunodeficiency syndrome (AIDS), caused by human immunodeficiency virus(HIV) infection. Upon disease progression, physical and mental health is hampered alongwith social isolation upon disclosure of disease.

Aims: Assessing Quality of Life(QOL) of HIV-AIDS patients receiving ART with reference to six domains namely physical, psychological well-being, level of independence, social relationships, environmental and spirituality, religion and personal beliefs, and in relation to various socio-demographic factors.

Settings and Design: Observational, cross sectional study to assess QOL of HIV/AIDS patients attending Anti-retroviral therapy (ART) clinic at MGM Hospital, Navi Mumbai.

Method: 150 HIV positive patients registered at ART Clinic were interviewed personally using a WHOQOL-HIV BREF<sup>(3)</sup> questionnaire, collected data was compiled and analysed.

Statistical analysis used: one way ANOVA followed by Tuckey's POST-HOCtest and unpaired t-test.

Results: Our data suggested that though gender didn't affect QOL, people with higher educational status had better QOL in psychological and environment domain. Even married people were found to have better QOL in social relationship, compared to single, widowed and separated.

Conclusions: HIV-AIDS affects QOL of patients. Thus, there is urgent need for strengthening existing interventional programmes and initiating further studies to determine more factors affecting various domains.

**Index Terms-** HIV/AIDS, Quality of life, Socio-demographic factors

## I. INTRODUCTION

HIV epidemic in India is concentrated in nature. Based on HIV Sentinel Surveillance 2008-09, it is estimated that 23.9 lakh people are infected with HIV in India, of whom 39% are female and 4.4% are children. The estimates highlight an overall reduction in adult HIV prevalence and HIV incidence (new infections) in India. The estimated number of new annual HIV infections has declined by 56% over the past decade from 2.7 lakh new infections in 2000 to 1.2 lakh in 2009.<sup>(1)</sup>

Living with HIV/AIDS not only hampers physical health but also mental and social well-being. HIV disease is chronic in nature. Also the stigma associated with HIV and social isolation still poses considerable barrier to disclosure of HIV status. It has implications for access to treatment facilities and compliance with medication. The psychological factors and social support do influence health outcomes of HIV infected individuals and also hinders preventive efforts directed at HIV/AIDS.

Quality of life is a complex and multidimensional concept. WHO 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, expectations, standards and concerns*"<sup>(2)</sup>. WHO has prepared a WHOQOL-HIV BREF<sup>(3)</sup> scale which is validated in field trials to assess the quality of life of people living with HIV/AIDS. The scale produces six domains scores namely physical, psychological well-being, level of independence, social relationships, environmental and spirituality, religion and personal beliefs.

HIV patients often experience a decline in QOL due to factors other than disease stage and physical conditions. Understanding such factors and there influence, helps to establish better social services to address multidimensional issues related to quality of life in these patients. With this background, the present study was conducted at ART clinic at MGM Hospital to assess the factors affecting the quality of life of people living with HIV/AIDS using the WHOQOL-HIV BREF<sup>(3)</sup> scales which would help to better allocate limited available resources and address the social welfare needs of the patients.

## Review of literature

### HIV/AIDS :

Human immunodeficiency virus infection / Acquired immunodeficiency syndrome (HIV/AIDS) is a [disease](#) of the human [immune system](#) caused by infection with [human immunodeficiency virus](#) (HIV).It has a variable incubation period from a few months to 10 years or even more.

Genetic research indicates that HIV originated in west-central Africa during the early twentieth century. AIDS was first recognized by the Centres for Disease Control and Prevention (CDC) in 1981 and its cause—HIV infection—was identified in the early part of the decade. AIDS is considered a pandemic present over a large area and is actively spreading.

#### **Global situation and trends:**

According to WHO :<sup>(4)</sup>

- Globally, 34.0 million [31.4–35.9 million] people were living with HIV at the end of 2011.
- An estimated 0.8% of adults aged 15-49 years worldwide are living with HIV.
- 1.7 million people died of AIDS-related illnesses worldwide in 2011.
- 9 countries reported a total of 95 million people tested in 2010

#### **Magnitude of Problem in India :**

NACO-According to Department of AIDS Control, Ministry of Health & Family Welfare (2012)<sup>(1)</sup>:

- India has the third largest number of people living with HIV/AIDS.
- As per the 2008-09 HIV estimates, there are an estimated 23.9 lakh people currently living with HIV/AIDS in India with an adult prevalence of 0.31% in 2009.
- The adult HIV prevalence was 0.25% among women and 0.36% among men in 2009.
- Children under 15 years account for 4.4% of all infections
- 83% of PLHIV are the in age group 15-49 years.
- Of all HIV infections, 39% (9.3 lakhs) are among women.
- About 1.72 lakh people died of AIDS related causes in 2009 in India.
- It is estimated that India had approximately 1.2 lakh new HIV infections in 2009.

#### **Interventions by NACO in 2011-2012:**<sup>(1)</sup>

- Presently, NACO is supporting 1,112 designated STI/RTI clinics which are providing STI/RTI services based on the enhanced syndromic case management.
- 79 new clinics have been set up in 2011 - 12
- NACO has strengthened seven regional STI training, reference and research centres.
- 955 STI counsellors are currently in position. Training material, curriculum and job aids, including posters, 1 ip book and a i lm on counselling have been developed by NACO.
- The state and regional resource faculties have trained a total of 7,511 persons in 2009–10 and 5,224 persons in 2010-11

#### **Effect of AIDS on Quality of Life :**

HIV/AIDS is a syndrome that builds a vacuum in a person affecting his/her life as a whole. With an alarming increase of Human Immunodeficiency Virus (HIV) /Acquired Immunodeficiency Syndrome (AIDS) in developing countries (estimated prevalence in India=0.91%) and inability to afford highly active anti-retroviral therapy, key issues like the quality of life (QOL) have come to the fore. In spite of the advent of new treatments, infection with the human immunodeficiency virus (HIV) is still a major public health preoccupation ruining the social framework of many communities and countries especially in the heavily affected developing countries. It continues to spread and affect the lives of millions of people. The impact of this therapy on his or her quality of life is significant and deserves closer investigation because AIDS has a chronic debilitating course and the long-term adverse side effects of current treatments modalities are uncertain. The mortality due to HIV is still quite high even after treatment affecting millions of couples worldwide orphaning number of children and also increasing the number of children born with HIV, thus adding to the morbidity pool. The social stigma attached with the proclamation of HIV sero-positivity may at times force the individual to change the job or the place of living, putting further stress on the already weak economic situation of the developing countries. This further leads to progressive deterioration of health, low morale, repeated consultation, abstinence from work and low productivity. The vicious cycle thus goes on, economic deprivation and social isolation takes it tolls on the quality of life.

Thus if treatment of AIDS allows patients to resume relatively normal lives—including supporting their families, working productively, and participating in civil society—then the long-term sustainability of large-scale treatment provision will be bolstered. If, on the other hand, quality of life and social and economic wellbeing of ART patients are low, sustaining life-long treatment adherence may be even harder than expected.

#### **Importance of Measuring the Quality of life:**

Living with HIV means that every day it is necessary to come to terms with a stigmatizing disease with distinct constraints. As HIV disease is among the most devastating of illnesses, having multiple and profound effects upon all aspects of life, hence the evaluation of QOL is very important. It is also important to underline the role of consultation-liaison psychiatry in the diagnosis and treatment of HIV and AIDS. Stress management interventions for HIV-infected persons are a promising approach to facilitate positive adjustment. Additional research is needed to further evaluate the role of routine QOL assessment in patients who have HIV/AIDS.

### **Measuring Quality of life in patients who have HIV/AIDS :**

The Quality of Life can be measured by using abbreviated WHO instrument (WHOQOL-BREF)<sup>(3)</sup> which is a standard quality-of-life questionnaire, prepared and validated in field trials by the WHO for use in HIV populations. It covers the respondent's perception of the overall quality of life within the 6 (six) broad domains: physical, psychological, level of independence, social, environmental and spiritual. Each item uses a Likert-type five-point scale.

#### **Domains :**

##### **Physical:**

The Physical domain assesses impact of disease on physical health. It describes 4 facets: pain and discomfort, energy and fatigue, sleep and rest and symptoms related to HIV.

In a study conducted by [Pedram Razavi](#) et al<sup>(5)</sup> on Quality of Life among Persons with HIV/AIDS in Iran, it was found that physical domain had the worst result. This may be because the majority of patients in that study had history of imprisonment and/or intravenous substance abuse.

In a study carried out by José Côté et al on Factors Related to Quality of Life in Treatment-Adherent, Successfully Treated HIV Patients in France<sup>(6)</sup>, it was found that Quality of life in physical domain is largely dependent on discomfort reported arising from HIV-associated symptoms and treatment (39%).

In a study conducted by [Sudhir Gowda](#) et al on Quality of life in HIV/AIDS patients in relation to CD4 count: A cross-sectional study in Mysore district<sup>(7)</sup>, significant positive correlation was found between CD4 cell count and all the four domains of WHO QoL, with physical domain showing least correlation with CD4 count.

##### **Psychological :**

Psychological domain describes 5 facets: positive feelings, concentration, self-esteem, bodily image and appearance and negative feelings.

In A Longitudinal Quality-of-Life Study of HIV-infected persons in South India conducted by Suniti Solomon et al<sup>(8)</sup>, it showed that Participants experienced significant improvements in their psychological wellbeing after the initiation of Anti-retroviral therapy. In a study conducted by Imam MH et al on Health related quality of life among the people living with HIV in Dhaka, Bangladesh<sup>(9)</sup>, it was found that QOL score was lowest for psychological health domain. This may show the lack of adequate counselling in this area.

In a study carried out by José Côté et al on Factors Related to Quality of Life in Treatment-Adherent, Successfully Treated HIV Patients in France<sup>(6)</sup>, it was found that Quality of life in psychological domain is largely dependent on perceived stress.

In a study conducted by [B Nirmal](#) et al on Quality of life in HIV/AIDS patients in south India<sup>(2)</sup>, it was found that as the education of the patients increased, they had better psychological domain scores. It reflects that education enhances problem-solving and active decision-making making the patient to cope with the dreaded disease better, both emotionally and problem focused.

##### **Level of independence :**

The Level of independence domain describes 4 facets: mobility, activities of daily living, dependence on medication and treatment and work capacity.

a study conducted by K.H. Rajeev et al on the Impact of HIV/AIDS on Quality of Life of People living with HIV/AIDS in Chitradurga District, Karnataka<sup>(10)</sup>, they found that QOL scores was lowest for Level of independence(11.16) showing decrease in work capacity and dependence on medication.

##### **Social Relationship:**

Social support refers to the perceived comfort, care, esteem, or help a person receives from other people or groups such as the spouse, lover, friends, family, co-workers, or physicians. Family members, in particular a spouse, appear to be the most important sources of social support, and account for most of the association between social support and health. There is evidence that support from sources outside the family cannot compensate for what is missing in the family.

In a study conducted by Deepika Anand, Seema Puri and Minnie Mathew in assessing Quality of Life of HIV positive people receiving ART in Orissa<sup>(11)</sup>, QOL score was highest for social domain suggesting the severest impact of HIV extended across social aspect of QOL. This is expected as people with HIV infection often experience social isolation, derogation, stigmatization, discrimination and marginalization thus they have a tendency to restrain themselves from social interactions due to self-consciousness of the disease.

In a study by [Sudhir Gowda](#) et al on Quality of life in HIV/AIDS patients in relation to CD4 count: A cross-sectional study in Mysore district<sup>(7)</sup>, the social domains with score less than the other domains indicating that the patients social contacts and sexual activity were affected markedly.

In A Longitudinal Quality-of-Life Study of HIV-infected persons in South India conducted by Suniti Solomon et al<sup>(8)</sup>, it showed that Participants experienced significant improvements in their social support after accessing medical support for HIV.

##### **Environment :**

The Environment domain describes 8 facets: physical safety and security, home environment, financial resources, health and social care: accessibility and quality, opportunities for acquiring new information and skills, participation in and opportunities for recreation/ leisure activities, physical environment, transport.

In a study by [Sudhir Gowda](#) et al on Quality of life in HIV/AIDS patients in relation to CD4 count: A cross-sectional study in Mysore district<sup>(7)</sup>, the environmental domain had a maximum mean score. This suggests that the patients had relatively better quality of health services and good accessibility to it.

In a study conducted by [B. Nirmal](#) et al on Quality of life in HIV/AIDS patients in south India<sup>(2)</sup>, it was found that the environmental domain had the maximum QOL score though statistically significant difference was found in the environmental domain scores between patients who have family support - married or single and those without support - separated, widowed, or divorced ( $P < 0.001$ ).

### **Spirituality, Religion and Personal beliefs :**

The Spirituality, religion and personal beliefs domain describes 4 facets: personal beliefs, forgiveness and blame, concerns about the future, death and dying.

In a study conducted by Imam MH et al on Health related quality of life among the people living with HIV in Dhaka, Bangladesh<sup>(9)</sup>, it was found that The mean scores of Health related Quality of Life (HQoL) was highest in the domain of spirituality (13.37). This could be the reason why women with HIV/AIDS had better overall general health perception than men in most aspects of life in that study.

In another study conducted by Deepika Anand, Seema Puri and Minnie Mathew in Orissa on assessing Quality of Life of HIV positive people receiving ART<sup>(11)</sup>, QOL score of Domain of Spirituality was highest. This may be because, most of the respondents believed that they were suffering because they were chosen to suffer by the supreme power and it was their destiny and had strong faith in that supreme power.

Thus, it can be seen from the review of literature that, HIV/AIDS affects the quality of life in various Domains. Therefore, areas of need of people should be identified and adequate interventions has to be taken up at the earliest, so as to improve their quality of life and to meet the needs of the people, thus enabling them to meet their daily responsibilities and duties towards their family and society.

### **Aim**

To conduct a cross sectional study to assess the quality of life of people living with HIV/AIDS attending Anti-retroviral therapy (ART) clinic at MGM Hospital, Navi Mumbai.

### **Objectives**

- 1) To assess the quality of life of people living with HIV/AIDS using the WHOQOL-HIV BREF<sup>(3)</sup> scale with reference to six domains namely physical, psychological well-being, level of independence, social relationships, environmental and spirituality, religion and personal beliefs.
- 2) To assess the quality of life of people living with HIV/AIDS in relation to various socio-demographic factors.

### **Material and Methods**

The study was an observational, cross-sectional study, which was conducted from May to July 2013, in the outpatient department of the Anti-Retroviral Therapy (ART) Clinic at MGM Medical College and Hospital, Kamothe, which is a tertiary care Hospital in Navi Mumbai. The study aimed to assess the Quality of Life (QOL) of patients living with HIV and AIDS using WHOQOL-HIV BREF<sup>(3)</sup> Scale.

WHOQOL-HIV BREF<sup>(3)</sup> version was used to investigate the quality of life of people living with HIV/AIDS receiving ART. The scale produces six domain scores namely physical, psychological, level of independence, social relationships, environmental and spirituality, religion, personal beliefs. Individual items are rated on a five-point Likert scale where 1 indicates low, negative perceptions and 5 indicates high, positive perceptions. Higher score indicates better quality of life.

Ethical clearance was obtained from Institutional Ethics Committee of MGM Medical College. 150 HIV positive registered patients who were regular attendees at the ART Clinic were included in the study. Inclusion criteria included only the registered patients on regular ART. Terminally ill, newly diagnosed patients, children, those not registered at the centre and those who refuse to participate in the study were excluded from the study.

The respondents were explained about the objectives of the study and were assured of confidentiality. A written informed consent was obtained from all the respondents. They were interviewed personally using a structured questionnaire (WHOQOL-HIV BREF<sup>(3)</sup>), to assess the Quality of Life (QOL) and to collect socio-demographic information. Data was collected on day-to-day basis, compiled and analysed.

All statistical procedures were carried out in SPSS 17.0 work-sheet. Data was presented by using descriptive statistics such as mean, standard deviation and range along with charts and graphs. Further statistical analysis was done by using one way ANOVA followed by Tuckey's POST-HOC test and unpaired t-test. Significance level was set at 5%. All p-values less than 0.05 were considered as significant.

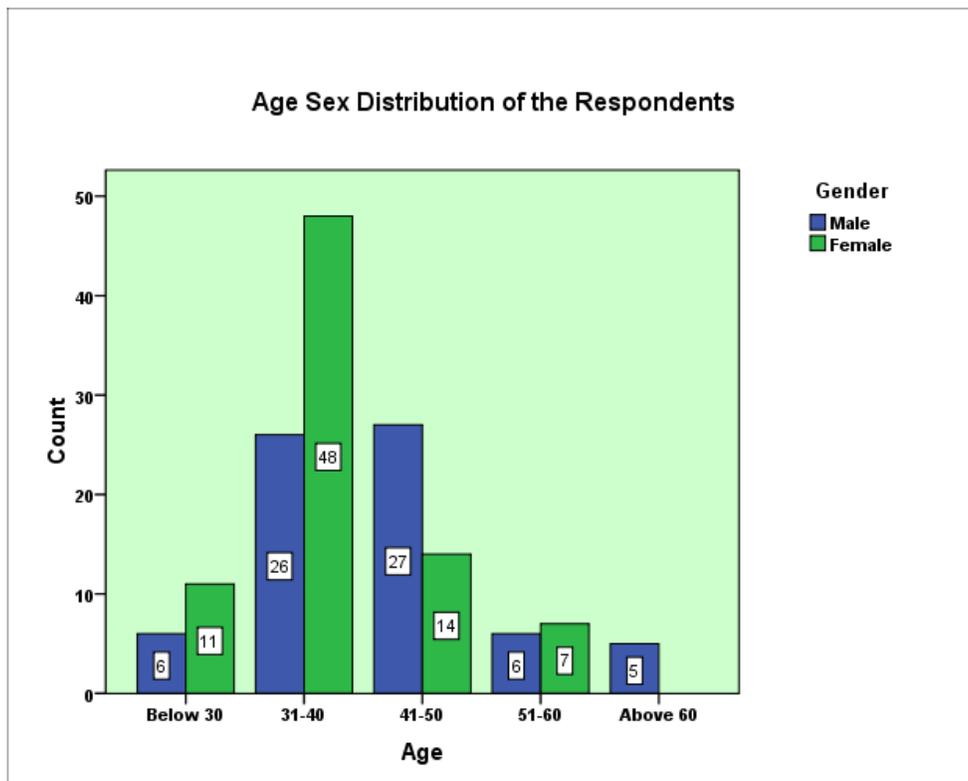
**Observations and Results**

***Table : I. Socio-demographic variables of the study group (n=150).***

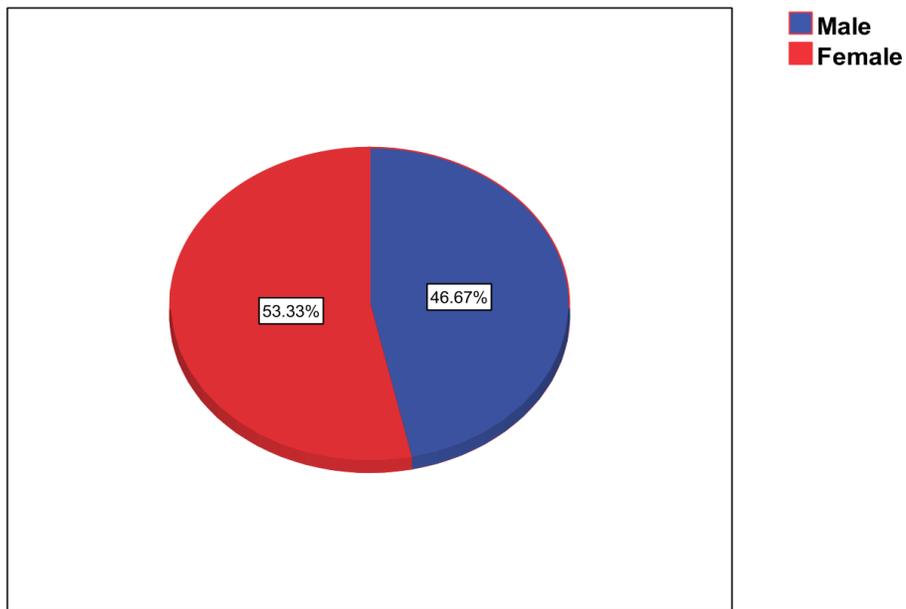
Age	Gender		Total (n=150) No. (%)
	Male No. (%)	Female No. (%)	
Below 30	6 (35.3%)	11(64.7%)	17 (100%)
31-40	26(35.1%)	48 (64.9%)	74 (100%)
41-50	27 (65.9%)	14 (34.1%)	41 (100%)
51-60	6 (46.2%)	7 (53.8%)	13 (100%)
Above 60	5 (100%)	0 (0%)	5 (100%)
<b>Total</b>	<b>70 (46.7%)</b>	<b>80 (53.3%)</b>	<b>150 (100%)</b>

**Mean Age = 40.16 (±8.762)**

The above table shows that out of 150 respondents selected for this study, majority of patients, i.e. 74(49.3%) were in the age group 31-40 years, followed by 41(27.3%) in the age group of 41-50 years. The mean age of the respondents was 40.16(±8.762). Out of 150 respondents, 70 (46.7%) were males and 80 (53.3%) were females.



***Gender of the respondents(n=150)***

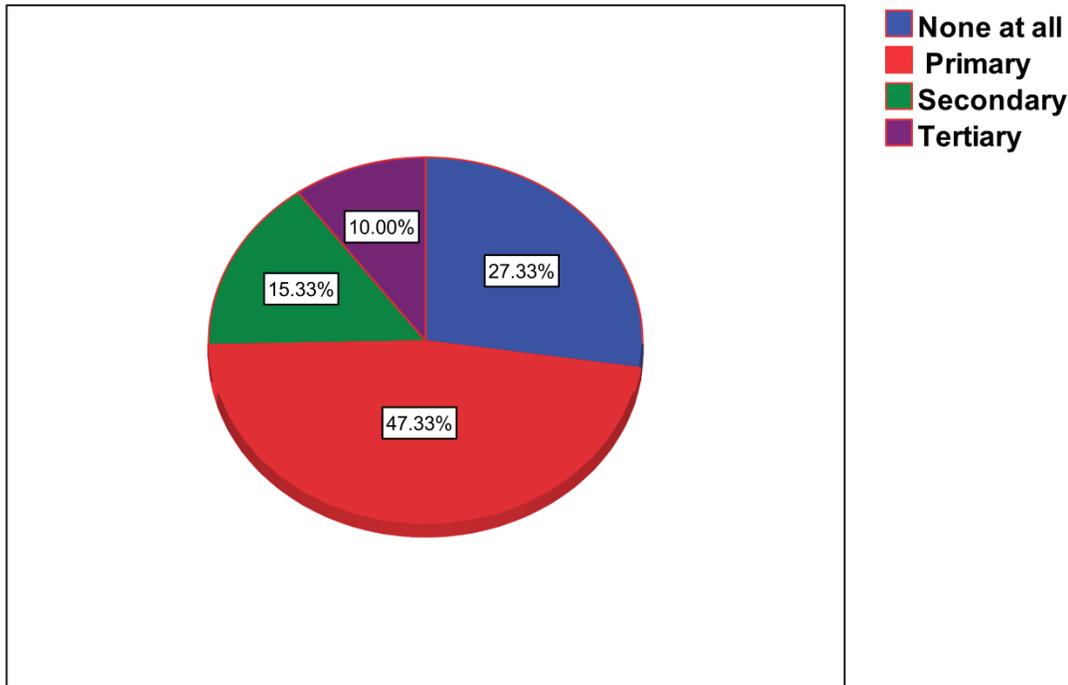


***Table : II. Distribution of Respondents according to Educational status***

<b>Educational status</b>	<b>No. of Respondents No. (%)</b>
None at all	41 (27.3)
Primary	71 (47.3)
Secondary	23 (15.3)
Tertiary	15 (10.0)
<b>Total</b>	<b>150 (100%)</b>

Out of total 150 respondents, 41(27.3%) were illiterate, 71(47.3%) received primary education, 23(15.3%) received secondary education and 15(10.0%) received tertiary education.

**Educational Status of the respondents(n=150)**

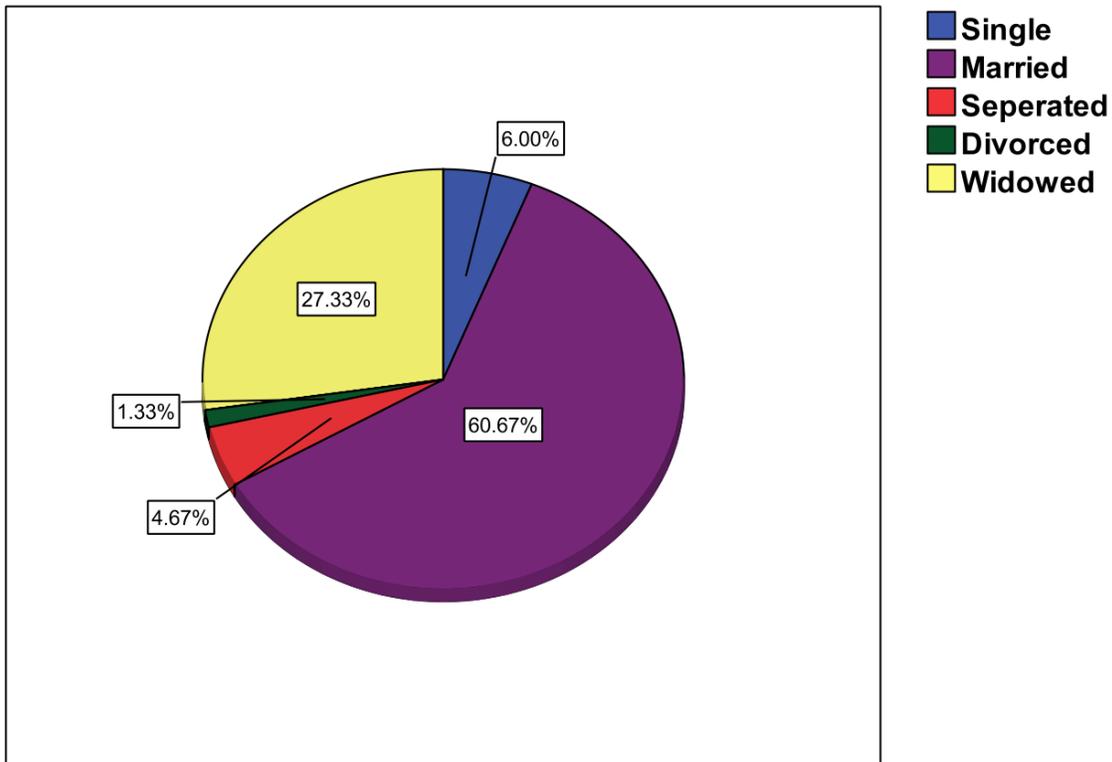


**Table : III. Distribution of Respondents according to Marital Status (n=150)**

Marital Status	No. of Respondents No. (%)
Single	9 (6.0)
Married	91 (60.7)
Separated	7 (4.7)
Divorced	2 (1.3)
Widowed	41 (27.3)
<b>Total</b>	<b>150 (100%)</b>

Out of 150 patients majority of the respondents were married, i.e. 91(60.7%) followed by 41(27.3%) who were widowed. This was followed by 9(6.0%) patients who were single. 7(4.7%) of the patients were separated and only 2(1.3%) were divorced.

**Marital Status of the respondents(n=150)**



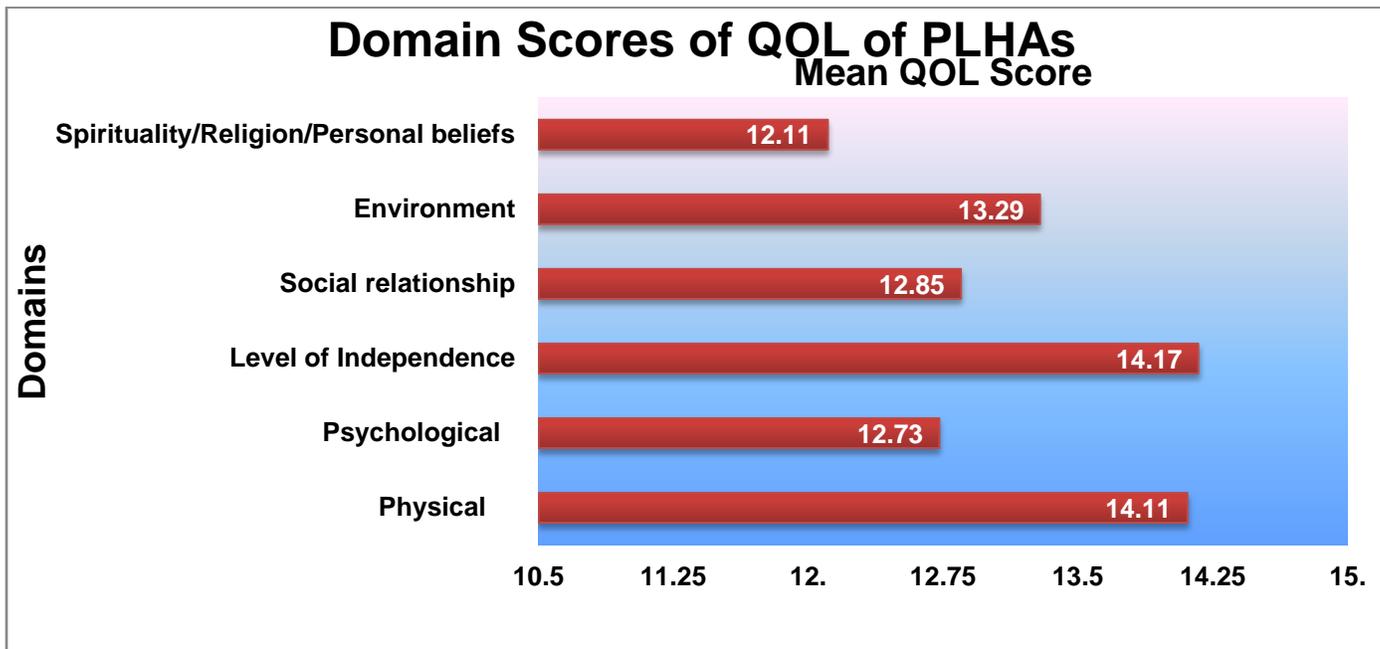
**Table : IV. Domain Scores of quality of life of people living with HIV/AIDS (n=150)**

**Descriptive Statistics**

	Minimum	Maximum	Mean	Std. Deviation	Range
Domain I (Physical)	7.00	17.00	14.11	2.38	10.00
Domain II (Psychological)	7.20	16.80	12.73	2.22	9.60
Domain III (Level of Independence)	5.00	16.00	14.17	2.42	11.00
Domain IV (Social relationship)	4.00	17.00	12.85	2.77	13.00
Domain V (Environment)	7.50	17.50	13.29	1.84	10.00
Domain VI (Spirituality/ Religion/Personal beliefs)	7.00	19.00	12.11	1.86	12.00

The above table shows descriptive statistics for score of various domains. The mean score was highest for Domain III (Level of Independence) that is 14.17(±2.42) with a range of 11.0 (Max.=16, Min.=5) closely followed by Domain I (Physical) which had a score of 14.11(±2.38) with a range of 10 (Max.=17.0, Min.=7), then Domain V (Environmental) where the mean score is 13.29(±1.84) with a range of 10 (Max.=17.50, Min.=7.50). This is followed by Domain IV (Social Relationship) where the mean score comes to 12.85(±2.77) with a range of 13 (Max.=17, Min.=4), then Domain II (Psychological) where the score was 12.73(±2.22) with a range of

9.60 (Max.=16.80, Min.=7.20). Domain VI (Spirituality/Religion/Personal beliefs) scored the lowest with the mean score of 12.11(±1.86) with range of 12 (Max.=19, Min.=7).

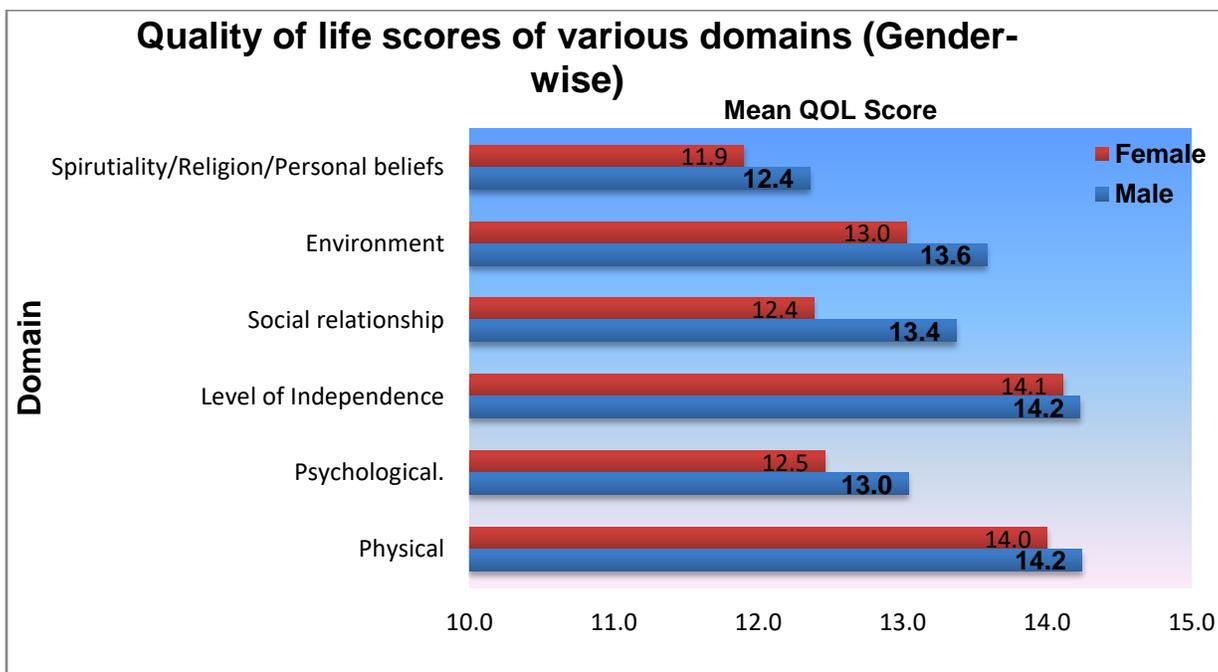


**Table : V. Quality of life scores of various domains depending up on Gender (n=150)**

	Gender	N	Mean	Std. Deviation	Difference	p-value
<b>Domain I (Physical)</b>	Male	70	14.2429	2.20957	.24286	0.27482
	Female	80	14.0000	2.52582		
<b>Domain II (Psychological)</b>	Male	70	13.0400	2.16363	.58000	0.97597
	Female	80	12.4600	2.24756		
<b>Domain III (Level of Independence)</b>	Male	70	14.2286	2.24042	.11607	0.37108

	Female	80	14.1125	2.57541		
<b>Domain IV</b> (Social relationship)	Male	70	13.3714	2.57733	.98393	0.05846
	Female	80	12.3875	2.86177		
<b>Domain V</b> (Environment)	Male	70	13.5857	1.77742	.56071	0.70825
	Female	80	13.0250	1.86727		
<b>Domain VI</b> (Spirituality/ Religion/Personal beliefs)	Male	70	12.3571	1.84968	.45714	0.84810
	Female	80	11.9000	1.85963		

The above table shows that there is no significant difference in the quality of life scores of various Domains in relation to the gender.



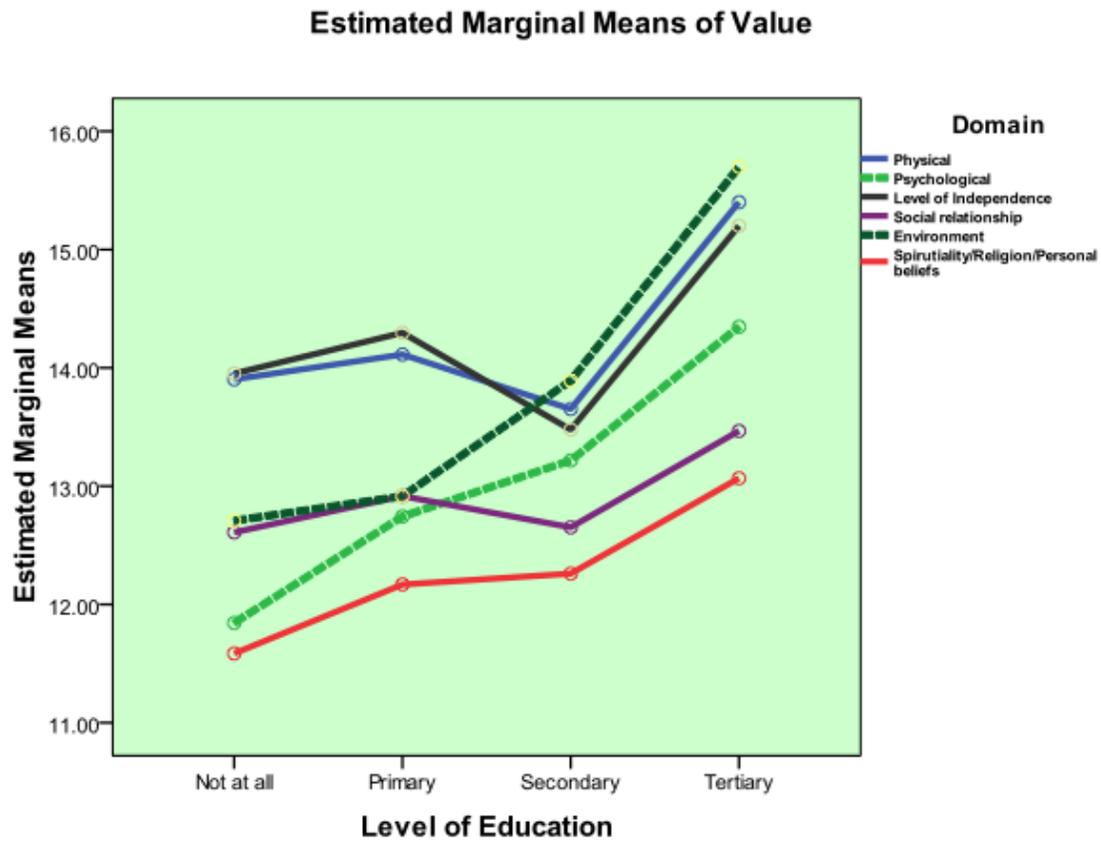
**Table : VI. Quality of life scores of various domains depending upon Educational Status (n=150).**

Domain	Education	N	Minimum	Maximum	Mean	Std. Deviation	P-Value
<b>Domain I</b> (Physical)	None at all	41	8.00	16.00	13.9024	2.18866	0.134
	Primary	71	7.00	16.00	14.1127	2.56097	
	Secondary	23	8.00	17.00	13.6522	2.53357	
	Tertiary	15	12.00	17.00	15.4000	1.18322	
<b>Domain II</b> (Psychological)	None at all	41	8.00	16.00	11.8439	1.95321	0.001**
	Primary	71	7.20	16.00	12.7437	2.20679	
	Secondary	23	8.00	16.00	13.2174	2.15568	
	Tertiary	15	10.40	16.80	14.3467	2.10505	
<b>Domain III</b> (Level Independence)	None at all	41	9.00	16.00	13.9512	2.12075	0.162
	Primary	71	5.00	16.00	14.2958	2.67472	
	Secondary	23	8.00	16.00	13.4783	2.52027	
	Tertiary	15	12.00	16.00	15.2000	1.20712	
<b>Domain IV</b> (Social relationship)	None at all	41	6.00	16.00	12.6098	2.67281	0.752
	Primary	71	7.00	17.00	12.9155	2.73468	
	Secondary	23	4.00	17.00	12.6522	3.43258	
	Tertiary	15	9.00	17.00	13.4667	2.13363	

<b>Domain V</b> (Environment)	None at all	41	7.50	16.50	12.7073	1.78877	0.000**
	Primary	71	7.50	16.00	12.9155	1.62126	
	Secondary	23	10.50	16.50	13.8913	1.65801	
	Tertiary	15	14.50	17.50	15.7000	.97834	
<b>Domain VI</b> (Spirituality/ Religion/ Personal beliefs)	None at all	41	7.00	16.00	11.5854	1.98715	0.058
	Primary	71	8.00	16.00	12.1690	1.63869	
	Secondary	23	9.00	15.00	12.2609	1.78930	
	Tertiary	15	11.00	19.00	13.0667	2.31352	

\*\*Significant

The above table shows that the quality of life score of the illiterate respondents was 11.84( $\pm$ 1.95) for Domain II (Psychological) and 12.7( $\pm$ 1.79) for Domain V (Environment) which was lowest for the respective Domains. In contrast to this the respondents who received tertiary education scored 14.35( $\pm$ 2.1) for Domain II (Psychological) and 15.7( $\pm$ 0.98) in Domain V (Environment) which is the highest for the respective Domains. This also shows that there is significant difference ( $p < 0.05$ ) in the quality of life scores in Domain II (Psychological) and Domain V (Environment) in relation to the level of education received by the respondents though no such significant difference is noticed in the other Domains in relation to the level of education.



*Please Note : The dotted lines indicates significant difference in the Quality of life scores according to level of education as seen in Domain II (Psychological) and Domain V (Environment)*

#### Descriptive Statistics

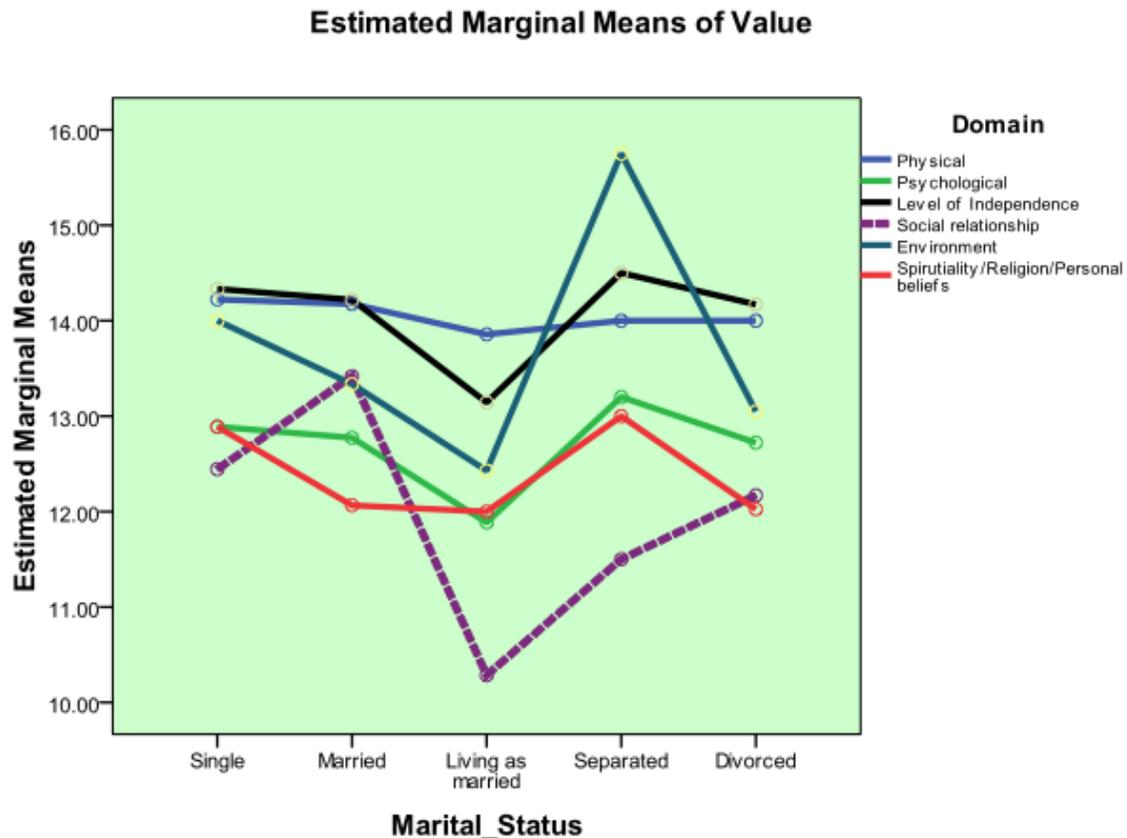
Domains	Marital Status	N	Minimum	Maximum	Mean	Std. Deviation	p-Value
<b>Domain I</b> (Physical)	Single	9	8.00	16.00	14.2222	2.68225	0.993
	Married	91	8.00	17.00	14.1758	2.35982	
	Separated	7	9.00	16.00	13.8571	2.67261	
	Divorced	2	12.00	16.00	14.0000	2.82843	
	Widowed	41	7.00	16.00	14.0000	2.40832	
<b>Domain II</b> (Psychological)	Single	9	9.60	16.00	12.8889	2.41477	0.884
	Married	91	8.00	16.80	12.7736	2.18423	

	Separated	7	8.00	13.60	11.8857	2.08761	
	Divorced	2	10.40	16.00	13.2000	3.95980	
	Widowed	41	7.20	16.00	12.7220	2.29647	
<b>Domain III</b> (Level Independence)	Single	9	10.00	16.00	14.3333	2.17945	0.851
	Married	91	7.00	16.00	14.2198	2.44405	
	Separated	7	8.00	16.00	13.1429	3.13202	
	Divorced	2	13.00	16.00	14.5000	2.12132	
	Widowed	41	5.00	16.00	14.1707	2.36540	
<b>Domain IV</b> (Social relationship)	Single	9	7.00	15.00	12.4444	2.55495	0.010**
	Married	91	4.00	17.00	13.4176	2.47236	
	Separated	7	6.00	17.00	10.2857	4.11154	
	Divorced	2	10.00	13.00	11.5000	2.12132	
	Widowed	41	6.00	16.00	12.1707	2.88879	
<b>Domain V</b> (Environment)	Single	9	13.00	15.00	14.0000	0.79057	0.124
	Married	91	10.00	17.50	13.3352	1.83493	
	Separated	7	9.50	16.00	12.4286	2.18763	
	Divorced	2	15.50	16.00	15.7500	0.35355	
	Widowed	41	7.50	16.00	13.0488	1.89672	
<b>Domain VI</b> (Spirituality/ Religion/ Personal beliefs)	Single	9	11.00	15.00	12.8889	1.61589	0.706
	Married	91	9.00	19.00	12.0659	1.79383	
	Separated	7	10.00	15.00	12.0000	2.16025	
	Divorced	2	11.00	15.00	13.0000	2.82843	
	Widowed	41	7.00	16.00	12.0244	2.01851	

**Table : VII. Quality of life scores of various domains depending on Marital Status (n=150).**

\*\*Significant

The above table shows that the quality of life score in Domain IV (Social Relationship) was highest in married people with a score of 13.4176 ( $\pm 2.47$ ). This was followed by those who were single with a score of 12.44 ( $\pm 2.55$ ). The score was 12.17 ( $\pm 2.89$ ) for widowed people and 11.50 ( $\pm 2.12$ ) for the divorced people. The lowest score that is 10.2857 ( $\pm 4.11$ ) was found among those who were separated. This shows that there is a significant difference ( $p < 0.05$ ) in the quality of life score in Domain IV (Social Relationship) in relation to the marital status of the respondents, but no such association was found in the other domains in relation to their marital status.



**Please Note :** The dotted lines indicates significant difference in the Quality of life score according to level of education as seen in Domain IV (Social Relationship).

**Discussion**

HIV / AIDS has serious repercussions not only on the physical and mental health of the people living with HIV/AIDS, but also affects their social relationships and level of independence. Assessing their Quality of life (QOL) helps in identifying various factors which may impinge on their QOL and their relation to various socio-demographic profiles. This also helps to gauge the initial health crisis the people faced after the diagnosis of this dreaded disease and their re-integration in the society. Thus, keeping this in mind, the present study was designed to assess how people living with HIV/AIDS receiving ART from MGM Medical College and Hospital, perceived their quality of life using WHOQOL-HIV BREF questionnaire<sup>(3)</sup>, which will further enable to understand the various aspects of this disease and allow to design more efficient interventions.

In the present study, Table I shows that, out of 150 respondents, majority of patients, i.e. 74(49.3%) were in the age group 31-40 years, followed by 41(27.3%) in the age group of 41-50 years. The mean age of the respondents was 40.16 ( $\pm 8.762$ ). 70 (46.7%) respondents were males and 80 (53.3%) were females. With regards to educational status, 41(27.3%) were illiterate, 71(47.3%) received primary education, 23(15.3%) received secondary education and 15(10.0%) received tertiary education (Table II). As per the marital status, majority of the respondents were married, i.e. 91(60.7%) followed by 41(27.3%) who were widowed. This was followed by 9(6.0%) patients who were single. 7(4.7%) of the patients were separated and only 2(1.3%) were divorced (Table III).

Table IV shows the descriptive statistics for scores of various domains. The mean score was highest for Level of Independence (14.17). This could be because of good compliance with medication, access to treatment facilities and active work force. This was closely followed by Physical (14.11), Environmental (13.29), Social Relationship (12.85), and Psychological (12.73) domains. The lowest mean score was observed in Spirituality/Religion/Personal beliefs (12.11). This was because of lack of awareness about

HIV/AIDS resulting in marginalization of patients. Since most of the patients were in the productive and reproductive age group, they were concerned about their dependants and thus feared for the disease and death. Another reason could be that out of 150 respondents, 132(88%) of the patients believe that they were infected through sexual contact showing dis-satisfaction with their partners and lack of faith. As a result, in the present study, the mean score was lowest for Spirituality/Religion/Personal beliefs domain. However, in a study done by Lamkang AS, Joshi PC and Singh MM in Manipur<sup>(12)</sup>, they found that the mean score was maximum for spirituality, religion, personal beliefs domain (12.73). This could be attributed to better educational status among their patients. This was followed by psychological (12.72), physical (12.41), level of independence (12.28), social relationship (11.83), and environment (11.54).

Table V showed that there was no significant difference in the quality of life scores of various Domains in relation to the gender. As such, there was no gender bias in the society. Both men and women were found to be equally tolerant towards the hardships in life. These findings are similar to that reported by Oluyemisi F. Folasire et al<sup>(13)</sup> in their study in Nigeria, where male participants had similar QOL scores as female participants in all the four domains assessed. However in a study conducted by Imam MH et al<sup>(9)</sup> on Health related quality of life among the people living with HIV in Bangladesh, it was reported that that the women with HIV/AIDS had better overall general health perception than men in most aspects of life. Although contradictory results have been given in case of gender as a socio-demographic factor on the quality of life of individuals living with HIV/AIDS in good numbers of literatures, some researches have documented low performance for women in some aspects of quality of life (QoL) while in some other studies difference according to gender was not found or had even shown the opposite<sup>(9)</sup>.

Table VI showed that the quality of life score of the illiterate respondents was 11.84(±1.95) for Domain II (Psychological) and 12.7(±1.79) for Domain V (Environment) which was lowest for the respective Domains. In contrast to this the respondents who received tertiary education scored 14.35(±2.1) for Domain II (Psychological) and 15.7(±0.98) in Domain V (Environment) which is the highest for the respective Domains. Thus present study showed that there was significant difference ( $p < 0.01$ ) in the quality of life scores in Domain II (Psychological) and Domain V (Environment) with respect to the educational status. These findings are similar to that reported by Naveet Wig et al in North India<sup>(14)</sup>, where education significantly affected psychological domain scores. However, this was not seen with regards to Domain V (Environment). The observation of significant difference in psychological domain in relation to educational level possibly suggests better coping attitudes towards disease. The better educational status reflected positive attitude of the patient towards his own body image, appearance, feelings, self-esteem and personal beliefs. This also suggests better capacity of the educated people to handle the disease and the adverse circumstances both emotionally and problem focussed showing enhanced problem solving and decision making capacity. In a study conducted in Vietnam by Bach Xuan Tran<sup>(15)</sup> significant difference in the quality of life scores was noticed in Domain V (Environment) which was also observed in the present study. This suggests that educated patients had relatively better quality of health services and good accessibility to it.

Table VII shows that the quality of life score in Domain IV (Social Relationship) was highest in married people with a score of 13.4176 (±2.47). This was followed by those who were single with a score of 12.44(±2.55). The score was 12.17(±2.89) for widowed people and 11.50(±2.12) for the divorced people. The lowest score that is 10.2857(±4.11) was found among those who were separated. This shows that there is a significant difference( $p < 0.05$ ) in the quality of life score in Domain IV (Social Relationship) in relation to the marital status of the respondents. Thus it can be said that, married people had a better quality of life showing that the support of spouse and a better sex life helps in improving the overall quality of life. Family support appears to be the most important source of social support.

The present study showed that HIV/AIDS affects the quality of life of the patients. This will help to plan out further interventions so as to improve their quality of life and to meet the needs, thus enabling them to meet their daily responsibilities and duties towards their family and society. Also it will help to initiate further research to explore the identified and unidentified needs of patients living with HIV/AIDS.

## **Conclusion**

HIV/AIDS affects the quality of life of the people, not only physically, but also psychologically, socially and spiritually. The comparative statistics of various domains showed better quality of life with regards to Domain III (Level of Independence), and poor quality with regards to Domain VI (Spirituality/Religion/Personal beliefs).

It can be concluded that gender played no role in the quality of life scores of various Domains. People with higher educational status were found to have better quality of life in Psychological and Environment domain. Married people were found to have better quality of life scores in Social Relationship as compared to single, widowed and separated.

The present study showed that HIV/AIDS affects the Quality of life(QOL) of the patients, and as such, there is an urgent need for strengthening the existing interventional programmes which will help to improve the QOL. Also further studies should be initiated to determine more factors affecting various domains and thereby assessing the quality of life of people living with HIV/AIDS.

## Summary

HIV patients often experience a decline in Quality of Life (QOL) not only physically, but also psychologically, socially and spiritually. Understanding such factors will help to establish better social services to address multidimensional issues related to quality of life in these patients. With this background, an observational, cross-sectional study was conducted from May to July 2013, in the outpatient department of the Anti-Retroviral Therapy (ART) Clinic at MGM Medical College and Hospital, Kamothe, which is a tertiary care Hospital in Navi Mumbai. The study was carried out to assess the Quality of Life (QOL) of patients living with HIV/AIDS using WHOQOL-HIV BREF<sup>(3)</sup> Scale and its relation to various socio-demographic factors.

150 HIV positive registered patients who were regular attendees at the ART Clinic were included in the study. The respondents were explained about the objectives of the study and were assured of confidentiality. A written informed consent was obtained from all the respondents. They were interviewed personally using a structured questionnaire (WHOQOL-HIV BREF<sup>(3)</sup>) to assess the Quality of Life (QOL) of patients and to collect socio-demographic information. Data was collected on day-to-day basis, compiled and analysed and statistical procedures were carried out.

In the present study, out of 150 respondents, 70 (46.7%) were males and 80 (53.3%) were females. The mean age of the respondents was 40.16(±8.762). With regards to educational status, 41(27.3%) were illiterate, 71(47.3%) received primary education, 23(15.3%) received secondary education and 15(10.0%) received tertiary education. As per the marital status, majority of the respondents were married, i.e. 91(60.7%) followed by 41(27.3%) who were widowed. This was followed by 9(6.0%) patients who were single. 7(4.7%) of the patients were separated and only 2(1.3%) were divorced.

The study showed that the mean score was highest for Domain III (Level of Independence) that is 14.17(±2.42), closely followed by Domain I (Physical) which had a score of 14.11(±2.38), then Domain V (Environmental) where the mean score is 13.29(±1.84). This is followed by Domain IV (Social Relationship) where the mean score comes to 12.85(±2.77), then Domain II (Psychological) with the score of 12.73(±2.22). The lowest mean score was observed in Domain VI (Spirituality/Religion/Personal beliefs) with 12.11(±1.86). No significant difference was noticed in the quality of life scores of various Domains in relation to the gender. The study showed that there was a significant difference ( $p < 0.05$ ) in the quality of life scores in Domain II (Psychological) and Domain V (Environment) with respect to the educational status. Also there was a significant difference ( $p < 0.05$ ) in the quality of life score in Domain IV (Social Relationship) in relation to the marital status of the respondents. Thus it can be concluded that gender played no role in the quality of life scores of various Domains. People with higher educational status were found to have significantly better quality of life in Psychological and Environment domain. Married people were found to have significantly better quality of life scores in Social Relationship as compared to single, widowed and separated.

The present study showed that HIV/AIDS affects the quality of life of the patients, and as such, there is an urgent need for strengthening the existing interventional programmes which will help to improve the QOL and will enable to better allocate limited available resources and address the social welfare needs of the patients. Also it will help to initiate further research to explore the identified and unidentified needs of patients living with HIV/AIDS.

## REFERENCES

- [1] [http://aidsdatahub.org/dmdocuments/NACO\\_Annual\\_Report\\_2011\\_12.pdf](http://aidsdatahub.org/dmdocuments/NACO_Annual_Report_2011_12.pdf)
- [2] Nirmal B, Divya KR, Dorairaj VS, Venkateswaran K. Quality of life in HIV/AIDS patients: A cross-sectional study in south India. *Indian J Sex Transm Dis* 2008;29:15-7
- [3] WHO. WHOQOL-HIV Instrument, Users Manual, Scoring and Coding for the WHOQOL-HIV Instruments. Mental Health Evidence and Research Department of Mental Health and Substance Dependence, World Health Organization, Geneva; 2002.
- [4] <http://www.who.int/gho/hiv/en/>
- [5] Pedram Razavi, Kaveh Hajifathalian, Behdash Saeidi, et al., "Quality of Life among Persons with HIV/AIDS in Iran: Internal Reliability and Validity of an International Instrument and Associated Factors," *AIDS Research and Treatment*, vol. 2012, Article ID 849406, 6 pages, 2012. doi:10.1155/2012/849406
- [6] Cote J, Delmas P, Delpierre C, Sylvain H, Delon S, Rouleau G. Factors Related to Quality of Life in Treatment-Adherent, Successfully Treated HIV Patients in France. *Open Nursing Journal*. 2009;3:10-17. doi 10.2174/1874434600903010010.
- [7] Gowda S, Channabasappa AN, Dhar M, Krishna D. Quality of life in HIV/AIDS patients in relation to CD4 count: A cross-sectional study in Mysore district. *Int J Health Allied Sci* 2012;1:263-7
- [8] Suniti Solomon, Ashita Batavia, Kartik K Venkatesh, Lisanne Brown, Praneeta Verma, Anitha J. Cecelia, Celine Daly, Vaishali S Mahendra, N. Kumarasamy, Kenneth H. Mayer. A Longitudinal Quality-of-Life Study of HIV-Infected Persons in South India: The Case for Comprehensive Clinical Care and Support Services. *AIDS Education and Prevention*. 2009; 21(2): 104-112
- [9] Imam MH, Karim MR, Ferdous C, Akhter S. Health related quality of life among the people living with HIV. *Bangladesh Medical Research Council Bulletin* 2011; 37: 1 -6
- [10] Rajeev K H, Yuvaraj B Y, Nagendra Gowda M R, Ravikumar S M. Impact of HIV/AIDS on quality of life of people living with HIV/AIDS in Chitradurga district, Karnataka. *Indian J Public Health* 2012;56:116-21
- [11] Anand D, Puri S, Mathew M. Assessment of quality of life of HIV-positive people receiving art: An Indian perspective. *Indian J Community Med* 2012; 37:165-9.
- [12] Lamkang A S, Joshi P C, Singh M M. Assessing the quality of Life and needs of HIV/AIDS patients in Manipur: A preliminary study. *Journal of Communicable Diseases*. 2009; 41(4): 221-227
- [13] Folasire OF, Irabor AE, Folasire AM. Quality of life of People living with HIV and AIDS attending the Antiretroviral Clinic, University College Hospital, Nigeria. *Afr J Prm Health Care Fam Med*. 2012;4(1), Art. #294, 8 pages.

- [14] Wig N, Lekshmi R, Pal H, Ahuja V, Mittal CM, Agarwal SK. The impact of HIV/AIDS on the quality of life: A cross sectional study in north India. Indian J Med Sci 2006;60:3-12
- [15] Tran BX (2012) Quality of Life Outcomes of Antiretroviral Treatment for HIV/AIDS Patients in Vietnam. PLoS ONE 7(7): e41062. doi:10.1371/journal.pone.0041062

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# WHOQOL-HIV BREF



MENTAL HEALTH: EVIDENCE AND RESEARCH  
DEPARTMENT OF MENTAL HEALTH  
AND SUBSTANCE DEPENDENCE  
WORLD HEALTH ORGANIZATION  
GENEVA

		Raw Score	Transformed Score	
Domain 1	$(6-Q3) + (6-Q4) + Q14 + Q21$ □ + □ + □ + □			
Domain 2	$Q6 + Q11 + Q15 + Q24 + (6-Q31)$ □ + □ + □ + □ + □			
Domain 3	$(6-Q5) + Q20 + Q22 + Q23$ □ + □ + □ + □			
Domain 4	$Q17 + Q25 + Q26 + Q27$ □ + □ + □ + □			
Domain 5	$Q12 + Q13 + Q16 + Q18 + Q19 + Q28 + Q29 + Q30$ □ + □ + □ + □ + □ + □ + □ + □			
Domain 6	$Q7 + (6-Q8) + (6-Q9) + (6-Q10)$ □ + □ + □ + □			

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<http://dx.doi.org/10.29322/IJSRP.10.06.2020.p10266>

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**ABOUT YOU**

Before you begin we would like to ask you to answer a few general questions about yourself: by circling the correct answer or by filling in the space provided.

What is your **gender**? Male / Female

How old are you? \_\_\_\_\_ (age in years)

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What is your **marital status**? Single / Married/ Living as married / Separated / Divorced / Widowed

How is your **health**? Very Poor / Poor / Neither Poor nor Good / Good / Very Good

Do you consider yourself currently ill? Yes / No

If there is something wrong with you, what do you think it is? \_\_\_\_\_

**Please respond to the following questions if they are applicable to you:**

What is your **HIV serostatus**? Asymptomatic / Symptomatic / AIDS converted

In what year did you first **test positive** for HIV? \_\_\_\_\_

In what year do you think you were infected? \_\_\_\_\_

How do you believe you were **infected with HIV**? (circle one only):

Sex with a man / Sex with a woman / Injecting drugs / Blood products / Other (specify) \_\_\_\_\_

**Instructions**

This assessment asks how you feel about your quality of life, health, or other areas of your life. **Please answer all the questions.** If you are unsure about which response to give to a question, **please choose the one** that appears most appropriate. This can often be your first response. Please keep in mind your standards, hopes, pleasures and concerns.

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We ask that you think about your life in the last two weeks. For example, thinking about the last two weeks, a question might ask:

<http://dx.doi.org/10.29322/IJSRP.10.06.2020.p10266>

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**Please read each question, assess your feelings, and circle the number on the scale for each question that gives the best answer for you.**

		Very poor	Poor	Neither poor nor good	Good	Very good
1(G1)	How would you rate your quality of life?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
2 (G4)	How satisfied are you with your health?	1	2	3	4	5

The following questions ask about **how much** you have experienced certain things in the last two weeks.

		Not at all	A little	A moderate amount	Very much	An extreme amount
3 (F1.4)	To what extent do you feel that physical pain prevents you from doing what you need to do?	1	2	3	4	5
4 (F50.1)	How much are you bothered by any physical problems related to your HIV infection?	1	2	3	4	5
5 (F11.3)	How much do you need any medical treatment to function in your daily life?	1	2	3	4	5
6 (F4.1)	How much do you enjoy life?	1	2	3	4	5
7 (F24.2)	To what extent do you feel your life to be meaningful?	1	2	3	4	5
8 (F52.2)	To what extent are you bothered by people blaming you for your HIV status	1	2	3	4	5
9 (F53.4)	How much do you fear the future?	1	2	3	4	5
10 (F54.1)	How much do you worry about death?	1	2	3	4	5

		Not at all	A little	A moderate amount	Very much	Extremely
11 (F5.3)	How well are you able to concentrate?	1	2	3	4	5
12 (F16.1)	How safe do you feel in your daily life?	1	2	3	4	5
13 (F22.1)	How healthy is your physical environment?	1	2	3	4	5

The following questions ask about **how completely** you experience or were able to do certain things in the last two weeks.

		Not at all	A little	Moderately	Mostly	Completely
14 (F2.1)	Do you have enough energy for everyday life?	1	2	3	4	5
15 (F7.1)	Are you able to accept your bodily appearance?	1	2	3	4	5
16 (F18.1)	Have you enough money to meet your needs?	1	2	3	4	5
17 (F51.1)	To what extent do you feel accepted by the people you know?	1	2	3	4	5
18 (F20.1)	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5

19 (F21.1)	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5
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		Very poor	Poor	Neither poor nor good	Good	Very good
20 (F9.1)	How well are you able to get around?	1	2	3	4	5

The following questions ask you how **good or satisfied** you have felt about various aspects of your life over the last two weeks.

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
21 (F3.3)	How satisfied are you with your sleep?	1	2	3	4	5
22 (F10.3)	How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
23 (F12.4)	How satisfied are you with your capacity for work?	1	2	3	4	5
24 (F6.3)	How satisfied are you with yourself?	1	2	3	4	5
25 (F13.3)	How satisfied are you with your personal relationships?	1	2	3	4	5
26 (F15.3)	How satisfied are you with your sex life?	1	2	3	4	5
27 (F14.4)	How satisfied are you with the support you get from your friends?	1	2	3	4	5
28 (F17.3)	How satisfied are you with the conditions of your living place?	1	2	3	4	5
29 (F19.3)	How satisfied are you with your access to health services?	1	2	3	4	5
30 (F23.3)	How satisfied are you with your transport?	1	2	3	4	5

The following question refers to **how often** you have felt or experienced certain things in the last two weeks.

		Never	Seldom	Quite often	Very often	Always
31 (F8.1)	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	1	2	3	4	5

## **INFORMED CONSENT FORM**

I .....

Resident of .....

Have been explained the aims and objectives of this study on “*Assessing the Quality of Life of HIV/AIDS Patients attending Anti-Retroviral Clinic : A Cross-sectional Study*“ and I hereby give consent for partici

Date :

Signature/Thumb impression

Of the Study Subject