



# ASSESSMENT OF HEALTH-RELATED QUALITY OF LIFE AMONG PEOPLE LIVING WITH HIV/AIDS AT A TERTIARY CARE HOSPITAL, GGH, ONGOLE.

<sup>1</sup>K.Harun Jaya Sai , <sup>2</sup>Sk.Karishma Pyari, <sup>3</sup>N.Chiran Teja,<sup>4</sup>P.Sandhya Rani,<sup>5</sup>Dr.J.Joseph Samuel

<sup>6</sup>Dr.J.Bhargava Narendra,

<sup>1,2,3,4</sup>Student, <sup>5</sup> Doctor, <sup>6</sup>Assistant Professor

<sup>1</sup>Department of Pharmacy Practice,

<sup>1</sup>QIS college of Pharmacy, Ongole, India

**Abstract:** HIV continues to be a major global public health issue, it effects the individual not only physically, but socially, mentally, financially. The QOL is an important factor in every diseased individual, when it comes to HIV/AIDS it is related with their health status, functional status, psychological well-being, enjoyment with life, fulfilment of requirements. The main aim and objectives of this study is to assess the health-related quality of life among people living with HIV/AIDS at a tertiary care hospital, GGH, Ongole and to determine the association of socio demographic and disease related variables; to assess QOL outcomes at facet level and the factors affecting it; to assess viral load before and after the study; to estimate medication adherence based on pill count among people living with HIV/AIDS.

**Methods:** A prospective observational study was carried out among 600 people living with HIV/AIDS, attending ART centre in a tertiary care hospital, GGH, Ongole, from October 2021 to March 2022. QOL was assessed using WHO-QOL-120 Questionnaire and statistical analysis was done using IBM SPSS Version 23.0 software.

**Results and Conclusion:** By using ANOVA ONE WAY the mean score and p-value were calculated for each facet, the current study shows that the majority of the patients had good quality of life. Gender is cross-tabulated with all demographic factors that were significant ( $P < 0.05$ ) according to chi-square analysis, except the mode of HIV transmission which is not significant ( $P > 0.05$ ). We concluded that the medication adherence of participants was good by comparing the viral load values before and after the study.

**Index Terms-** HIV-AIDS, QOL, HRQOL, WHO, UNAIDS, IBM-SPSS

## I. INTRODUCTION

Acquired immune deficiency syndrome (AIDS) is a syndrome caused by human immune deficiency virus (HIV). HIV is one of the major public health problems with severe impact on various facets of life<sup>(1)</sup>. As per UNAIDS reports, globally 37.7 million people were living with HIV in 2020, out of them an estimated 36.0 million were adults; 1.7 million were children (0-14 years); and 53% of all people living with HIV were women and girls<sup>(2)</sup>. At the end of December 2020, 27.5 million (26.5 million-27.7 million) people were accessing antiretroviral therapy. As of 30 June 2021, 28.2 million people were on antiretroviral medication, according to the global HIV and AIDS statistics 2021<sup>(3)</sup>.

WORLDHEALTH ORGANISATION 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, standard, expectations and concerns<sup>(4)</sup>.

The QOL is an important factor in every diseased individual, when it comes to HIV/AIDS it is related with their health status, functional status, psychological well-being, enjoyment with life, fulfilment of requirements. Assessing health related quality of life (HRQOL) is important for documenting patient's perceptions of burden of chronic disease, following changes in health overtime, and evaluating treatment outcome.

It is important to provide in-depth understanding of QOL outcome and influencing factors. If factors affecting QOL is known, it becomes easy for better treatment approaches. Awareness programmes should be implemented to family and community for the support of patients. The adherence ART will be having a positive impact on the QOL.

The purpose of this study is to assess the QOL outcomes at facet level and the factors affecting it; to assess viral load before and after the study; to estimate medication adherence based on the pill count and to determine the association of socio demographic and disease related variables among people living with HIV/AIDS. So, we want to assess the HRQOL among people living with HIV/AIDS which we hope will be a positive step in giving better treatment.

## II. RESEARCH METHODOLOGY

### ➤ **Study design**

This was a prospective observational study was carried out in ART Centre.

### ➤ **Study site**

Department of ART Centre, RIMS Government general hospital, Ongole, Prakasam district, Andhra Pradesh, India

### ➤ **Study period**

This study was carried out for a period of 6 months.

### ➤ **Study population**

The total of 600 patients were included for this study.

### ➤ **Study subjects**

Patients who met the following criteria were enrolled in this study.

### ➤ **Study eligibility criteria:**

#### ▪ **Inclusion criteria**

- Patients of age about 18-70 years were included.
- Patients who are under follow up are included.
- Patients who are registered at ART Centre are included.

#### ▪ **Exclusion Criteria**

Patients above 70 years' age were excluded.

- Patients below 18 years' age were excluded.
- Pregnancy women and paediatrics and TB patients were excluded.

### ➤ **Data collection tools**

- Well-designed proforma
- Microsoft excel 2016 spreadsheet
- IBM SPSS for windows version 23.0 software.

### ➤ **Study procedure**

A prospective observational study was conducted among the subjects who are registered at ART Centre in a tertiary care hospital (GGH-Ongole). They are well diagnosed by the physician based on the laboratory parameters, diagnostic tests and are treated with respective medications. The data was collected by using well designed proforma questionnaire according to the criteria and the data was statistically analysed.

### ➤ Data collection

Data collection was initiated after necessary permissions were obtained from the hospital and concerned departments. Study subjects were interviewed by using world health organization QUALITY OF LIFE-120 (WHO QOL 120) questionnaire. The questionnaire consists of 30 items in 6 domains (Physical health, Psychological health, Level of independence, Social relationships, Environmental and Spiritual domains). Each item contains 5- point Likert type scale that is best represented on their opinion. On the scale one (1) indicates low and negative perceptions, scale five (5) indicates high and positive perceptions, which denoted better QOL. Negatively worded items were scored in reverse order, and all the scores were checked for appropriate range 1 and 5. Other data that were collected include socio demographic information such as age, gender, education status, occupation status, WHO clinical stage, recent CD4 count, Viral load (Before and After 6 months). We have collected data from the ART cards of patients, patient's information books during their visit to hospital and records of patient available in the electronic data system of hospital. Adherence data was collected from the records of patients available in the hospital system. The collected data were used for further statistical interpretations.

### ➤ Statistical analysis

Analysis was conducted by using IBM SPSS for windows version 23.0 software.

## IV. RESULTS AND DISCUSSION

In Ongole, a study has been conducted to assess the QOL among PLWHA. This study uses the WHOQOL-120 questionnaire which consists of 30 items in 6 domains and assessed the QOL among PLWHA attending the government general hospital, Ongole.

The present study includes a total of 600 patients visiting the ART department during 6 months' period.

### Gender:

Figure 1 shows females (59%) are higher prone to HIV than males. Our study is opposed by *Eliza Koirala et.al*<sup>(5)</sup>; *Ekaterine karkashadze et.al*<sup>(6)</sup> they stated males are more prone than females.

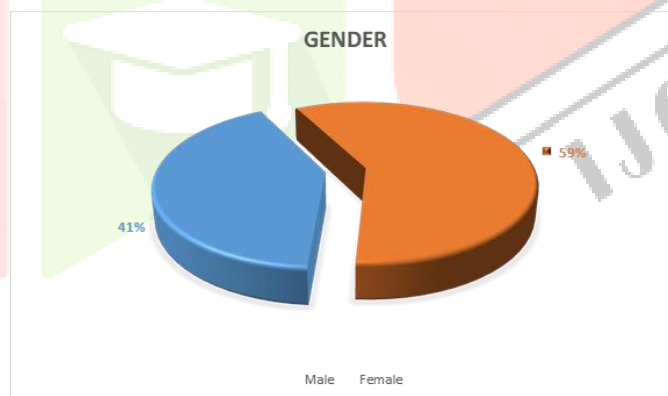
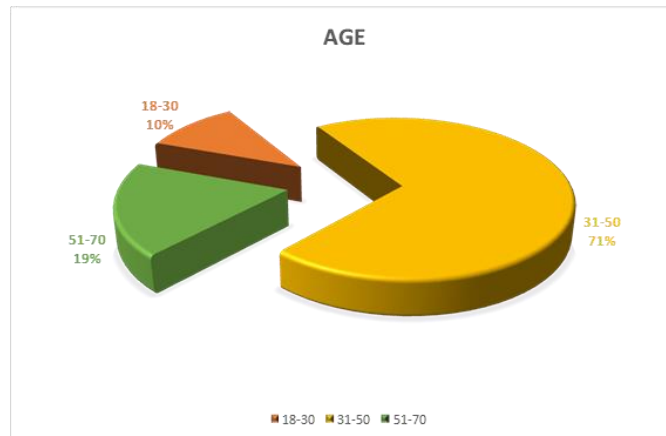


Figure 1 : Distribution of Gender among HIV patients

**Age:**

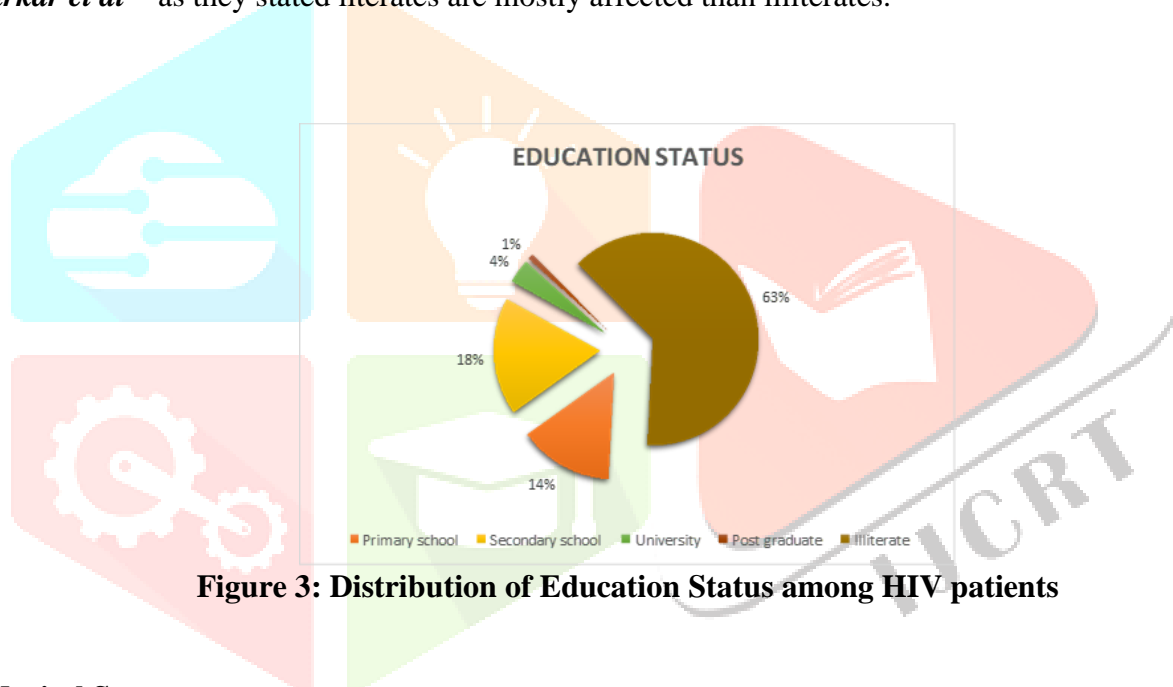
Figure 2 shows the people at age between 31-50 (70.6%) are mostly affected and this was supported by *S. Cynthia Subhaprada et al*<sup>(1)</sup> by stating the people at age between 31-40 are mostly affected.



**Figure 2: Distribution of Age among HIV patients**

**Education Status**

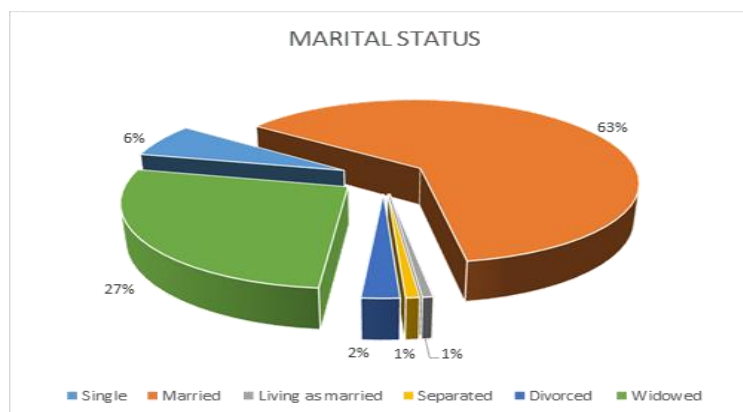
Figure 3 shows Illiterates (63.3%) are mostly affected in this study which is controversial to *Trinath Sarkar et al*<sup>(7)</sup> as they stated literates are mostly affected than illiterates.



**Figure 3: Distribution of Education Status among HIV patients**

**Marital Status**

Figure 4 shows HIV is highly observed in Married woman (62.6%). Out study was supported by *S. Cynthia subhaparada et al*<sup>(1)</sup> they stated that majority of the patients were married.



**Figure 4: Distribution of Marital Status among HIV patients**

### Occupation status

Figure 5 shows Daily wager people (44.5%) are mostly affected.

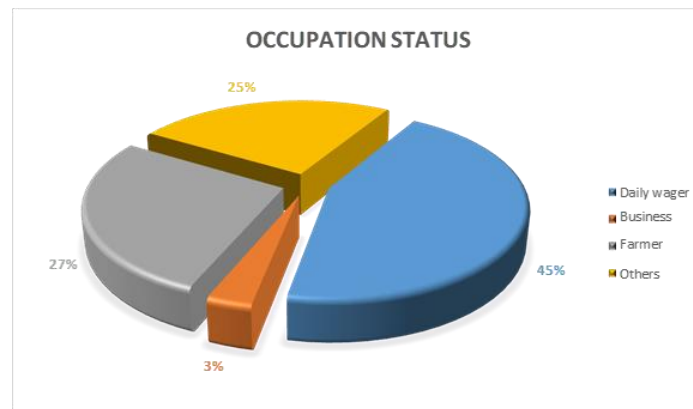


Figure 5 : Distribution of Occupation Status among HIV patients

### Mode of transmission

Figure 6 shows Mode of transmission is high through sexual route (92.5%).

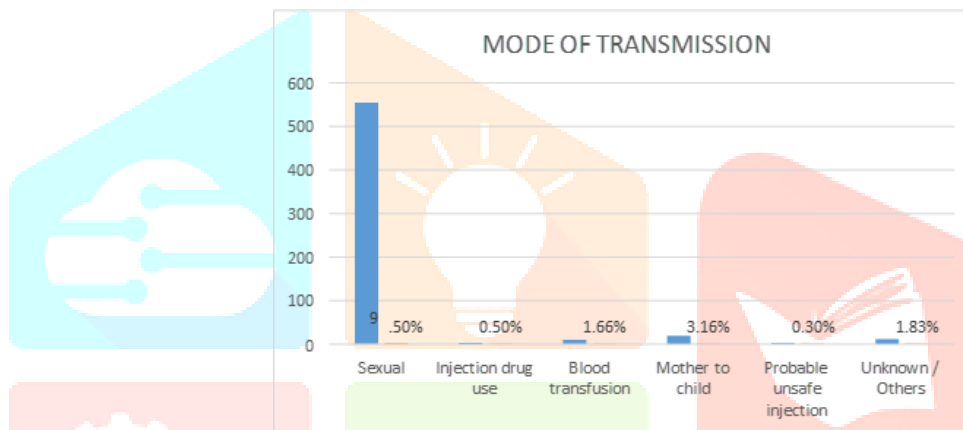


Figure 6 : Distribution of Mode of transmission among HIV patients

### Adherence percentage

Figure 7 shows the demographic parameters out of 600,592 patients were 80-100%, 7 patients were 50-79% and 1 patient were below 50%.

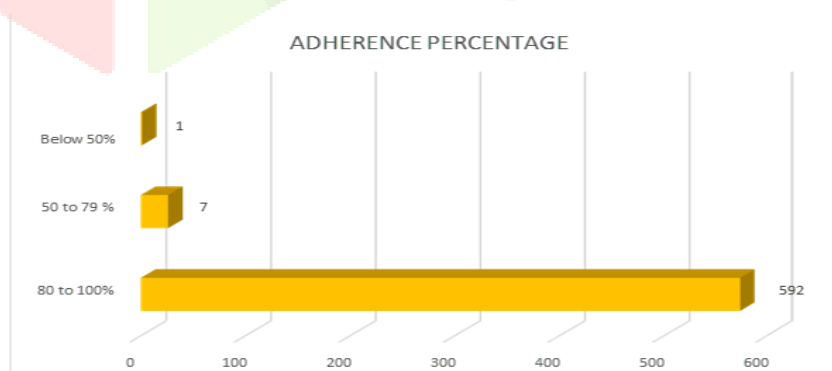


Figure 7 : Distribution of Adherence percentage among HIV patients

### Comparison of viral load before and after the study

Figure 8 shows out of 600 patients, viral load is <1000 for 552 patients before the study and 574 after the study which is highly observed in maximum adherence (592) people.

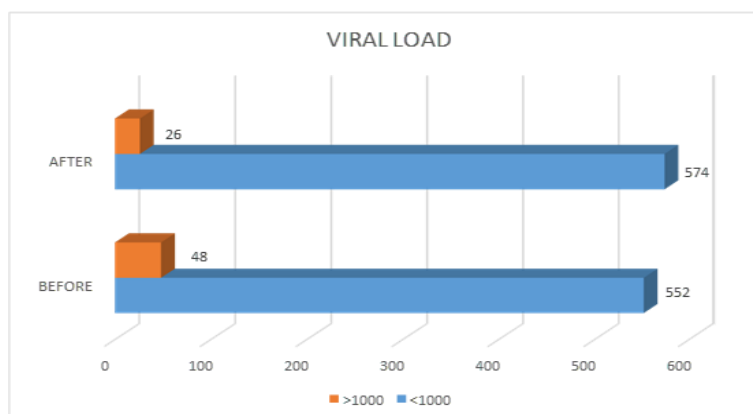


Figure 8: Comparison of viral load before and after the study

Table 1: Descriptive frequency analysis of socio-demographic composition of study participants

Demographic characteristics		Male (N-248)	Female (N-352)	Total N-600(%)	Chi-square
Age	18-30 years	25	39	64(10.6)	0.014 <sup>S</sup>
	31-50 years	163	261	424(70.6)	
	51-70 years	60	52	112(18.6)	
Education	Primary school	45	41	86(14.3)	0.001 <sup>S</sup>
	Secondary school	54	53	107(17.8)	
	University	14	8	22(3.6)	
	Post graduate	2	3	5(0.83)	
	Illiterate	133	247	380(63.3)	
Marital status	Single	28	11	39(6.5)	0.001 <sup>S</sup>
	Married	205	171	376(62.6)	
	Living as married	2	2	4(0.6)	
	Separated	4	1	5(0.83)	
	Divorced	3	11	14(2.3)	
	Widowed	6	156	162(27)	
Occupation	Daily wager	128	139	267(44.5)	0.033 <sup>S</sup>
	Business	7	12	19(3.16)	
	Farmer	59	105	164(27.3)	
	Others	54	96	150(25)	
Family history	Spouse	108	271	379(63.1)	0.000 <sup>S</sup>
	Mother	11	5	16(2.6)	
	Father	4	3	7(1.16)	
	Daughter	1	0	1(0.16)	
	Son	0	2	2(0.3)	
	None	124	70	194(32.3)	
Mode of HIV transmission	Sexual	227	328	555(92.5)	0.214 <sup>NS</sup>
	Injection drug use	1	2	3(0.5)	
	Blood transfusion	2	8	10(1.66)	
	Mother to child	12	7	19(3.16)	
	Probable unsafe injection	1	1	2(0.3)	
	Unknown/Others	5	6	11(1.83)	

S=Significant at  $p < 0.05$ ; NS=Not significant at  $p > 0.05$

- Table 1 shows descriptive frequency analysis of socio-demographic composition of study participants was done. Gender is cross tabulated with following demographics
  - As per statistical analysis there was a **strong clinical association** between gender and age (p value <0.014 by using chi-square test).
  - As per statistical analysis there was a **strong clinical association** between gender and education (p value 0.001 by using chi-square test).
  - As per statistical analysis there was a **strong clinical association** between gender and marital status (p value 0.001 by using chi-square test).
  - As per statistical analysis there was a **strong clinical association** between gender and occupation (p value 0.033 by using chi-square test).
  - As per statistical analysis there was a **strong clinical association** between gender and family history (p value 0.000 by using chi-square test).
  - As per statistical analysis there was **no strong clinical association** between gender and mode of HIV transmission (p value 0.214 by using chi-square test).

**Table 2: One-way ANOVA test to compare mean domain and facet scores between male and female population**

Domains and facets	Mean score facets		
	Male	Female	P-value
<b>PHYSICAL DOMAIN</b>	<b>19.63</b>	<b>18.99</b>	<b>1.039</b>
Sleep	4.24	4.08	0.05*
Energy	2.72	2.70	0.801
Pain	4.34	4.16	<0.05*
Symptom	4.13	4.02	0.168
Fatigue	4.20	4.03	<0.05*
<b>PSYCHOLOGICAL DOMAIN</b>	<b>17.72</b>	<b>16.98</b>	<b>0.52</b>
Negative feeling	3.92	3.79	0.129
Positive feeling	3.09	2.98	0.168
Thinking, learning, memory and concentration	3.42	3.31	0.175
Self-esteem	3.60	3.46	<0.05*
Bodily image and appearance	3.69	3.44	<0.05*
<b>LEVEL OF INDEPENDENCE</b>	<b>17.6</b>	<b>16.95</b>	<b>2.3</b>
Activities of daily living	3.63	3.48	0.05*
Dependence on medication or treatments	2.96	2.52	<0.05*
Work capacity	3.37	3.38	0.868
Mobility	3.86	3.82	0.675
Activities of daily living	3.78	3.75	0.700
<b>SOCIAL RELATIONSHIPS</b>	<b>19.62</b>	<b>18.89</b>	<b>0.74</b>
Sexual activity	4.23	4.15	0.323
Personal relationships	3.66	3.59	0.385
Social support	3.41	3.21	<0.05*
Social inclusion	4.17	3.99	<0.05*
Social inclusion	4.15	3.95	<0.05*
<b>ENVIRONMENTAL DOMAIN</b>	<b>11.7</b>	<b>15.08</b>	<b>1.297</b>
Home environment	3.11	3.18	0.435
Financial resources	3.75	3.51	<0.05*
Health and social care; accessibility and quality	3.35	3.60	<0.05*
Transport	2.05	2.22	<0.05*
Participation in and opportunities for recreation/leisure activities	2.55	2.57	0.806
<b>SPIRITUALITY/PERSONAL BELIEFS</b>	<b>19.82</b>	<b>18.83</b>	<b>1.717</b>
Concerns about the future	3.79	3.78	0.918
SRPB	3.25	3.24	0.795

Concerns about the future	4.11	3.88	<0.05*
Forgiveness and Blame	4.25	3.84	<0.05*
Death and Dying	4.42	4.09	<0.05*

- Table 2 shows by using ANOVA one way the mean scores and p value are calculated for each facet and it is compared between male and female. In that we found males are having higher QOL scores compared to female. Higher QOL scores among males in our study could be due to nature to adopt and mental strength than females, which helps to deal with HIV disease and cope with treatment.
- The mean scores for domain are maximum for physical domain followed by spirituality/personal beliefs, Social relationships, psychological, level of independence. Environmental domain showed the minimum score *which is supported by Abdunaser Algaralleh et.al*<sup>(8)</sup> whereas this is opposed by the study conducted by *Ranjita Santra(Dhali)*<sup>(9)</sup>.
- Along with domain scores which helps in understanding of QOL in various populations, it is also important to understand that each domain contains various components which may affect the outcomes in different ways. For this reason, the individual facets contributing to QOL were examined to know where and what type of problems were faced by PLWHA.
  - In physical domain-sleep, pain, and fatigue are found significant (p value <0.005)
  - In psychological domain- self-esteem, bodily image and appearance are significant (p value <0.005).
  - In level of independence- activities of daily living and dependence on medication or treatments are found significant (p value 0.005, <0.005).
  - In social relationships- social support, social inclusion is significant (p value <0.005).
  - In environmental domain-financial resources, health and social care; accessibility and quality are found significant (p value <0.005).
  - In spirituality and personal beliefs- concerns about the future, forgiveness and blame, death and dying are found significant ( p value <0.005).

## CONCLUSION

- In the present study, we observed more number of HIV patients in female than males. It is highly observed in 31-50 age group, illiterates, married people, daily wage workers as well as in sexually transmitted patients.
- In this study, viral load values are collected before and after 6 months. Out of 600 patients, viral load values of <1000 is observed in 552 and 574 patients respectively. So, we concluded that medication adherence of the patients is good.
- Gender is cross tabulated with all the demographics using chi-square analysis. Most of the demographics are found significant except mode of HIV transmission.
- One-way ANOVA was used to calculate mean scores and p values for each facet and we found most of the patients are having good quality of life.
- Some of the patients Quality of life is negatively affected mainly because of the following domains like environmental domain and level of independence.
- HIV continues to be a major global public health issue. When it comes to HIV/AIDS, QOL is an important factor to estimate the well-being of every individual in all aspect. So, there is a need to do such types of studies in large population.

## ACKNOWLEDGEMENT

We sincerely thank to Dr.J. Joseph Samuel, K.V. Ramesh Babu, Dr.M. Bhargavi, D. Poojitha, K.V.N. Priyanka



## REFERENCES

- [1] S. Cynthia subhaprada, shssank R.V.S.S.,T. Sivakala,S. Madhusai.An evaluation of healthrelated quality of life abd its determinants among prople living with HIV/AIDS attending tertiary care hospital of Kurnool.India. International journals of community medicine and public health- October 2019; 6(10);4470-4477.
- [2] UNAIDS data 2021
- [3] Global HIV and AIDS statistics- fact sheet [internet]
- [4] WHOQOL -HIV Instrument, WHO/MSD/MER/02..English only.
- [5] Eliza koriala, Alisha Thapa.Quality of life of HIV Infected people Receiving Anti Retro Viral Therapy in Westren Nepal: International journal of health science and Research.June,2020:10(6);91-96.
- [6] Ekaterine karkashadze,Margaret A,Gates Nikoloz Chkhartishvili,Jack Dehovitz and Tenagiz t sertsvadze. Assessmentbog QUALITY OF LIFE IN PEOPLE LIVING WITH HIV IN GEORGIA> International journal of STD and AIDS 2017,Vol.28(7)672-678.
- [7] Trinath Sarkar, nabarun karmakar, Aparajita Dasgupta, Bibhuti Saha. Quality of life with HIV/AIDS attending antiretroviral clinic in the centre of excellence in HIV care in india.Jopurnal of education and health promotion;November 2019:8; 1-8.
- [8] Abdunaser Algaralleh,Diala Altwalbeh,Fatima Al-Tarawneh. Health-related Quality of life Among persons Living withHIV/AIDS in JORDan: An Exploratory study. HIV/AIDS – research and palliative care 2020:12;897-907.
- [9] Ranjita santra[dhali] I DEEPAL KUMAR DASH shibani data.Assessment of quality of life in HIV/AIDS patients- A cross- sectional study in school of tropical medicine of Kolkata. Journal of medicine Biomedical and applied sciences. 7 apr 2021:Vol9(4),643-657.

