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Determinants of Non-Adherence to Anti-Retroviral Therapy in HIV/AIDS Patients of HIV Centre Jinnah Hospital

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Abstract
Introduction: Human immunodeficiency virus is very harmful to human's immune system. This virus can further cause specific contaminations and tumors in humans. The HIV-contaminated populace is at a higher danger of AIDS-characterizing tumors, for example, Kaposi sarcoma, non-Hodgkin lymphoma, and cervical malignant growth. Since the coming of exceptionally dynamic antiretroviral treatment (HAART) in 1996, the endurance of HIV-tainted populace in the United States has expanded significantly (Shiels et al., 2011).**Methods:** A descriptive study conducted at HIV centre Jinnah Hospital Allama Iqbal Medical College Lahore. Data was collected through questionnaire from patients of HIV clinic. Data was analysed by SPSS version 21.0, frequency, percentage and standard deviation was found with statistics of pie charts and histogram.**Results**: From one hundred participants 100(100%) shows forgetfulness , 29(29%) shows missing appointments, 33(33%) shows run out of medication, 11(11%) shows depression, anger, despair. 78(78%) don't think that ART helps ,only 4(4%) shows side effects of ART and 1(1%) shows other reason for non-adherence. **Conclusions**: The outcomes gave basic and valuable data that will help in decreasing the factors that are causing non-adherence to ART.
Keywords: Antiretroviral therapy, Adherence, Determinants, Lahore, Pakistan
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CHAPTER 01:
INTRODUCTION:

Human immunodeficiency virus is very harmful to human's immune system. This virus can further cause specific contaminations and tumors in humans. The HIV-contaminated populace is at a higher danger of AIDS-characterizing tumors, for example, Kaposi sarcoma, non-Hodgkin lymphoma, and cervical malignant growth. Since the coming of exceptionally dynamic antiretroviral treatment (HAART) in 1996, the endurance of HIV-tainted populace in the United States has expanded significantly (Shiels et al., 2011).

The invulnerable framework is viewed as lacking when it can no longer satisfy its job of battling contamination and malady. Contaminations related with serious immunodeficiency are known as "shrewd diseases", since they exploit a debilitated insusceptible framework (Ahlawat, 2014).

AIDS is a term which applies to the most developed phases of HIV contamination. The (AIDS) is a staggering new infection brought about by the human immunodeficiency infection (HIV). This retrovirus causes significant immunoincompetence in its contaminated hosts, who are from that point defenceless to create group serious and regressing protozoal, contagious, bacterial, viral, and arthropodal astute diseases, just as uncommon malignancies (Macher, 1988).

It is very necessary for HIV infected patient to be compliant to its treatment to reduce further complications. Support of adherence to antiretroviral treatment is one of the basic mainstays of treatment for HIV-tainted patients. The high extent of non_adherence (28.4%) and the prescient variables identified with this demonstrate it is important to improve patients' adherence to antiretroviral treatment (Soares, Brito, Lima, & Lapa, 2019).

Following 95% or more of antiretroviral treatment lessens the pace of malady movement and passing among individuals' living human immunodeficiency infection (Gebrezgabher et al., 2017).

The development of medication safe strains of HIV infection and treatment disappointment can result from non-adherence to antiretroviral treatment. While non-adherence to treatment is definitely not other issue or clear to HIV/AIDS, it has gotten revived consideration due to the entangled combination treatment regimens being recommended (Chesney, Morin, & Sherr, 2000).

1.1 Background:

First case of AIDS was reported in 1981 in USA and this was become a major public health problem since the time of first report , nationally and internationally (Control & Prevention, 2006).

Overall enumeration review of HIV tainted individuals demonstrates that about 37.9 million [32.7-44.0 million] human populaces were living with HIV toward the finish of 2018. The age absolute insights of HIV tainted human populace estimation depicted as 0.8% [0.6-0.9%] of grown-up matured human populace in the scope of 15-49 years are living with HIV disease around the world. Despite the fact that there is a distinction in weight to complete circumstance related with the HIV pestilence impressively among areas and nations, African district stays as most lethal tainted, with roughly 1 in each 25 grown-ups which establishes about (3.9%) living with HIV

and this records for multiple thirds of the absolute human populace living with HIV around the world (Cheneke, Edessa, & Koya).

Sub –Saharan Africa has been overwhelming by AIDS while only 10%of total world population lives in that area, an expected 70% of all HIV contaminated grown-ups and kids are found there. (Morison, 2001) In 2018, the level of individuals living with HIV among grown-ups (15–49 years) in Ethiopia were 1%. The quantity of new HIV diseases has diminished, from 29,000 to 23,000 (Desta et al., 2020).

First case of AIDS was reported in 1987 in Pakistan (Khanani, Hafeez, Rab, & Rasheed, 1988).

Of the almost 100,000 road based IDUs in Pakistan, 20% have HIV. We examined the ongoing ascent in HIV pervasiveness from 12 to 52% among IDUs in Sargodha in spite of > 70% inclusion with syringe trades (Khan, Awan, Qureshi, Razaque, & Zafar, 2009).

In April 2019, the nearby organization in Larkana area was alarmed by media reports of expanded in human immunodeficiency infection (HIV) cases among kids Larkana, Sindh region, Pakistan (Mir et al., 2020).

1.2 Significance:

It is vital to be follower to any treatment or treatment being developed of sickness, for example, to decrease the medication opposition, to grow the capacity of body to contend HIV contamination, to decay the viral burden in the body, to shield the person to get different diseases because of immunocompromised condition and to increase life expectancy. Poor adherence can have negative effects on treatment output (Jack, McLean, Moffett, & Gardiner, 2010).

To move towards adherence, it is similarly essential to discover first the real factors that are making boundaries in the method of adherence treatment. Estimation of adherence might be significant in deciding why patients fall flat antiretroviral treatment (Paterson, Potoski, & Capitano, 2002).

1.3 Problem statement:

There are different factors that lead to non-adherence to ART taking by patients. Only few studies about determinants of non-adherence are present in Pakistan, because in our Islamic culture people hesitate to disclose this disease because of its immoral reasons. This study will be helpful in filling this gap by finding other substantial factors causing non-adherence in patients taking ART in Lahore Pakistan that will help in further improvement in adherence level and HIV infection control in country.

1.4 Objectives of Study:

I. To assess the attitude of people living with HIV/AIDS towards antiretroviral therapy in HIV centre Jinnah Hospital.
II. To assess the adherence and satisfaction of people living with HIV/AIDS towards antiretroviral therapy in HIV centre Jinnah Hospital.

CHAPTER 02:
LITERATURE REVIEW:

A cross sectional examination was done at Arba Minch Hospital from March 5 to May 5, 2015. One month patients' self-report and drug store top off records were utilized to evaluate adherence. Information were gathered by a standard poll after pre-tried and information reflection design. Multivariable investigation indicated that, adherence was decidedly connected with sex (male) (AOR=3.03, CI (1.69-5.42)), liberated from substance utilizes (AOR=3.49, CI (1.80-6.77)), nonappearance of indicator of medications (AOR =2.61, CI (1.19-5.73)), ART plan fit to every day schedules (AOR= 2.93, CI (1.24-6.91)) and feeling comfort on taking ART sedate before others (AOR=3.32, CI (1.54-7.16)). The foremost reasons detailed for skipping medicine dose in this analysis were change in their every day schedule work 47 (25.54%), occupied with doing different things 34 (18.48%) and being away from home 32 (17.39%), and the rest reasons included essentially neglected to take the pills, need to stay away from symptoms, come up short on drugs, felt sadness, transport cost, and felt rest (Azmach, 2017).

Another cross-sectional study was done among 368 HIV-positive pregnant moms going to the PMTCT center at Nnamdi Azikiwe University Teaching Hospital Nnewi, Nigeria to decide the frequency and demographic factors identified with non-adherence to ART. The mean age and equality of the ladies were 30.4 ± 4.4 years and 2.5 ± 2.0 respectively. Greater part (97.0%) were coupled and had accomplished secondary study or more (86.9%). one hundred and sixty five (44.8%) had been on ART for over 2 years while 37.0 % initiated ART in the list pregnancy. The non-adherence rate was 21.7%. The normal explanations behind missing ARV drugs were absent mindedness (63.8%); feeling sound and subsequently no compelling reason to take ARV drugs (16.3%) and living a long way from the clinic (15.0%). Expanding maternal age (X2 = 13.6; P = 0.001), low instructive level (X2 = 39.36 P = 0.002), boundaries of equality (X2 = 11.3 P = 0.03), spouse's low instructive level (X2 = 13.8; P = 0.01), being in a sero-concordant relationship (X2 = 6.2; P = 0.05) and non-exposure of HIV serostatus (X2 = 12.96; P = 0.003) were fundamentally connected with non-adherence to ART (Igwegbe, Ugboaja, & Nwajiaku, 2010).

Moreover another Cross-sectional study in a tertiary-level hospital in north-eastern Brazil was conducted to find the reasons linked with nonadherence to ART. The prevalence of nonadherence was 28.4%. Critical affiliations were found in regards to the accompanying factors: age under 35 years, smoking, stationary way of life, absence of drug and absence of information in regards to the patient's HIV status, with respect to the patient's partner or family (Soares et al., 2019).

Furthermore a Study was done among 401 young people accepting ART in 13 health workplaces of the Center Region of Cameroon, from April through August 2018, a cross sectional study. Hazard factors of non-adherence were evaluated, Mean age was 14.63 (±2.89) and 55.9 % (224) were female. Non-adherence was related with "living away about 5 km from the heath office" (OR 1.84, 95% CI: 1.01-3.33, p=0.045); "young people taking prescription in a same service with adults" (OR 0.11, 95% CI: 0.03-0.35, p<0.001), managed at countryside health office (OR 4.29, 95% CI: 1.84-9.96, p=0.001) and not guided consistently (OR 0.02, 95% CI: 0.01-0.36, p=0.007) (Ketchaji et al., 2019).

Another case–control study (institution based unmatched) was conducted in Aksum town. An aggregate of 411 (137 cases and 274 control) study members were included for the investigation. Most of them were male in sex. Having 2 years or more span on ART [AOR = 7, 95% CI (2.2, 22.6)], history of unfriendly impact [AOR = 6.9, 95% CI (1.4, 32.9)], substance use [AOR = 5.3, 95% CI (1.4, 20.0)], living with guardians [AOR = 3.4, 95% CI (1.2, 10.3)], having unhappiness manifestation [AOR = 3.3, 95% CI (1.4, 7.5)], <350 cells/mm3 group of separation 4 count [AOR = 3.2, 95% CI (1.8, 5.8)] and low dietary assorted variety [AOR = 2, 95% CI (1.1, 3.7)] were discovered critical determinants of non-adherence to antiretroviral treatment (Gebrezgabher et al., 2017).

Furthermore a medical clinic based, cross-sectional investigation was led at two tertiary consideration emergency clinic of Lucknow. A sum of 322 grown-up HIV-positive patients enlisted in the ART place were incorporated. Non adherence was evaluated based on pill check strategy. A sum of 10.9% of patients were seen as nonadherent to ART. Chief causes referred to were being occupied with other work (40.0%), felt debilitated or sick (28.5%), not having cash (14.2%), and being away from home (11.4). Multivariate logistic regression examination uncovered that non_adherence was fundamentally connected with nonbeneficial recognitions towards ART (chances proportion (OR) 18.5; 95% certainty stretch (CI) 3.2-106.6; P = 0.001), being advised for adherence for over 3 months (OR 13.9; 95% CI 1.6-118.9; P = 0.01), nearness of misery (OR 2.6; 95% CI 1.0-6.7; P = 0.04), and the individuals who were not happy with human services offices (OR 5.63; 95% CI 1.88-16.84; P = 0.00) (Shukla et al., 2016).

Here another multiple office based cross-sectional investigation, where 416 patients matured more than 18 years were deliberately chosen and talked with utilizing an organized survey about their experience taking ART. Extra information was separated from medical clinic records. Generally speaking, 403 patients reacted; 35% male and 65% females, 18% were non-follower, and main (38%) purpose behind missing treatment were being full of activity and be unable to remember. Getting to ART in a centre inside strolling good ways from home (OR = 2.387, CI.95 = 1.155-4.931; p = 0.019) and trouble with dosing plan (OR = 2.310, CI.95 = 1.211-4.408, p = 0.011) anticipated non-adherence (Wakibi, W Ng'ang'a, & Mbugua, 2011).

A cross-sectional examination was directed on 351 ART patients in the ART center of the University of Gondar referral medical clinic. Information were gathered by a pretested questionnaire organized survey from May to June 2014. Out Of 351 investigation subjects, ladies were more dominating than men (64.4% versus 35.6%). Three hundred and forty (96.9%) patients agreed and vigorously agreed that the utilization of ART is basic in their life, and around 327 (93.2%) uncovered their sero-status to family. Seventy-nine (22.5%) members were dynamic substance clients. The degree of adherence was 284 (80.9%). Three hundred and forty-one (97.2%) respondents had great or reasonable adherence. Among the explanations behind missing portions were neglect (29 [43.3%]), missing arrangements (14 [20.9%]), coming up short on medication (9 [13.4%]), melancholy, outrage, or misery (4 [6.0%]), symptoms of the medication utilized (2 [3.0%]), and non-belief in the ART (2 [3.0%]). The factors discovered altogether connected with non-adherence were age (P-esteem 0.017), work (P-esteem 0.02), HIV revelation (P-esteem 0.04), and agreeableness to take ART within the sight of others (P-esteem 0.02) (Tsega, Srikanth, & Shewamene, 2015).

Another prospective study of HIV patients getting their first antiretroviral treatment in public referral centres, Belo Horizonte, Brazil. Among 306 patients, the combined frequency of non-adherence was 36.9% (rate 0.21/100 person days). Multivariate examination (P < 0.05) demonstrated that joblessness (RH = 2.17), alcohol use (RH = 2.27), self-report of at least three unfavourable responses (RH = 1.64), number of pills every day (RH = 2.04), switch in antiretroviral routine (RH = 2.72), and a more extended time between the HIV test result and the first antiretroviral solution (RH = 2.27) were related with an expanded danger of non-adherence, though the utilization of more than one health administration showed a negative affiliation (RH = 0.54) (de F Bonolo et al., 2005).

Forthcoming cross-sectional examination. Assessed 385 epilepsy outpatients in a tertiary referral place, 18 years or more established, proficient, without subjective hindrance or dynamic mental issue, who were autonomous in everyday living exercises. Information were broke down with relationship tests and conjoint examination utilizing multivariate calculated regression. Non-adherence rate, estimated by the Morisky–Green Test, was

66.2%, a moderate-to-low adherence level. Non-adherence was higher in men, in more youthful patients and in patients with uncontrolled seizures. Expanding treatment unpredictability was additionally connected with diminished treatment adherence (Ferrari, de Sousa, & Castro, 2013).

This cross-sectional investigation was on HIV contaminated grown-ups going to ART center in Nigeria to investigate non_adherence factors corresponding to their financial qualities. Approved organized survey was controlled to 221 members. Results indicated a high non_adherence rate of 85.1%. The commonest happening components of non-adherence were forgetfulness (53.8%), occupied timetable (38.8%), reactions of medications (31.9%), and disgrace (31.9%). Guys were bound to gripe from occupied timetable, feeling solid, dread of accomplice exposure, long holding up period, and long haul routine. Patients with no conventional training were bound to credit non-adherence to poor correspondence, symptoms of medications, and shame

CHAPTER: 3
METHODOLOGY

3.1 Study Design: Descriptive study design was used for study.
3.2 Study setting: The setting of this study was HIV centre Jinnah Hospital AIMC Lahore.
3.3 Sample size: sample size was as convenient.
3.4 Target Population: population was patients of HIV clinic Jinnah Hospital AIMC Lahore.
3.5 Research Tool: Questionnaire was used as research tool for data collection. Tool was comprise of four sections with 25 items, which was developed from different literature.

First section of questionnaire was consisted of 08 items that will be relating to demographic and socioeconomic factors, including age, sex, and education. Occupation, marital status, religion, living conditions and family income.

Second section of questionnaire was consisted of five items relating to Attitude of people living with HIV/AIDS towards ART by using Likert scale and digitomas (yes/no) answers.

Third section was consisted of five items related to treatment related Treatment Adherence and satisfaction with ART.

Fourth section was consisted of seven question the reason for non-adherence to ART medication to relevant patient.

3.6 Time frame; The study duration was three and half months 16th April 2020 to 30th June 2020.
From 15th march 2020 – 15th April 2020 theory (introduction + literature review) was written,
From 16th April 2020 – 10th May 2020 questionnaire was filled and data collected,
From 11th May 2020 – 31st May 2020 data was data entered on SPSS software version 20 and data analysis done,
From 1st June 2020 to 25th June 2020 writing up results, discussions, recommendations and abstract done,
Binding and submission of proposal was **from 26th 2020 to 30th June 2020.**
3.7 Inclusion criteria: Inclusion criteria was the adults both male and females from 18-45 years of age registered in HIV clinic Jinnah Hospital Lahore.
3.8 Exclusion criteria: Exclusion criteria was all HIV AIDS patients who are adherent to their treatment of 18 to 45 years of age, have missing their clinical record, mentally ill and pregnant women.
3.9 Statistical analysis:
The data was entered in SPSS (Statistical Package for Social Sciences) for Windows software application program version 21.0, and frequencies, percentages and standard deviation of different variables was determined.

CHAPTER: 4
RESULTS

This chapter consists of two section in which section one indicates frequency and percentage of demographic data, Section 2 show the frequency and percentage of Determinants of non-adherence of antiretroviral therapy in HIV/AIDS patients.

Section: 1		
	Characteristics	**N%**
Gender	Male	80(80%)
	Female	13(13%)
	Transgender	7(7%)
Age	18-30 yrs.	18(18%)
	31-45 yrs.	64(64%)
	46-54 yrs.	16(16%)
	Above 54	2(2%)
Marital status	Married	75(75%)
	Single	18(18%)
	Widowed	3(3%)
	Divorced	4(4%)
Qualification	Illiterate	27(27%)
	Primary	55(55%)
	Secondary	16(16%)
	Higher secondary	2(2%)
Occupation	Student	1(1%)
	Employed	33(33%)
	Unemployed	35(35%)
	Self-employed	31(31%)
Living condition	Poor	18(18%)
	Average	62(62%)
	Good	19(19%)
	Very good	1(1%)
Monthly income	<10000 PKR	8(8%)
	11000-20000 PKR	20(20%)
	21000-30000 PKR	51(51%)
	>30000 PKR	21(21%)
Religion	Muslim	92(92%)
	Christianity	8(8%)

Table: 1

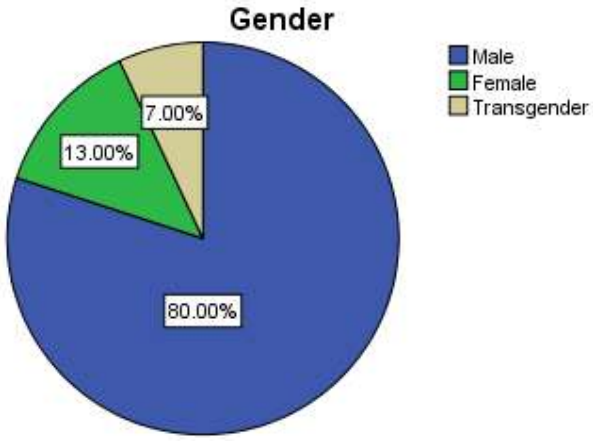
Table 1: shows the frequency and percentage of demographic data

One hundred HIV detected patients were participated in this study in which 1(1%) students, 33(33%) employed, 35(35%) unemployed, 31(31%) self-employed. Age between 18-30yrs were 18(18%), 31-45yrs of age were 64(64%) and age from 46-54yrs were 16(16%) and above 64 yrs were 2%. Among those 80(80%) were male, 13(13%) were female and 7(7%) were transgender. From them married were 75(75%), single 18(18%), widowed 3(3%) and divorced 4(4%). 27(27%) were illiterate, 55(55%) were having primary education, 16(16%) were only middle and 2(2%) were with higher secondary education. The living condition of patients of above table shows only 62(62%) were with average living style, 19(19%) were living in good condition, 18(18%) were living in poor condition and 1(1%) were with very good living style.

Table 2

Gender of patients

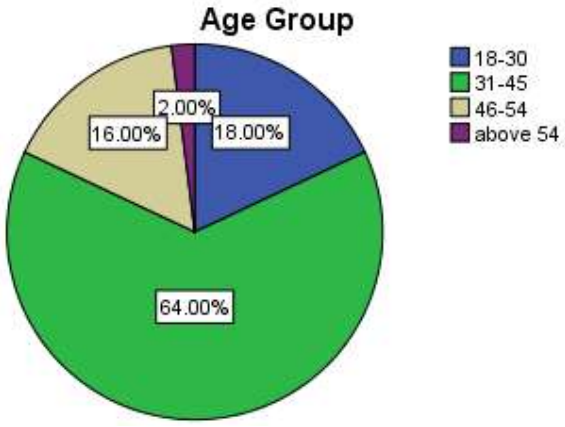
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	Male	80	80.0	80.0	80.0
	Female	13	13.0	13.0	93.0
	Transgender	7	7.0	7.0	100.0
	Total	100	100.0	100.0	



Figures 1: Pie chart represent the frequency and percentage of the gender of participants which shows that 80% were male, 13% female and 7% were transgender that was 100 in number and 100%.

Table 3

	Age Group				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-30	18	18.0	18.0	18.0
	31-45	64	64.0	64.0	82.0
	46-54	16	16.0	16.0	98.0
	above 54	2	2.0	2.0	100.0
	Total	100	100.0	100.0	



Figures 2: Pie chart represent the frequency and percentage of the age of participants which shows that 64% were between 31-45 years of age, 18% were between 18-30 years of age ,16% were between the range of 46-54 years of age and 2% were above 54years that was 100 in number and 100%.

Table 4

	Marital Status				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Married	75	75.0	75.0	75.0
	Single	18	18.0	18.0	93.0
	Widowed	3	3.0	3.0	96.0
	Divorced	4	4.0	4.0	100.0
	Total	100	100.0	100.0	

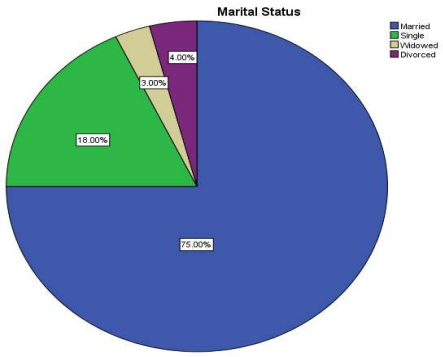


Figure 3: Pie chart represent the frequency and percentage of the marital status of participants which shows that 75% were married , 18% single ,4% were divorced and 3%were widowed that was 100 in number and 100%.

Table 5

	Qualification				
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	illiterate	27	27.0	27.0	27.0
	primary	55	55.0	55.0	82.0
	secondary	16	16.0	16.0	98.0
	Higher secondary	2	2.0	2.0	100.0
	Total	100	100.0	100.0	

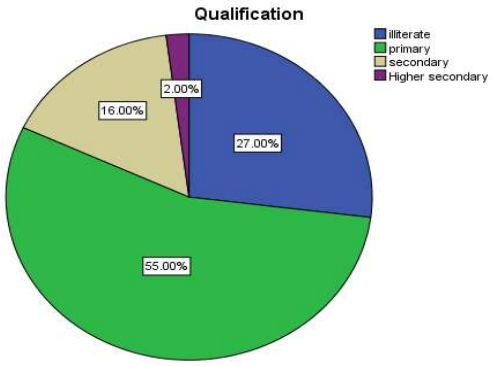


Figure 4: Pie chart represent the frequency and percentage of the qualification of participants which shows that 55% were primary educated, 27% were illiterate, 16% were secondary educated and 2%were graduated higher secondary that was 100 in number and 100%

Table 6

	Occupation				
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	student	1	1.0	1.0	1.0
	employed	33	33.0	33.0	34.0
	unemployed	35	35.0	35.0	69.0
	self-employed	31	31.0	31.0	100.0
	Total	100	100.0	100.0	

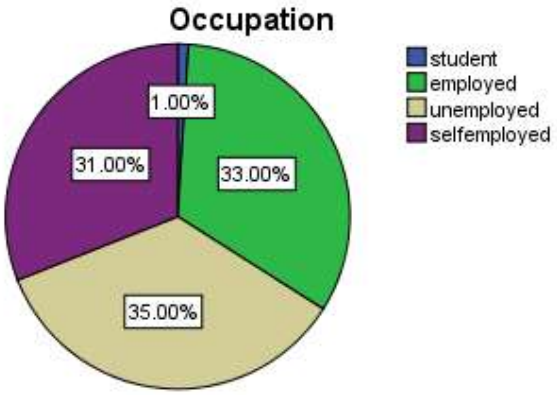


Figure 5: Pie chart represent the frequency and percentage of the occupation of participants which shows that 35% were unemployed, 33% were employed, 31% were self-employed and 1%were students that was 100 in number and 100%.

Table 7

		living Conditions			
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	poor	18	18.0	18.0	18.0
	Average	62	62.0	62.0	80.0
	good	19	19.0	19.0	99.0
	Very good	1	1.0	1.0	100.0
	Total	100	100.0	100.0	

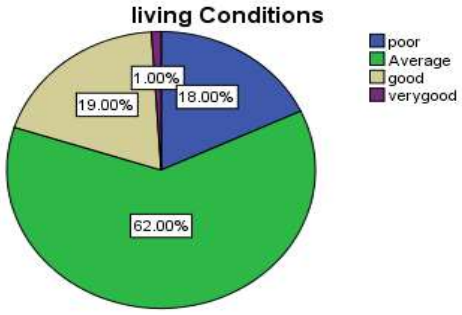


Figure 6: Pie chart represent the frequency and percentage of the living condition of participants which shows that 62% were living with average condition, 19% were living in good condition, 18% were living in poor living condition and 1%were living in very good living condition that was 100 in number and 100%.

Table 8

		Monthly Income			
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	<10000	8	8.0	8.0	8.0
	11000-20000	20	20.0	20.0	28.0
	21000-30000	51	51.0	51.0	79.0
	>30000	21	21.0	21.0	100.0
	Total	100	100.0	100.0	

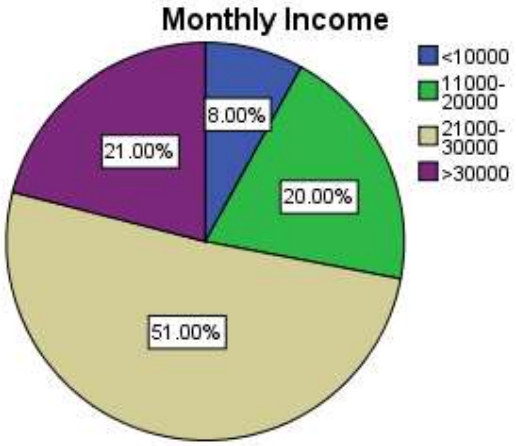


Figure 7: Pie chart represent the frequency and percentage of the monthly income of participants which shows that 51% have between the range of 21000 PKR -30000 PKR income , 21% have >30000 PKR income, 20% have between the range of 11000 PKR -20000PKR income and 8% have <10000 income that was 100 in number and 100%.

Table 9

	Religion	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Muslim	92	92.0	92.0	92.0
	Christianity	8	8.0	8.0	100.0
	Total	100	100.0	100.0	

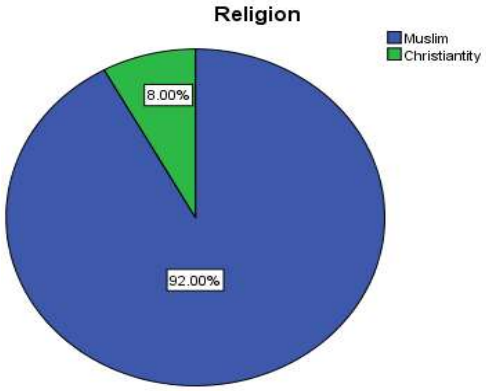


Figure 8: Pie chart represent the frequency and percentage of the religion of participants which shows that 92% were Muslims and 8% were Christians, that was 100 in number and 100%.

Table: 10
Attitude of people living with HIV/AIDS towards ART
1= Strongly Disagree 2 = Disagree 3 = Neutral 4= Agree 5 = Strongly Agree

S. No	Statement	SD	DA	N	A	SA
1	ART is essential for the HIV patient	0(0%)	14(14%)	57(57%)	29(29%)	0(0%)

1= Comfortable 2 = Uncomfortable

S. No	Statement	C	UN
1	Are you feeling comfortable to take ART in the presence of others	9(9%)	91(91%)

Above table shows the attitude of people living with HIV/AIDS towards ART
First question was about ART is essential for the HIV patients? , from hundred participants 57(57%) were neutral for this question, 29(29%) shows agree response, 14(14%) shows disagree response and zero were strongly agree

and strongly disagree response. 91(91%) from these show uncomfortable response to take ART in presence of others, only 9(9%) show comfortable response to take ART in presence of others

Table: 11
Treatment Adherence and satisfaction with ART
Optional Category
1= <6 months 2 =6-12 months 3 = >12months & 3 years 4=>3 years

1= Yes 2 = NO

1= Most of the time 2 = Sometime 3 = None of time 4= All the time

1= 1-3 Doses 2 = 4-8 Doses 3 = > 8Doses

S. No	Statement	Yes	No
1	Family disclosure	64(64%)	36(36%)
2	Community disclosure	37(37%)	63(63%)
3	Use of active substance	65(65%)	35(35%)
4	Duration of therapy		
5	side effect		
6	satisfaction with health care provider		
7	Dose missed		
8	Numbers of missed doses	4(4%)	96(96%)

Above table shows the treatment adherence and satisfaction with ART
First statement
Section 2

Table: 12
Reason for non-adherence
1= Yes 2 = No

S. No	Statement	Yes	No
1	Forgetfulness	100(100%)	0(0%)
2	Missing appointment	29(29%)	71(71%)
3	Run out of medication	33(33%)	67(67%)
4	Depression, anger, despair	11(11%)	89(89%)
5	Don't think ART helps	78(78%)	22(22%)
6	Side affects	4(4%)	96(96%)
7	Others	1(1%)	99(99%)

Above table shows reasons for non-adherence to ART
From one hundred participants 100(100%) shows forgetfulness , 29(29%) shows missing appointments, 33(33%) shows run out of medication, 11(11%) shows depression, anger, despair. 78(78%) don't think that ART helps ,only 4(4%) shows side effects of ART and 1(1%) shows other reason for non-adherence.

Table 13

ART is essential for the HIV Patient					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	14	14.0	14.0	14.0
	Neutral	57	57.0	57.0	71.0
	Agree	29	29.0	29.0	100.0
	Total	100	100.0	100.0	

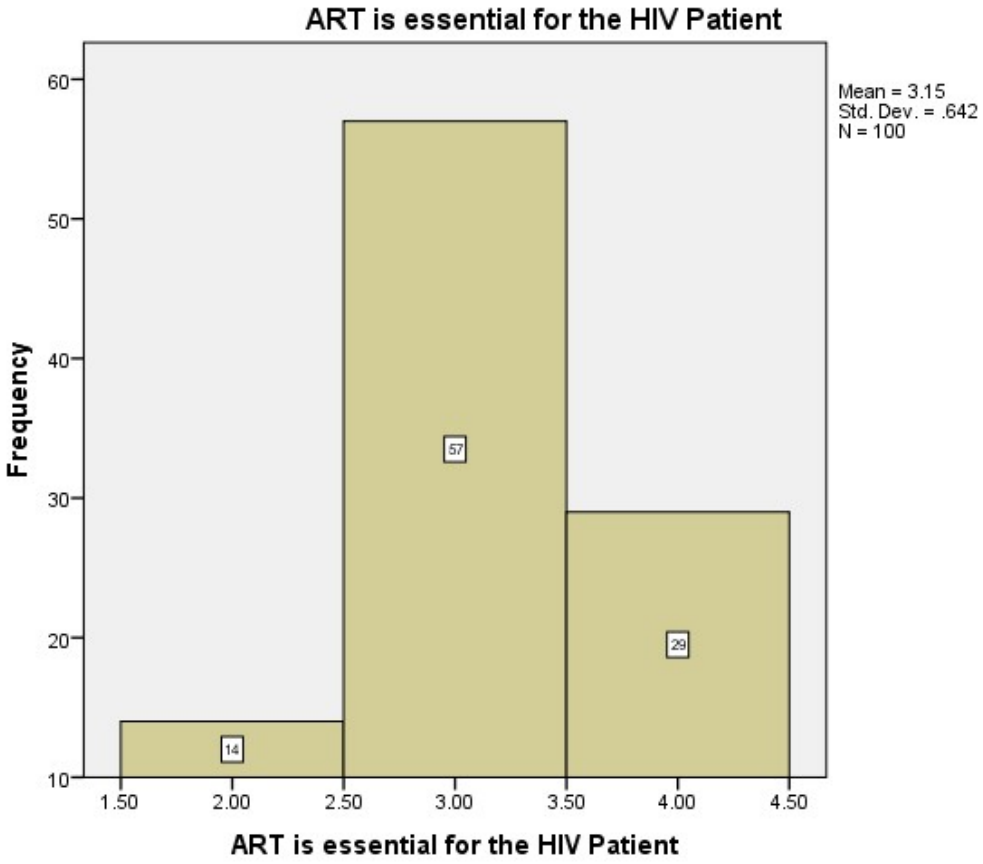


Figure 9: Histogram shows the frequency and standard deviation of ART is essential for HIV patients

Table 14

Are You feeling Comfortable to take ART in the presence of Others?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	comfortable	9	9.0	9.0	9.0
	Uncomfortable	91	91.0	91.0	100.0
	Total	100	100.0	100.0	

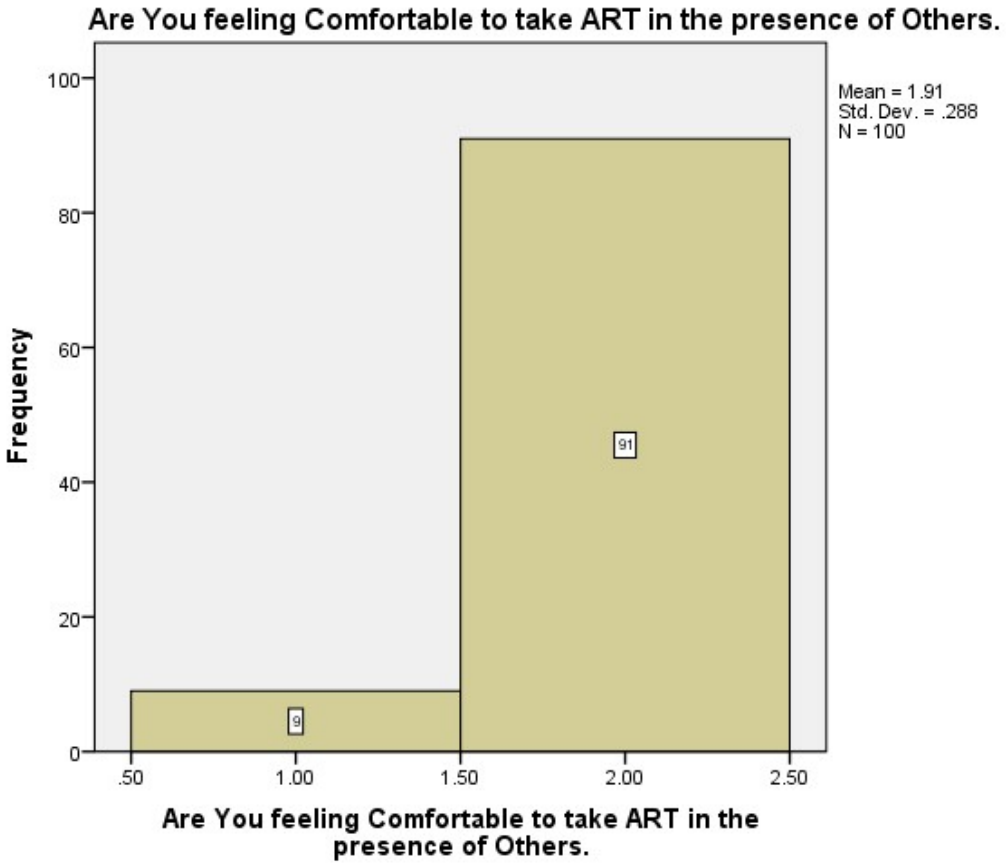


Figure 10: Histogram shows the frequency and standard deviation of are you feeling comfortable to take ART in presence of others

Table 15

Satisfaction with health care provider

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	most of the time	19	19.0	19.0	19.0
	sometimes	29	29.0	29.0	48.0
	none of the time	32	32.0	32.0	80.0
	all the time	20	20.0	20.0	100.0
	Total	100	100.0	100.0	

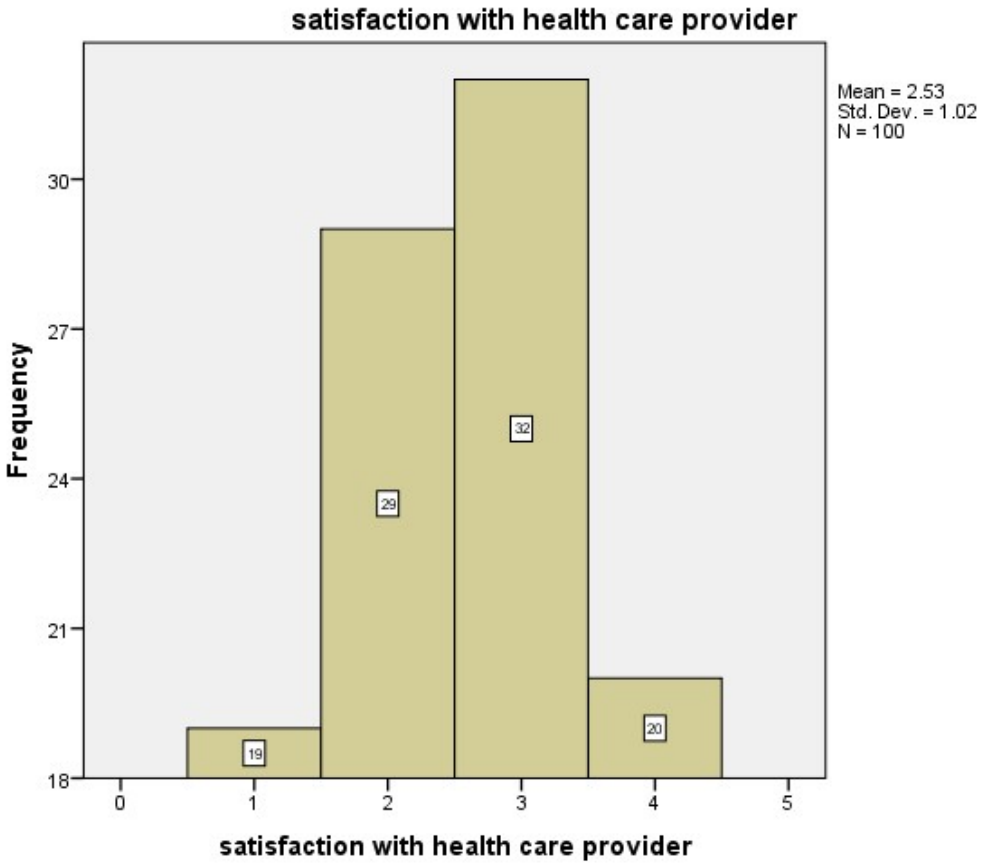


Figure 11: Histogram shows the frequency and standard deviation of satisfaction with healthcare provider

Table 16

		forgetfulness			
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	yes	100	100.0	100.0	100.0

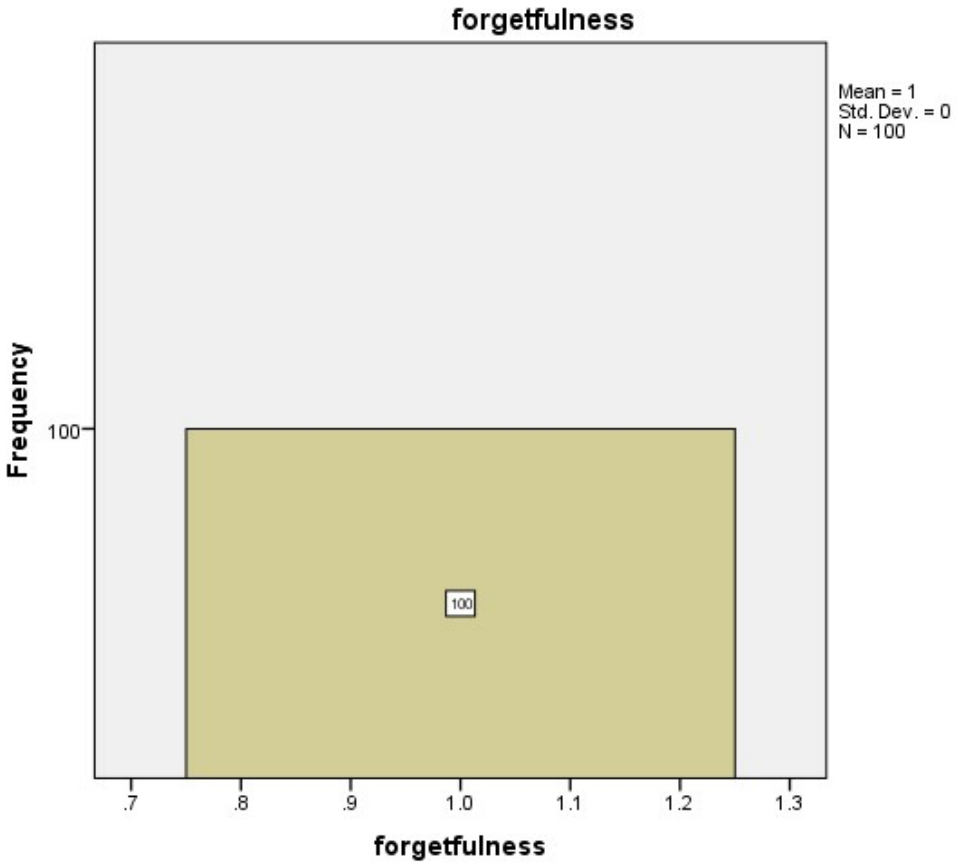


Figure 12: Histogram shows the frequency and standard deviation of forgetfulness

Table 17

		missing appointment			
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	yes	29	29.0	29.0	29.0
	no	71	71.0	71.0	100.0
	Total	100	100.0	100.0	

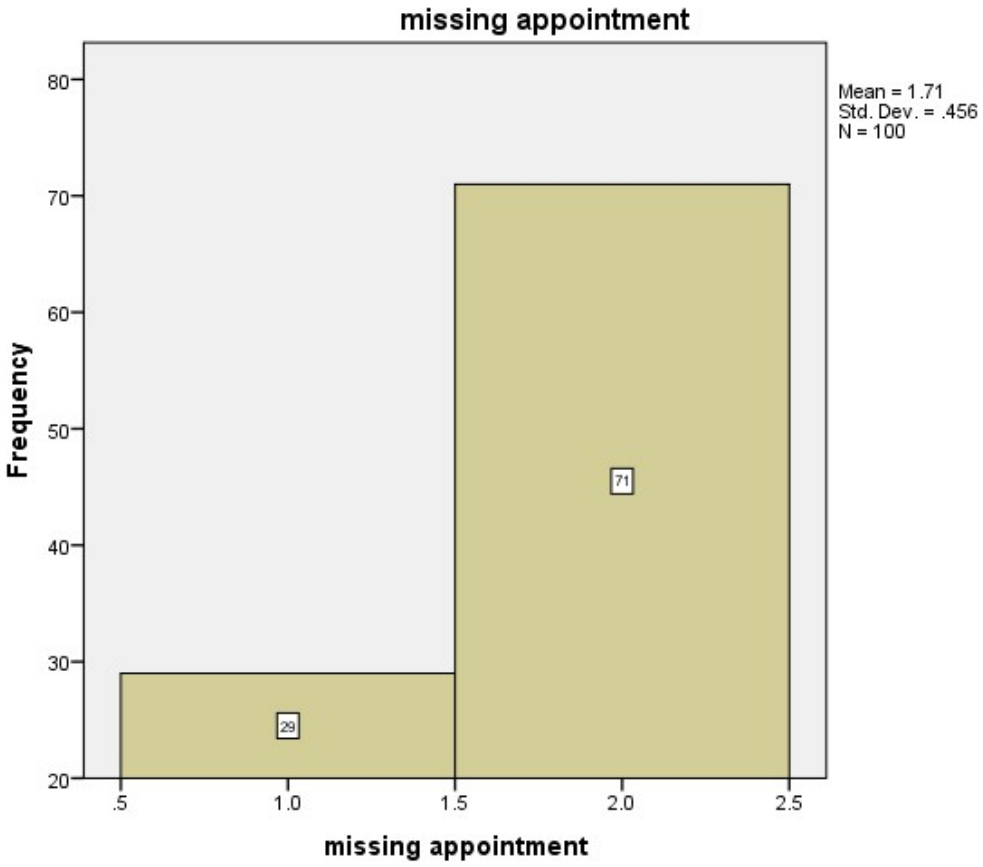


Figure 13: Histogram shows the frequency and standard deviation of missing appointments

Table 18

		depression,anger,despair			
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	yes	11	11.0	11.0	11.0
	no	89	89.0	89.0	100.0
	Total	100	100.0	100.0	

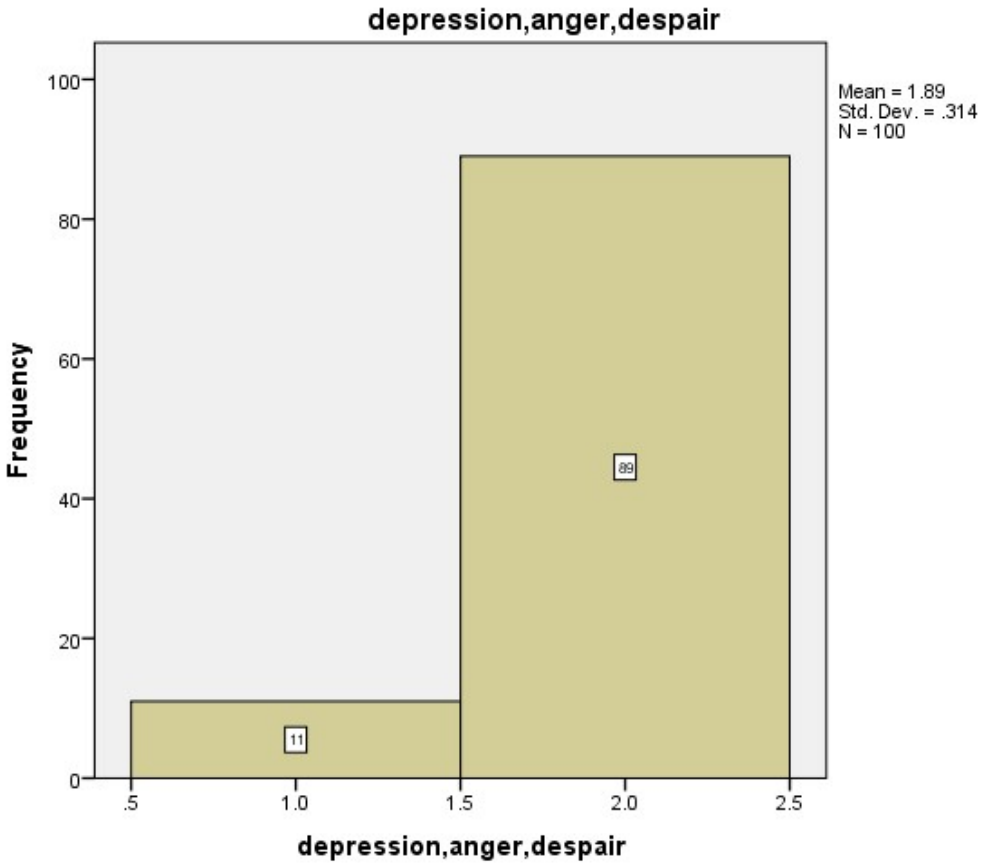


Figure 14: Histogram shows the frequency and standard deviation of depression, anger, despair

CHAPTER: 5
CONCLUSION

This descriptive study was done in HIV centre Jinnah Hospital Allama Iqbal Medical College Lahore. This study explored the reasons of non-adherence to ART in HIV/AIDS patients. Study shows that multiple reasons can cause non-adherence to treatment or these determinants lead to non-adherence although in this study from hundred participants most of them are adherent to their treatment therapy but some of them facing problems towards therapy which lead to non-compliance. The outcomes gave basic and valuable data that will help in decreasing the factors that are causing non-adherence to ART.

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RESEARCH TOOL

Dear Sir/ Madam

This survey is being done by the scholar Bushra Samreen, Farzana Amir, Rida Abid in the supervision of PRECEPTOR Madam Nazia Yousaf, Department of Nursing at Superior University, Lahore. The purpose of this survey is to collect the information about determinants of non-adherence to Antiretroviral in HIV/AIDS patients. This survey is only for the academic purpose and the personal identity will be kept confidential. Thank you for your valuable time and opinion.

Signature of patient: _____

Demographics (Include your demographic statements like this)

Gender	☐ Male ☐ Female ☐ Transgender	**Marital Status**	☐ Married ☐Single ☐ widowed ☐ divorced
Age Group	☐ 18-30☐ 31-45 ☐ 46-64☐Above 64	**Qualification**	☐ illiterate ☐ primary ☐ secondary ☐ higher secondary
0ccupation	☐ student ☐ employed ☐ unemployed ☐ self employed	**Monthly income**	☐<10,000 ☐ 11,000-20,000 ☐21,000-30,000 ☐ >30,000
Living condition	☐poor☐average ☐good ☐very good	**Religion**	☐ Islam ☐ Christian

Sr. #	**Attitude of people living with HIV/AIDS towards ART**					
1	ART is essential for the HIV patient	a) Strongly Disagree	b) Disagree	c) Neutral	d) Agree	e) Strongly Agree
2	Are you feeling comfortable to take ART in the presence of others	a) Comfortable		b) Uncomfortable		
3	Family disclosure	a) Yes		b) No		
4	Community disclosure	a) Yes		b) No		
5	Use of active substance	a) Yes		b) No		

Sr. #	**Treatment Adherence and satisfaction with ART**				
1	Duration of therapy	a) <6 months	b) 6-12 months	c) >12months - 3 years	d) >3 years
2	side effect	a) Yes		b) No	
3	satisfaction with health care provider	a) Most of the time	b) sometime	c) None of the time	d) All the time
4	Dose missed?	a) Yes		b) No	
5	number of missed doses	a) 1-3doses	b) 4-8doses	c) >8doses	

Sr.no	**Reasons for non-adherence**		
1	Forgetfulness	a) Yes	b) No
2	Missing appointment	a) Yes	b) No
3	Run out of medication	a) Yes	b) No
4	Depression, anger, despair	a) Yes	b) No
5	Don't think ART helps	a) Yes	b) No
6	Side affects	a) Yes	b) No
7	Others	a) Yes	b) No