

Assessment of Health Related Quality of Life among People Living with HIV/AIDS Attending Antiretroviral Therapy Clinic in Metekel Zone

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Abstract

Acquired Immunodeficiency Syndrome (AIDS) is a viral disease that leads to immune suppression. According to the most recent estimates globally, an estimated 36.9 million people were living with HIV, while 2 million were newly infected in 2014, the largest number (1.4 million) of new HIV infections was estimated to be in Sub Saharan Africa.

The main aim of this study is to assess risky sexual behavior and health related quality of life and associated factors among people living with HIV/AIDS in Metekel zone Benishangul Gumuz regional state. An institution based cross-sectional quantitative study design was conducted in selected health institution in Benishangul Gumuz Regional state. To assure quality, questionnaires were checked for completeness, coded and entered in to EPI INFO version 3.5.3 and exported for analysis using SPSS for Windows versions 20. Descriptive statistics, such as mean and standard deviation have been used to summarize the score of the relevant variables. Multivariate analysis was used to determine factors affecting sexual behavior and Health related quality of life of people living with HIV.

The overall Good Health related quality of life of PLWHA of the study participants was 189 (48.3%). Current CD4 count greater than 200 Cells/mm³, Income greater than 3000 birr were found to be significantly associated with Good Health related quality of life. Level of risky sexual behavior among the study participants was high. Level of HRQOL of the study participants with Good QOL was low and needs further intervention. We recommend branches of Ethiopian Ministry of Health and organizations concerned about welfare of PLWHA to enhance social support services delivered of HIV/AIDS to improve psychological, environmental, and overall HRQOL of the target group.

Keywords: Acquired Immunodeficiency Syndrome (AIDS); Antiretroviral Therapies (ART); Quality of Life (QoL); CD4 cell counts

Introduction

Acquired Immunodeficiency Syndrome (AIDS) is a viral disease that leads to immune suppression. When it was first described, the disease was fatal, acute and had limited therapeutic options. After 26 years, researches resulted in discovery of new drugs that could limit viral replication and improve patient's immune response. Actually it is possible to live better and longer with no manifestation of this disease or its associated opportunistic infections. AIDS has turned to be a chronic disease with better life expectancy [1].

The emergency of highly active Antiretroviral Therapies (ART) in the course of 1996 is one of the most radical steps in the treatment of AIDS. Antiretroviral treatment has greatly improved the health status and life expectancy of people with AIDS. Many HIV positive people on ART are living longer and are healthier. ART has changed the capabilities that would be lost due to the burden of illness such as social and economic viability and sexual activity. Investigators have also established that when PLWHA are on ART they increasingly become sexually active and some of them engage in risky behavior. It has also been established that PLWHA on ART practice unsafe sexual

behavior patterns such as not using condoms and having multiple partners [2].

Quality of Life (QoL) is a term that is popularly used to convey an overall sense of well-being and includes aspects such as happiness and satisfaction with life as a whole. World Health Organization has defined QoL as individual's perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, standards, expectations and concerns [3].

The advent of highly active antiretroviral therapies has helped to improve the health status and life expectancy of people living with HIV. Improvements in health and life expectancy of HIV-Infected people may lead to a belief that HIV is no longer a serious and deadly disease. ART significantly reduces patient's viral loads, often to undetectable levels, which may lead to the perception that they are no longer infectious. In addition, ART significantly improves physical health and quality of life, which may enable or encourage individuals to resume sexual activity, including unsafe sex [4].

The Quality of Life (QoL) has never been investigated among people living with HIV and AIDS (PLWHA) in the region. By

examining the QoL and associated factors this study therefore will provide valuable base line information on these issues in the region. And it will play a great role in devising mechanisms regarding the care needed for people living with HIV/AIDS to improve their lives [5].

Objectives

General objectives: The general objective of this study is to assess health related Quality of Life and its associated factors among Adult people living with HIV/AIDS in Benishangul Gumuz region, North West Ethiopia.

Specific objectives: To evaluate the level of health related quality of life among adult people living with HIV/AIDS. To identify factors associated with health related quality of Life among adult people living with HIV/AIDS.

Materials and Methods

An institutional based cross sectional study design was conducted in Benishangul gumuz regional state North West Ethiopia. The Study was conducted in Benishangul gumuz regional state Metekel zone. The region has three zones namely Metekel, Kemashi and Assosa zone. The region has 2 general hospitals 1 district hospital and 3 other district hospitals under construction [6].

About 7,600 are currently on ART. All the health centers are giving VCT service but ART service is provided in 02 general hospitals and 18 Health centers. The study was conducted from December 30, 2018 to February 30, 2018. The source population of the study were HIV-Infected people who are attending clinical care (ART) at Governmental Health facilities in Metekel Zone. And the study population were HIV-Infected people who are attending clinical care (ART) visits at the selected health institutions of Metekel Zone, systematic sampling was used. A structured pre-tested standardized and locally adopted questionnaire was utilized for data collection. QoL data was collected using the World Health Organization's Quality of Life of HIV Patients (WHOQOL-HIV) instrument. The WHOQOL-HIV contains 29 facets, each with five items, which are subsumed in five domains: Physical, psychological, level of independence, social, environmental. There is also a general facet that measures the overall QoL and general health perceptions (overall QoL). Items have been rated on a 5-point Likert interval scale where 1 indicates low, negative perceptions, and 5 indicate high, positive perceptions. Facet scores are the mean of the four items in each facet. Domain scores are obtained by adding the facet means in the respective domain, dividing by the number of facets in that domain, and multiplying by 4, so that scores ranged from 4 (worst possible QoL) to 20 (best possible QQL). The instrument is derived from standard data collection tools and related literatures and Health related quality of life is prepared by WHO health related quality of life. It was pre-tested for consistency of responses by taking 10% of the sample size, conducted in a similar population but out of the study area at Assosa health center. Necessary modifications have been made accordingly before the actual data collection [7].

One day's intensive training was given to data collectors on instructions on how to fill the questionnaire. To maintain validity, the questionnaire will be prepared in English then translated to Amharic and back translated to English by principal investigator and language experts [8].

Sample size was determined using the formula for single population proportion and considering that the prevalence of risky sexual behavior among PLWHAS is (p=50) % and 95% level of confidence and 5% margin of error. Therefore, sample size is determined as follows:

$$n = (Z\alpha/2)^2 P (1 - P)$$

d2

$$n = (1.96)^2 0.5(1 - 0.5) = 384 \text{ Where } (0.05)^2$$

Z=standard normal distribution value =1.96 at α value of 0.05

W=margin of error=0.05

Design effect=2

By considering 10% non-response rate because of the sensitive nature of the information the final sample size was 422 [9].

Results

The sexual characteristics and related variables of study participants

Clinical characteristics: Regarding their clinical characteristics of participants greater majority about 226 (57.5%) of participants have known their HIV status greater than 66 months. Majority of them (99.2%) are currently working and regarding to their CD4 cell count majority about 85.5% of them have above 200 Cells/mm³. Majority of the study participants are free from opportunistic infection [10].

Sexual characteristics: Regarding their sexual behavior about 87% of the study participants have ever had sex after being HIV positive and greater majority of the study participants (79.0) have regular sexual partner. About 83.4% of study participant's discuss about their HIV status with their sexual partner. About 90.8% of the participants believe HIV positives have to use condom. According to our operational definition, the overall risky sexual practice of study participant was 34.26% (Table 1) [11].

Descriptions sociodemographic variables	Category	Frequency (%)
Place of residence	Rural	177 (45.1)
	Urban	215 (54.9)
Age (years)	18-28	71 (18.0)
	29-39	192 (49.9)
	≥ 40	129 (33.0)
Gender	Male	188 (47.9)
	Female	204 (52.1)
Marital status	Single	137 (35.0)
	Married	231 (59.0)
	Others	24 (6.0)
Educational status	No education	32 (8.2)
	Elementary school	189 (47.4)
	Secondary school and above	174 (44.6)
Occupation	Employed	167 (42.5)
	Self-employee	94 (24.0)

	Not employed	131 (33.5)
Religion	Orthodox	146 (37.3)
	Muslim	96 (24.5)
	Protestant	106 (27.2)
	others	44 (11.0)
Income	≤ 2000	80 (20.4)
	2001-3000	130 (33.1)
	>3000	182 (46.5)
Time since they had known their HIV status	<66 months	166 (42.5)
	≥ 66 months	226 (57.5)
Functional status during start of ART	Working	322 (82.1)
	Ambulatory	54 (13.7)
	Bedridden	16 (4.2)
Current functional status	Working	389 (99.2)
	Ambulatory	3 (0.8)
Opportunistic infection	Yes	70 (17.85)
	No	322 (82.15)
CD4 count at start of Art Cells/mm ³	Below 200	118 (30.1)
	Above 200	274 (69.9)
Current CD4 count Cells/mm ³	Below 200	57 (14.5)
	Above 200	335 (85.5)
WHO clinical stage at start of ART	Stage 1	43 (11.0)
	Stage 2	149 (38.0)
	Stage 3	175 (44.7)
	Stage 4	27 (7.0)
Current WHO clinical stage	Stage1	70 (18.0)
	Stage 2	292 (74.6)
	Stage 3	30 (7.6)
	Stage 4	0
Duration on ART (in Year)	<4	244 (62.4)
	≥ 4	148 (37.6)
Adherence to dose of ARVs over the last 6 months	Good	338 (86.3)
	Fair	49 (12.6)
	poor	5 (0.1)
Adherence to schedules of ARVs	Never	0 (0)
	Sometimes	89 (22.7)
	Most of the time	63 (16.07)
	Always	240 (61.12)
Time since they start ART	≤ 57 month	177 (45.15)
	>57 month	215 (54.85)
Have you ever had gender after being HIV positive	Yes	341 (87.6)
	No	51 (13.4)
What type of sexual partners do you have	Regular sexual partner	269 (79.0)
	Casual sexual partner	39 (11.4)
	Commercial partner	33 (9.6)
How many people in total have you ever had sexual Intercourse with	With 1 person	258 (75.6)
	With 2-3 person	28 (8.2)
	With 4-6 person	38 (11.1)
	With more than 6 people	17 (5.1)
Have you discuss before about your HIV status with your sex partner	Yes	327 (83.4)
	No	65 (16.6)

HIV positives have to be use condom?	Yes	356 (90.8)
	No	36 (9.2)
Have you used condom in your last sexual intercourse	Yes	255 (65.2)
	No	137 (34.8)
Do you always use condom during sexual intercourse	Yes	182 (46.4)
	No	210 (53.6)
Substance use	Yes	228 (58.2)
	No	164 (41.8)

Table 1: Sociodemographic and clinical characteristics of the study participant in, 2019 (n=392).

Health related quality of Life of participants: The overall Health related quality of life among the study participants was 203 (51.7) which is poor and 189 (48.3%) is good. Level of independence, Psychological, and social relationship are among those having greater proportion of poor domains while, emotional, spiritual domains are among those having greater proportion of good scores (Table 2) [12].

QoL domains (No. of items)	Mean	std deviation	Quality of life	
			Poor N (%)	Good N (%)
Physical (4)	12.7352	3.2374	185(47.3)	207 (52.7)
Psychological (5)	13.4532	2.6619	240 (61.3)	152 (38.7)
Level of independence (4)	12.3248	2.5026	225 (57.3)	167 (42.3)
Social relationships (4)	14.8364	3.5582	188 (54.7)	156 (45.3)
Environmenta l (8)	14.4027	2.4517	196 (50)	196 (50)
Spiritual (4)	15.3456	2.5943	157 (40)	235 (60)
Overall HRQOL	13.8496	2.6719	203 (51.7)	189 (48.3)

Table 2: HRQoL domain's mean score on ART in Metekel zone health facilities, 2019 (n=392).

Discussion

The mean QoL score was highest for the spirituality/religion/ personal beliefs domain, indicating a better QoL in this domain than the other domains. This is in agreement with a similar study which assessed the quality of life of people living with HIV/AIDS. This could be attributed to the fact that people generally, tend to be more spiritual and religious when confronted with issues that are beyond their capacity [13].

Assessment of associated factors revealed that clinical characteristics assessed in this study (current WHO clinical stage, ART regimen and current functional status of the participants) had no statistically significant associations with neither overall HRQoL receiving ART in the study area. But those respondents who have Better CD4 cell counts were associated with better HRQoL, this result was similar with other findings conducted in brazil, china, India this

might be due to the fact that Better CD4 cell counts have a direct linkage with that of the physical and psychological domains. Increase in CD4 cell counts where due to improvements in health and life expectancy of HIV-Infected people which may lead to a belief that HIV is no longer a serious and deadly disease. ART significantly reduces patient's viral loads, often to undetectable levels, which may lead to the perception that they are no longer infectious. In addition, ART significantly improves physical health and quality of life, which may enable or encourage individuals to resume sexual activity, including unsafe sex (Table 3) [14].

Variables	Overall HRQoL			Crude OR (95% CI)	Adjusted OR (95% CI)
		Good	Poor		
Occurrence of opportunistic infection	No	47	23	2.59 [1.19, 2.34]	1.19 (1.36, 3.12)
	Yes	142	180	1	1
Current CD4 count Cells/mm ³	Above 200	165	118	4.95 (2.25-5.87)	3.28 (2.88,17.18)
	Below 200	24	85	1	1
Income	≤ 2000	52	28	1	1
	2001-3000	63	67	2.68 (2.37-3.58)	1.74 (0.92-3.25)
	>3000	74	108	2.71 (1.57-4.28)	1.98(1.02, 3.39)
Duration on ART	<57 months	93	84	1.37 (2.34-3.18)	1.23(1.34-3.88)
	≥ 57 months	96	119	1	1

Table 3: Factors associated with overall HRQoL among PLWHA on ART in health facilities. Note: *=Variable statistically significant at P<0.05, AOR=Adjusted Odds Ratio, COR=Crude Odds Ratio; CI=Confidence Interval.

In this study, duration on the duration of patients on ART was significantly associated with overall HRQoL of the participants, individuals with shorter duration on ART having better HRQoL. This might be due to the fact that HIV/AIDS is one of the chronic illnesses affecting economic, psychological, and social aspects of patients. Improvement of QoL that resulted from the treatment may be outweighed by the negative impacts of chronicity of the disease. Furthermore, this finding is supported by a recent study carried out in Kenya and Ethiopia in which it was reported that patients on ART for a relatively longer duration had had poorer HRQoL than those who had been on ART for lesser durations [15].

Conclusion

The level of risky sexual behavior among the study participants was high Level of HRQOL of the study participants with Good QoL was low and needs further intervention .The associated factors of Risky sexual Behavior among PLWHA were those with symptoms of STI, being Female by sex, those who were poor adherence to ART were found to be significantly associated with risky sexual behavior. The associated factors of Good Health related quality of life among PLWHA were those who are free from opportunistic infection , Current CD4 count greater than 200 Cells/mm³, those who have income greater than 3000 birr and those with shorter duration on ART were found to be significantly associated with Good Health related quality of life.

Recommendations

We recommend branches of Ethiopian Ministry of Health and organizations concerned about welfare of PLWHA to enhance social support services delivered of HIV/AIDS to improve psychological, environmental, and overall HRQoL of the target group. In addition, strategies must be formulated and implemented to promote financial welfare of women with HIV/AIDS to enhance their quality of lives.

We also recommend researchers to conduct further studies by applying stronger designs to establish causal relationship between health-related quality of lives of women on ART and factors identified to affect it, such as duration on ART treatment. Behavioral change health education and counseling adapted to the specific needs of each patient must be programmed.

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