ADDIS ABABA UNIVERSITY, SCHOOL OF GRADUATE STUDIES

Health Related Quality of Life of People Living With HIV/AIDS in Hawassa University Referral Hospital

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A Thesis Submitted to the School of Graduate Studies, Addis Ababa University in Partial Fulfillment of the Requirements for the Degree of Master in Maternity and Reproductive Health Nursing

27-Jan-2010
Addis Ababa, Ethiopia

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Jan-27-2010

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Acknowledgments

Glory is to The Sovereign, Gracious, and Almighty God, who is the Lord of all Wisdom, knowledge and Understanding!!!

This is, in fact, a great moment to raise my deepest gratitude and appreciation to my dear advisor Ato. Fekadu Aga (RN, BSc.N, MSN, and Lecturer). Your, unreserved support and constructive comments throughout the preparation of this thesis is unforgettable. Moreover, those lessons and experiences that I got while working in your international, interdisciplinary collaborative project is marvelous.

I would also like to acknowledge William L. Holzemer, (PhD,RN, FAAN) for he helped me to get articles of related studies.

My appreciation extends to my sponsor Hawassa University and Addis Ababa University, Medical Faculty, School of Nursing for funding this research. And also to all staffs of AAU, School of Nursing AAU for their unforgettable and friendly assistance

My gratitude also goes to the library staffs of; the School of Nursing, School of Public Health, and AIDS Resource Center (ARC) for their support in providing me the necessary references for the success of this study.

My special appreciation also extends to those who participated in the study, Hawassa referral Hospital staff, and my friends and to all data collectors and supervisors.

Had it been without the keen participation of PLWHA in this research, the study would have not been proceeded a step forward. Great deal of thanks!!!

Last, but not least my sincere thanks go to my lovely wife Dr. Fiker Taddesse who provided me support and enormous encouragement throughout this work

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Acronyms

AAU:	Addis Ababa University
AIDS:	Acquired Immune Deficiency Syndrome
ART/ARV:	Anti-Retroviral Therapy/Viral
ARV:	Antiretroviral Drugs
CD4 cells:	Cells with CD4 marker
CDC:	Center for Disease Control
CDC:	Center for Disease Control
DW:	Disclosure worries
EPHA:	Ethiopian Public Health Association
et.al.	And others (root word "et alii" is a Latin expression)
FDA:	Food and Drug Administration (FDA), agency of the United States Department of Health in and Human Services
FW:	Financial worries
HAART:	Highly Active Anti Retroviral Therapy
HAPCO:	HIV/AIDS Prevention & Control Office
HAT-QoL:	HIV/AIDS targeted Quality of life, instrument
HIV:	Human Immunodeficiency Virus
HRQoL:	Health Related Quality of Life
HURH:	Hawassa University Referral Hospital
HW:	Health worries
IDUs:	Injection-drug users
LS:	Life satisfaction
MOH:	Ministry of Health
MOS-HIV:	Medical Outcome Study-HIV
MSM:	Men who have sex with men
OF:	Overall function
OI:	Opportunistic Infections
PCP:	Pneumocystic Cariny Pneumonia
PF:	Physical Functioning
PLWHA:	People Living With HIV/AIDS
QoL (QL):	Quality of Life
SNNPR:	South Nations Nationalities and People's Region
SPSS:	Statistical Package for the Social Sciences for Windows software
SSC-HIV rev:	The Revised Sign and Symptom Checklist for Persons with HIV
TB:	Tuberculosis
UNAIDS:	Joint United Nations Programme on HIV/AIDS
USA:	United States of America
WHO:	World Health Organization
WHO:	World Health Organization
WHO-QoL:	World Health Organization Quality of Life instrument

Abstract

Background: Understanding the health related quality of life in people living with HIV/AIDS has become increasingly a key measurement of treatment outcome

Purpose: This study was intended to assess the health related quality of life (HRQQL) of people living with HIV/AIDS in Hawassa University Referral Hospital by using the Wilson and Cleary model.

Methods: Using a cross-sectional design and convenience sampling method, a quantitative exploratory survey was conducted on HIV patients attending the ART clinic (n=392). Using pretested questionnaires the data collected on demographic and clinical characteristics, symptom status, and patients' perceptions of quality of life were organized based on the Wilson and Cleary framework for analyzing variables related to quality of life. Then, by using SPSS for Windows version 15 a hierarchical multiple regressions was conducted with quality of life as dependent variable

Result*:* The sample of 392 persons was 259(66.1%) female with mean age of 32.5(SD=8.6) years .On the day of the interview, few 37(9.4%) individuals presented with opportunistic infections(OI).Similarly the average types of symptoms, out of the possible 64 symptoms, experienced per person on the date of visit was 4(SD=4.5). Twenty three predictor variables explained 65.1% of the variance in patients' overall quality of Life. Those participants with higher health related quality of life scores were those who had greater functioning, fewer financial worries, lower symptom intensity, with fewer health worries and had no opportunistic infection. In addition social support and disclosure worries made statistically significant relationship with HRQOL at P-value less than 0.05.

Conclusion: The Wilson and Cleary model of quality of life served as a useful organizing framework for developing an understanding of the correlates of quality of life for a sample of persons living with HIV/AIDS in Hawassa University Referral Hospital. Health related quality of life for this sample was primarily defined as over all functional abilities, absence of financial worries, control over symptom intensity, lack of health worries and also absence of opportunistic infections. These findings are similar with finding studied both in developed and developing countries. Based on the finding of this study, recommendations are forwarded.

CHAPTER – ONE

INTRODUCTION

1.1. Background

The acquired immunodeficiency syndrome (AIDS) was first recognized among homosexual men in the United States in 1981 (1). From the time when the first cases of acquired immunodeficiency syndrome (AIDS) were reported in 1981, infection with human immunodeficiency virus (HIV) has grown to pandemic proportions, resulting in an estimated 65 million infections and 25 million deaths. During 2005 only, an estimated 2.8 million persons died from AIDS, 4.1 million were newly infected with HIV, and 38.6 million were living with HIV (2). HIV continues to disproportionately affect certain geographic regions (e.g., sub-Saharan Africa and the Caribbean) and subpopulations (e.g., women in sub-Saharan Africa, men who have sex with men [MSM], injection-drug users [IDUs], and sex workers). Effective prevention and treatment of HIV infection with antiretroviral therapy (ART) are now available, even in countries with limited resources". Nonetheless, comprehensive programs are needed to reach all persons who require treatment and to prevent transmission of new infections"(2).

Though HIV/AIDS is deadly, incurable but preventable disease, Highly Active Antiretroviral Therapy (HAART) was found effective in prolonging the life of People living with HIV AIDS (PLWHA) and also improving their lives. The rapid expansion of free treatment access in resource-limited settings, such as Ethiopia, is saving lives, improving quality of life, and contributing to the restoration of households, communities, and entire societies (3). Recent studies in Denmark imply that a young man newly diagnosed with HIV is likely to live an additional 35 years with available medications, a tripling of the life expectancy for people with HIV (4). In line with this benefit, the government of Ethiopia has launched the free ART program in January of 2005 and is also accelerating access to HIV/AIDS treatment for PLWHA (5).

Specific measures to evaluate the outcome of an illness or its treatment include quality of life. Although length of survival was previously considered the most important among these, the impact of illness on quality of life or Health Related Quality of Life (HRQoL) has received increasing recognition. As an example, improvements in HRQoL are one of two potential benefits that were considered by the United States Food and Drug Administration for the approval of new anticancer drugs (6).

Although difficult to define precisely, quality of life has an inherent meaning to most people. The term quality of life is defined as contentment or the degree of enjoyment and satisfaction experienced in everyday life (59). It is comprised of broad concepts that affect global life satisfaction, including good health, adequate housing, employment, personal and family safety, education, and leisure pursuits. For matters related to health care, quality of life has been applied specifically to those life concerns that are most affected by health or illness, hence the term "health-related quality of life" (HRQoL) (7).As per WHO also defined Quality of life as “individuals” perception of their position in life in the context of culture and value system in which they live and in relation to their goals, expectations standards and concerns.”(8). The term Health related Quality of life (HRQoL) refers to how well people can perform daily activities and how good they feel about their lives. It can more formally, be defined as: "The extent to which one's usual or expected physical, emotional and social well-being are affected by a medical condition or its treatment" (9).

Even though much valid and reliable health-related quality-of life instruments like the WHO-QoL instrument (10), had been used to study HIV- infected patients, yet consensus was lacking about how quality of life should be measured. But there is a consensus about the need of strong conceptual framework (11). Therefore, in this the Wilson and Cleary’s (1995) HRQoL model with several dimension of quality of life was used to assess the health related quality of life in a sample of people infected HIV/AIDS in Hawassa University Referral Hospital (11, 12, 13).

1.2. *Statement of the Problem*

Worldwide HIV /AIDS have created an enormous challenge on survival of mankind. Since its recognition, the virus has infected close to 65 million individuals and over 25 million have already died due to AIDS (14). Among the continents, Africa especially the Sub-Saharan Africa remains the region most heavily affected by HIV, accounting for 67% of all people living with HIV and for 75% of AIDS deaths in 2007. In 2007 there were 2.7 million new HIV infections and 2 million HIV-related deaths (3). And also AIDS brought large social, Psychological, Demographic, Economic impacts on both the individuals and societies (15).

In Ethiopia the first case was detected in 1986. Since then Ethiopia become one of the most seriously affected countries in the world (16, 17). Currently the prevalence of HIV in Ethiopia reached to 2.1 % (17). One report denoted that Ethiopia hosts the fifth largest number of people living with the virus globally. Out of the 1.5 million PLWHA, 817,000 are women and 96,000 are children under 15 years (18).

The Federal ministry of health of Ethiopia in its 2005 fact sheet reported that the total number of PLHWA in Ethiopia is about 1,320,000(Female=730,000, Male=590,000).Among this 176,000 are believed to live in SNNPR (71). The projected prevalence of HIV by year adult population15-19 for the year 2009&2010 was 2.9 & 2.8 respectively. The report also added that the prevalence of HIV among SNNPR urban population shall remain 2.0 in both years (70). This report further explained that the trend of life lost due to HIV/AIDS shows decreases since 2005 .For instance, by 2010 the estimated life expectancy for the general population shows a decline by from 57.9 years to55.1 (expectancy reduces by 2.8 year).The report further raises a promising point in that the Universal access to ART can reduce AIDS deaths by 41% and AIDS orphans by 13% by 2010.

Though HAART is the only effective treatment for eligible PLWHA, the World Health Organization (WHO) report estimates that only 8% of the 6 million persons who need ARV have access to ARV drugs. This is due to social, economic and structural obstacles.

These obstacles are already started to be addressed via the "Treat 3 million by 2005" (3 by 5)" global initiative strategy previously endorsed by the WHO (World Health Organization, 2003) (19). To combat these challenge the Government of Ethiopia embarked on national free ARV service provision program to those who need it and to expand access to all eligible PLWHA in the near future (5). Besides, the total number of PLWHA who need ART by the year 2009/2010 was estimated to be 350,000 (70)

The MOH report (ART Update as of October 8, 2009 per site) depicts that as of October-8-2009 a total of 410,477 PLWHA are ever enrolled under the chronic HIV care. Out of this 226,801are patients ever started ART where as 167,271 are currently on ART.(69) To expand the access of ART to all or about 1.3million PLWA, the country is facing a problem in that more than 50 percent of patients are living in rural areas where access to health facility is difficult.(70).Even specific information related with the quality of life of people is less, these information is therefore an affirmation that the quality of life of PLWHA is being affected by factors related with; delay initiation of ARVs, the potential side-effects of ARVs, and other socio-psycho-economic factors. (19, 69, 70, 71)

Specific measures to evaluate the outcome of an illness or its treatment include quality of life. Although length of survival was previously considered the most important among these, the impact of illness on health Related Quality of Life (HRQoL) has received increasing recognition. As an example, improvement in HRQoL is one of two potential benefits that were considered by the United States Food and Drug Administration for the approval of new anticancer drugs (8).

"The quality of life of people with HIV/AIDS is a complex constellation of disease, poverty, stigma, discrimination, and lack of treatment combined with family life, work, and social activities. HIV/AIDS affects not only the infected person, but also his or her family, community, and country. Without treatment, people experience accelerated losses. At the household level, people have loss of companionship and income. At the community and national levels, they experience loss of productivity because of absenteeism and death. Many young women and men are too ill to participate in their

schooling or work, few people are available to care for the very young and the very old, and parents are burying their children. Many people do not have enough money to buy medicines. And with fewer people to care for the land, the small farm economies are being destroyed .In short, HIV /AIDS is devastating at all level. As a result of the magnitude of the pandemic, however, the troubles of individuals particularly their quality of life might be overlooked. With the promise of anti retroviral medications, this grim picture has the potential to improve." (11).

The development of HAART like any other medical advances have afforded PLWHA longer, healthier, and more productive lives, resulting in a paradigm shift from HIV infection as a rapidly fatal illness to that of a long-term, chronic disease. In another words the introduction of HAART has dramatically changed the prognosis of persons living with HIV/AIDS. Rapid disease progression followed by death is no longer the expected outcome (20, 21). In fact, a variety of treatment options improve the probability of longer life expectancy. These same treatments, however, also lengthen patients' experiences with treatment and short- and long-term side effects, thus affecting their quality of life. As a result; health-related quality of life (HRQoL) among individuals with HIV infection has become an important focus of clinical practice and research. Researchers have identified various factors which affect the quality of life of PLWHA. These includes characteristics of the individual, characteristics of the environment, biological and physiological factors, symptom status, functional status, and general health perceptions (11, 13).Nevertheless, the effects of living with HIV/AIDS on persons HRQoL is not well addressed in Ethiopia (11, 12).Therefore, this research was intended to fill this gap by exploring the quality of life of people living with HIV/AIDS in Hawassa University Referral Hospital. Hwassa, Ethiopia.

CHAPTER– TWO

LITRATURE REVIEW

The discovery and utilization of highly active anti retroviral therapy (HAART) has noticeably changed the prognosis of persons living with HIV /AIDS. As was previously and extensively reported, the rapid disease progression followed by death is no longer the expected outcome (24). The available variety of treatment option especially the development of HAART is reported that it improves the probability of longer life expectancy and also the health related quality of life of PLWHA (44). Nevertheless these Drugs also lengthen patients' experience with treatment and short-and- long-term side effects, thus affecting their quality of life. Thus doing a continuous investigation of the HRQoL of PLWHA is central to evaluation of the treatment outcome (25, 6).

Health related Quality of life (HRQoL), a term which refers to how well people can perform daily activities and how good they feel about their lives, so far had been studied with about eleven instruments designed for PLWHA (26, 27). Though extensive studies are being conducted using some of these instruments, yet consensus was lacking about how quality of life should be assessed. Now there is mutual consensus that research on HRQoL should be based on strong conceptual models (17, 28). Among the models, Wilson and Clearly model of quality of life is the one which is designed and used to test the correlates of health related quality life (13). Even though no formal evidence about its use for research purpose in Ethiopia found, its application in some of developed and some Sub-Saharan African countries in research has brought an evidence that that the model is adequate framework for understanding of quality of life of PLWHA(11, 12, 25).

As per to Wilson's and Clearly's (13), patients over all quality of life includes aspects such as Individual Characteristics, Environmental Characteristics, Biological /Physiological Factors, Symptom Status, Functional Status, and General Health Perceptions. Similarly different researchers (11, 13, 25, and 28) in their research identified that the over all health related quality of life of PLWHA can be affected by

factors such as: Age, Sex ,Educational status, Marital status ,Number of Children, Income, Financial worries, Disclosure worries, Source of financial support, Insurance status, Social support, AIDS diagnosis , Adverse drug effects, Opportunistic Infections(OI), Comorbidities, CD4 cell count, Hemoglobin, Over all functioning and Health worries

The model on HRQL tested in one study showed that symptom control, functional status and general health are found being the three key dimensions of HRQoL among PLWHA (28).In another study also an enhanced daily functioning, low level of general anxiety and fewer HIV associated symptoms are found the three most important determinants of health (29). The study which is conducted in some of sub-Saharan African countries is also one witness that these several dimensions of the Wilson and Cleary model of quality of life were significantly related to life satisfaction or health related Quality of life of PLWHA in sub-Saharan Africa (11, 25).

Different literatures states that demographic factors showing relatedness to HRQoL of PLWHA includes: Age, sex, ethnicity, educational status, marital status, number of children and family size (11, 13, 25, 28, 30, 31, 32). Older age, for instance, in one study found associated with greater declines in physical quality of life (30). This is similar with other finding which depicts that people who are older than 50 are found with significantly more medical conditions such as diabetes and hypertension, more limitation on physical functioning and self disclosure of HIV infection to fewer people (31). In addition, another study suggested that older age is associated with more health concerns and more pessimistic health appraisals than warranted by objective health status (32).

The effect of sex and marital status on HRQoL of PLWHA is a well stated issue (30, 33). As evidence, one gender based study conducted in India stated that women have lower scores on several areas of QoL compared to men (33). On this study men reported significantly higher scores on the facets of positive feeling, sexual activity, financial resource, transport and the environmental domain. Where as females reported significantly higher score on two facets and also on the spirituality/religion and personal

belief domains. On another study the effect of marital status was reported that married women are found with lower scale of quality of life than men (30).

One cohort study in Miami, USA, confirmed that the total HRQoL composite scores were significantly lower in the HIV- 1 infected women than men (34). In this study significant gender differences were observed in activity assessment; independent of disease status, with women being six times more likely to have lower activity scores. HIV infected men and women in different HIV disease severity stages were assessed (35). On this study younger women (>35 years) and married patients reported lower QOL. Meanwhile, a study in Nepal (36) used a cross sectional design to examine the degree to which indicators of physical, mental and social domains, and perceived health, predicted life satisfaction among HIV-positive women (N = 98) who were former commercial sex workers. As per the report of this study life satisfaction was significantly associated with physical functioning, physical role, bodily pain, mental health, anxiety, depression, social functioning and health transition. Anxiety, health transition, physical role, physical function, and mental health explained 60% of the variance in life satisfaction.

Age, ethnicity, education are also reported to have a strong association with health status and also functional status (37). Likewise, individual and environmental characteristics, such as low socio economic status along with minority group membership have generally been found to be associated poorer QoL (25). One study revealed employment and childlessness are factors associated with higher quality of life (38). Using WHOQoL-Bref (Hindi) instrument one study in northern India evaluated the HRQoL of PLWHA and find that QOL is associated with education, income, occupation, family support and clinical categories of the patients (39). One recent analysis of health-related QoL in a sample of 3,778 HIV-positive individuals reported that that lower scores on the overall health dimension of the QoL module of the CDC's Supplement to HIV/AIDS Surveillance Project were associated with being older, being female, being Black or Hispanic, having been infected via intravenous drug use, having a low CD4+ count, having less than 12 years of education, lacking private health insurance, and having a low income (40).

Environmental characteristics such as lower or reduced income, presence of financial worry, presence of disclosure worry, lack of social support, and lack of insurance are important factors responsible for lower HRQoL (11, 13, 25, and 28.) In addition to these source of social support is one of the important environmental variable which relates with HRQoL (11, 13, 25, and 28). Karen H. et al (28) reviewed that factors such as social isolation, adverse life events, unemployment, and dissatisfaction with one's life circumstances were associated with one's health. In addition income, an example of characteristics of the environment is the one which strongly associates with unemployment, has been shown to have a strong association with health status and functional status. When the effect of income is discussed further, the lower the income is predisposes the person to lower self assessed health status score and more functional limitations.

Regarding the biological, physiological factors and symptom status affecting the HRQoL of PLWHA many evidences are reported. For instance, in one study symptomatic HIV patients and patients with the lowest CD4 counts reported poorer HRQoL than asymptomatic patients and patients with higher CD4 counts (40, 41). However, medical and demographic variables explained only 35% of the variability of HRQoL ratings in this sample of HIV-infected patients. More to the point viral load (amount of HIV RNA per unit of blood) and CD4 lymphocyte cell counts are important predictors of HIV disease progression and death. However, independent of these factors, opportunistic infections (infections that attack people with weakened immune system) have a major impact on HIV-related deaths (42). In another study patients with CD4 count less than 200 had lower Physical functioning (PF), role function (RF), energy level (EL) and health perceptions (HP) scores .Meanwhile, patients with detectable HIV loads had lower PF than those with undetectable HIV viral load (43). Regarding the use of HAART towards improving HRQoL it is concluded that, even in a resource-poor environment, HRQoL can be greatly improved by HAART, and that the possible side effects of the drugs seem to have a negligible impact on the wellbeing of the subjects." (44, 45) Nevertheless, in one study HAART use was also found associated with lower physical function (PF) scores, probably due to disagreeable side effects, which is comparable in impact to

having either diarrhea or clinical depression. But the adverse effects of HAART on PF are likely to be outweighed by its positive effects on lowering viral load and increasing CD4 counts (43).

Other study conducted to determine the effect of progression or stage of the of the disease to quality of life of PLWHA has identified that Better HRQoL scores occurred in early stages of the infection while the AIDS (stage four) group showed worse scores in all domains of WHOQoL-HIV, with statistically significant differences in early stages (46). In addition the correlation between the domains and overall QoL was statistically significant ($r>0.5$; $p<0.01$). One study by Sowell et al, (29) has also identified that stage of illness had a statistically significant correlation with perceived quality of life in people with HIV infection. In line with symptom status of PLWHA, such as the presence, number, and severity of constitutional symptoms were strongly associated with HRQoL in Symptomatic HIV-infected people (11, 13, 25, 28, and 35). Similar study revealed that higher quality of life was associated with less mood disturbance ($r = -.72$; $p <.001$), reduced physical-symptom distress ($r = -.47$; $r <.001$), and higher levels of social support (r 57; $p <.001$) (47). The presence of comorbidities is also important predictors of HRQoL of PLWHA (48).

Holzemer W.L et al, in their research titled the concept of “living well” With HIV AIDS in sub-Saharan Africa, reported that daily functioning is the most significant predictor of life satisfaction or HRQoL (11). In this study people with impaired ability to carry out daily activities had the list life satisfaction .In this study inadequate financial resources and financial worries explained the second largest proportion of the variance in life satisfaction.

Patient’s general health perception is one of the proposed factors by Wilson’s and Cleary model which directly affect QOL after being empowered by other correlate variables of the model (13). General health perceptions, as reviewed by Karen H. et al, are personal beliefs, evaluation of general health status and are by definition subjective ratings (28). This review also states that the concept of Health perception includes a self- rating of health an overall measure of health concern and a measure of perceived susceptibility to

illness. General health perceptions in this literature have been displayed to correlate with functional status. Psychological problems such as financial problems, worry about the family, distress about losing others to HIV, and worry about disease progression (worry about CD4 count, viral load) are found the most prevalent disruptions in the study conducted on quality of life of women with symptomatic HIV/AIDS (30).

To sum up the review, HRQoL which refers to the discrepancy between a person's expectations or hopes and their present experience is an important client rated outcome measure which can be affected by multiple factors (28, 13). Though exploration of an outcome of any nursing or medical intervention directed toward chronic care is mandatory, still getting information about patient rated HRQoL is not available for Ethiopian nurses, physicians as well as policy makers (12, 25). Therefore this study will provide evidence based about health related quality of life as perceived by PLWHA in Hwassa, Ethiopia.

2.1. Conceptual Framework of the Study

Health related Quality of life (HRQoL) has emerged as a conceptualization of health that can be measured and used as a quality indicator. Although there continues to be debate about the dimensions, there are three agreements: HRQoL is a multidimensional concept (17); The assessment of HRQoL is subjective (49); and research on HRQoL should be based on strong conceptual models. Therefore, in this Study the Wilson and Cleary model which links clinical variables with health-related quality of life will be used (17). This HRQoL model is a model which unifies the biomedical model and the social science paradigm. The biomedical model focuses on etiological agents, pathological processes, and biological, physiological and clinical outcomes. The principal goal of the biomedical model is to understand causal relationships. In contrast, the Social science paradigm focuses on dimensions of functioning and over all well being. It takes in to account individuals, the social context in which they live and the complementary system devised by society to deal with the disruptive effects of illnesses (50).

This model includes five sets of variables: (a) physiological and biological factors (e.g. diagnosis such as pulmonary TB, laboratory values serum hemoglobin or creatinin inflammatory bowel disease), (b) symptom status, (c) functional status, (d) general health perceptions, and (e) overall quality of life. A linear, directional relationship among the variables is shown in *Figure 1(page 12)*. Individual and environment characteristics comprise clusters of variables that have the potential to affect all five levels .The arrows in the figure do not imply that there are not reciprocal relationship neither does the absence of arrows between non adjacent levels imply that there are not such relationships. But the arrows show the dominant and common directions of relationships (17).

The Wilson and Cleary model of Quality of life was once used in USA and it has served as a useful organizing framework and for developing an understanding of the correlates of quality of life for a sub sample of ethnic minority persons living with HIV/AIDS (25). Several dimensions of the model were also found significantly related to life satisfaction

for PLWHA in sub-Saharan Africa (11). But its applicability in Ethiopia has not yet been tested. Hence the variables for the study are organized using this framework.

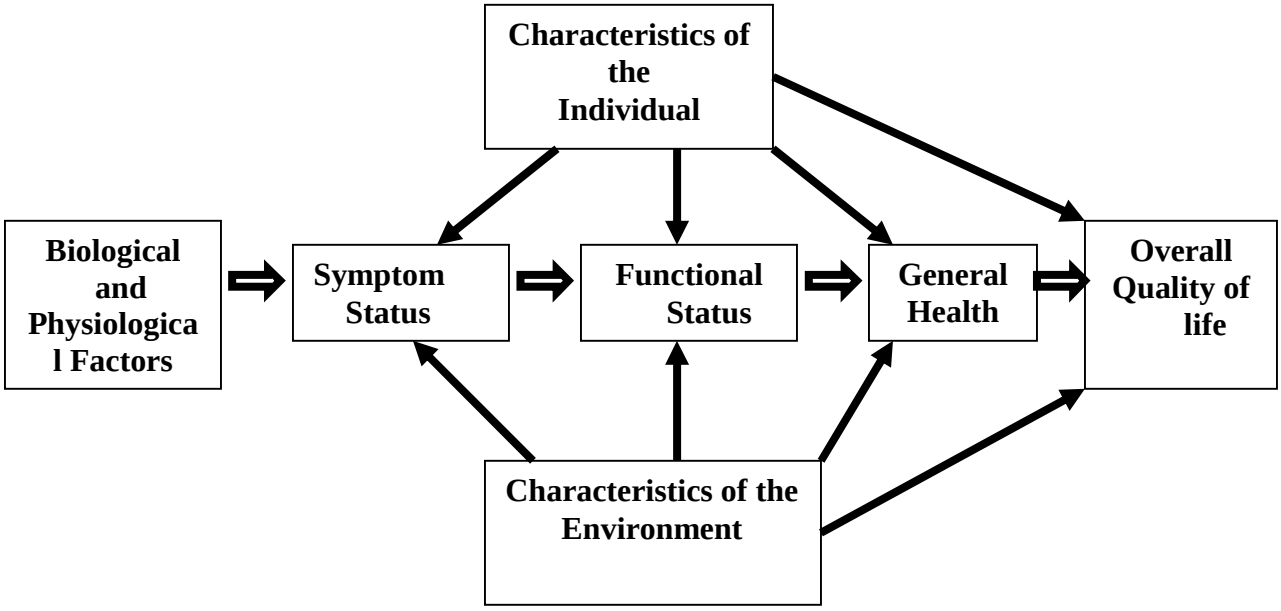

Figure-1. Wilson and Cleary's Model of the Correlates of Quality of Life

CHAPTER -THREE

OBJECTIVE

3.1. General Objective

The general objective of this study was to assess the health-related quality of life (HRQOL) of people living with HIV/AIDS in Hawassa University Referral Hospital

3.2. Specific objective

1. To describe the frequency and intensity of HIV-related symptoms in people living with HIV/AIDS in Hawassa University Referral Hospital
2. To examine to what extent does the Wilson & Cleary(1995)HRQOL model predict the overall quality of life of people living with HIV/AIDS in Hawassa University Referral Hospital
3. To identify factors determining the health related quality of life(HRQOL) of people living with HIV/AIDS in Hawassa University Referral Hospital

CHAPTER-FOUR

METHODOLOGY

4.1. Back Ground Information of Study Area

The study was conducted in Hawassa University, Referral Hospital, Hawassa town, which is the capital city of South Nations and Nationality Peoples Region (SNNPR) and is located **270** km south of Addis Ababa. There are different levels of both government and private health institutions offering health services in the city. Hawassa Referral Hospital is the only Referral Hospital in the City as well in the region. It was established in 2004/05GC and currently provides comprehensive health services (prevention, curative and teaching) including ART, VCT, PHICT, PMTCT and other services included in comprehensive HIV Care. The ART clinic was established in June 2006GC. At the end of October-8- 2009, there were about 3334 ever enrolled in the comprehensive chronic HIV care ("ART") clinic. Out of 1830 cases that ever started ARVs, about1527 were on ART whereas remaining were on pre-ART follow-up care. Of those ever enrolled in the Comprehensive Chronic care, 120 were of pediatric age group. The service is rendered by one physician, 4 nurses, three laboratory technicians, two pharmacy technicians and two data clerk; who were trained on VCT and ART.

4.2. Study Design

A descriptive, cross sectional, quantitative study design was used to assess the health related quality of life of PLWHA in Hawassa University Referral Hospital.

4.3. Source Population

All HIV patients, who ever enrolled in the chronic HIV care follow-up clinic in Hawassa University Referral Hospital during the study period.

4.4. Study Subjects

The study subjects were all registered PLWHA who were taking chronic care at ART clinic of Hawassa University Referral Hospital during the study period

4.4.1. Inclusion Criteria

The participants of the study were:

- seropositive participants who were receiving chronic HIV care
- neurologically and psychiatrically asymptomatic
- eighteen (18) years of age and above
- willing and also signed an informed consent

4.4.2. Exclusion criteria

- Those people aged less than 18 and with a history of CNS infection substance or alcohol abuse those who come with an overt clinical symptoms of depression or anxiety and those who are on psychiatric drugs were excluded from the study.
- Besides, participants who had been diagnosed with HIV and informed about their status within the last 6 months prior to recruitment were excluded to avoid possible acute effects of notification (51).

4.5. Study period

The study was conducted in HIV positive men and women at Hawassa University Referral Hospital, from May -11-2009 to June-23-2009

4.6. Sampling Procedure:

4.6.1. Sample Size

The sample size for the study was determined by using the formula for single population proportion by assuming 5% marginal error and 95% confidence interval (α=0.05) and the prevalence for HRQoL of PLWHA is 50 % or P=0.5 using the following formula the minimum sample size (n) was determined

$$n = \frac{(z \times \alpha/2)^2 \, p(1-p)}{d^2}$$

$$= \frac{z^2 \, p(1-p)}{d^2}$$

$$= \frac{(1.96)^2 \times 0.05(1-0.05)}{(0.05)^2}$$

$$= 384$$

Even though the minimum sample size was 384, assuming there would be non-response 5% of 384(n) was added as a contingency giving the minimum sample size;

5 %(n) = 384 x 5% =19.2=403 PLHA

Where **n =** the required sample size

Z = the value of standard normal curve score corresponding to the given confidence interval**= 1.96**

P = Assumed proportion of HRQOL

D = The permissible margin of error (the required Precision**) = 5%**

4.6.2. Sampling technique

Since getting all patients on the short study period was not feasible, a convenience sampling technique was used.

4.7. *Data collection Material and Technique*

4.7.1. Data Collection Materials

Three structured questionnaires of self-report measures, and one checklist designed to abstract selected clinical variables from patient chart were used. Each material is briefly illustrated as follows.

4.7.1.1. Demographic survey

The first part of the questionnaire is designed to hold the following variables such as information on personal characteristics (age, sex, educational status, marital status, number of Children ethnicity, marital status), environmental characteristics (income, financial worries, disclosure worries, source of financial support, insurance status, and social support). In addition, data on biological/physiological factors, such as whether participants had received an AIDS diagnosis or had any comorbidities, opportunistic infections(OI) ,stage of the diseases, functional status of the person, adverse drug effects, CD4 cell count, hemoglobin date confirmed for HIV positive and other clinical and laboratory data will be abstracted from the medical chart.

4.7.1.2. The Revised Sign and Symptom Checklist for Persons with HIV Disease (SSC-HIV rev)

The SCC-HIV (52) revised sign and symptom checklist used in this study comprised of 64 items that capture the frequency and severity of HIV signs and symptoms that the participants will experience on a given day. Items are rated on a 3-point Likert scale of 1 *(mild), 2 (moderate),* or 3 *(severe).* Calculations include the total number of symptoms (range = 0 - 64) and the mean severity of symptoms (range = 1-3). Reliability and validity of the instrument have been previously reported for a U.S. sample. Similarly, a Chinese version of the instrument has been tested with a Taiwanese sample. (*53).* Somewhat different Spanish versions of the SSC-HIVrev were used in Texas for a predominately Mexican population, in San Juan for a Puerto Rican population, and in Cali for a Colombian population. Researchers at each site confirmed the content validity of the versions. (54).

4.7.1.3. HIV/AIDS Targets quality of Life (HAT-QoL)

The HAT-QoL, HIV/AIDS targeted Quality of life, instrument is a self-report scale that measures overall functioning, life satisfaction, health worries, financial worries, medication worries, HIV mastery, provider trust, sexual function, and disclosure worries (58). The nine-dimensional scale includes items that were initially tested in a sample of 201 HIV seropositive persons. Only five of the nine dimensions were used in this study: (a) overall function (OF), (b) financial worries (FW), (c) health worries (HW), (d) disclosure worries (DW), and (e) life satisfaction (LS). These five dimensions exhibited favorable psychometric properties including adequate internal consistency and evidence of construct validity (55, 56). The Items were rated on a 5-point scale ranging from 1 *(low)* to 5 *(high).* The dimensional scores for the HAT-QoL scales were computed by summing all of the item responses in each dimension. Negatively worded items in the instrument were scored after being reversed. Higher scores shall indicate more favorable outcomes. The Cronbach's alpha reliability coefficient was above 0.80 for each scale, indicating highly favorable internal consistency across items (57).

4.7.2. Data Collection Procedure/Technique

- The above three standardized questioners were translated from English to Amharic for cross check up and the Amharic questioner was used for data collection.
- Five (5) nurses and one general practitioner (GP) were recruited from the health institution. Following these, all the data collectors were trained for one day on data collection techniques and pre testing of the questioner was conducted in 5% of the cases(n)
- Data was collected by four trained nurses and health officers under the close supervision of the two resident supervisors and the principal investigator.
- A total of 392 subjects were recruited and assessed for various characteristics.

4.8. Field Testing

The questioner was pre-tested for clarity, flow, cultural and moral fitness and time requirement. The questioner was pre-tested on 20 peoples living with HIV/AIDS (5% of sample size) in Yergaalem Hospital prior to the start of the actual research. Participants of the pretest were not included in the study samples.

4.9. Data quality control

- Supervision was made frequently by the two supervisors together with the principal investigator for data quality and completeness.
- Each questioner was checked for completeness of the information collected from each subject.
- Data entered was rechecked in 10% of randomly selected subjects
- The questionnaire was by two expert professionals

4.10. Data analysis technique

Pre-coded data responses to the questionnaires were entered into Statistical package for the Social Sciences for Windows software version 15^{th} (SPSS, Version15^{th}) and then cleaned. Data cleaning, coding and analysis were done by the investigator. Accuracy was improved through double entry. Descriptive statistics (i.e. means, standard deviations, frequencies, and percents) were used to describe the demographic characteristics of the sample, severity of illness, and quality of life. The average number of symptoms rated was computed, and symptom frequency and intensity were correlated. The variables were organized utilizing Wilson and Cleary's (1995) quality of life conceptual framework. A hierarchical multiple regression analysis was then conducted using six blocks or sets of variables. The average number of symptoms rated was computed, and symptom frequency and intensity were correlated

4.11. Data dissemination method

The finding obtained from the study will be presented to School of Nursing and the final result of this paper will be given to medical faculty of Addis Ababa University, Hawassa University, An Attempt will also be made to present the paper at conferences and to publish on reputable research Journal

4.12. Study Variables

4.12.1. As a **Dependent Variable**

1- **Health related Quality of Life**

Life satisfaction

4.12.2. **Independent Variables**

Individual Characteristics

1. Age
2. Sex
3. Educational status
4. Marital status
5. Number of Children
6. Ethnicity
7. Marital status

Environmental Characteristics

1. Income adequacy
2. Financial worries
3. Disclosure worries
4. Have children
5. Social support
6. Family size

Biological /Physiological Factors

1. Received AIDS diagnosis
2. Opportunistic Infections(OI)
3. Comorbidities
4. CD4 cell count
5. Hemoglobin

Symptom Status

1. Number of symptoms
2. Intensity of symptoms

Functional Status

1. Over all functioning
2. Physical Condition

General Health Perceptions

1. Health worries
2. Psychological Condition

4.13. Operational Definitions

1. **Health related Quality of Life**: implies persons self-ratted life satisfaction on life satisfaction instrument consisting of four 4 items
2. **Individual characteristics**: This will be assessed by person's age, educational status, marital status, number of children, Ethnicity, Religion, and marital status each represented by item on self-rated instrument.
3. **Environmental Characteristics**: this will be assessed by assessing the persons income(1 item), his/her financial worries(3 items), his/her disclosure worries(5 items), and his/her social support (1 item) on self rated instrument
4. **Biological /Physiological Factors:** This will be measured by assessing the person's CD4 cell count, Hemoglobin level, the presence of AIDS diagnosis, stage of his disease, the presence of opportunistic infections and the presence of other comorbid condition each represented by one item on self-rated instrument.
5. **Symptom Status:** This will be measured by assessing the presence , number and intensity of symptom each represented by 64 items on self rated instrument
6. **Functional status:** this will be measured by assessing the person's over all function instrument consisting of seven items
7. **General Health Perceptions:** This will be measured by assessing the persons psychological condition (1 item), and persons health worries (4 item) on self rated instrument.

1.14. Ethical Consideration

The study was approved by the Addis Ababa University, Medical Faculty, Institutional Review Board (IRB), and Hawassa University Health Science College IRB. Both Hawassa University Referral Hospital and Yergalem Hospital were adequately communicated and permitted the study to be conducted. Written consent was obtained from the study subjects to participate in the study after the nature of the study was briefed. Consents also obtained for record review from the concerned health institutions to know the selected clinical characteristic of patients. The interviews with study subjects were held in privacy and confidentiality and the right of the respondents to refuse at anytime was respected.

CHAPTER-FIVE

RESULT

5.1 Socio-Demographic Characteristics of the Participants

Three hundred ninety two subjects participated in this study making the response rate of 100.0%.All patients responded to the structured interview questionnaires of the survey after giving informed written consent. Patients aged less than eighteen (18years), who are seriously ill, and mentally incompetent and also patients who refused to give informed consent were excluded. The study participants ranged in age from 18 years to 76 years (see table 1). A greater number of (66.1%) female subjects and relatively fewer (33.9%) male subjects participated in the study. The majority, belong to Amhara (see fig.2)

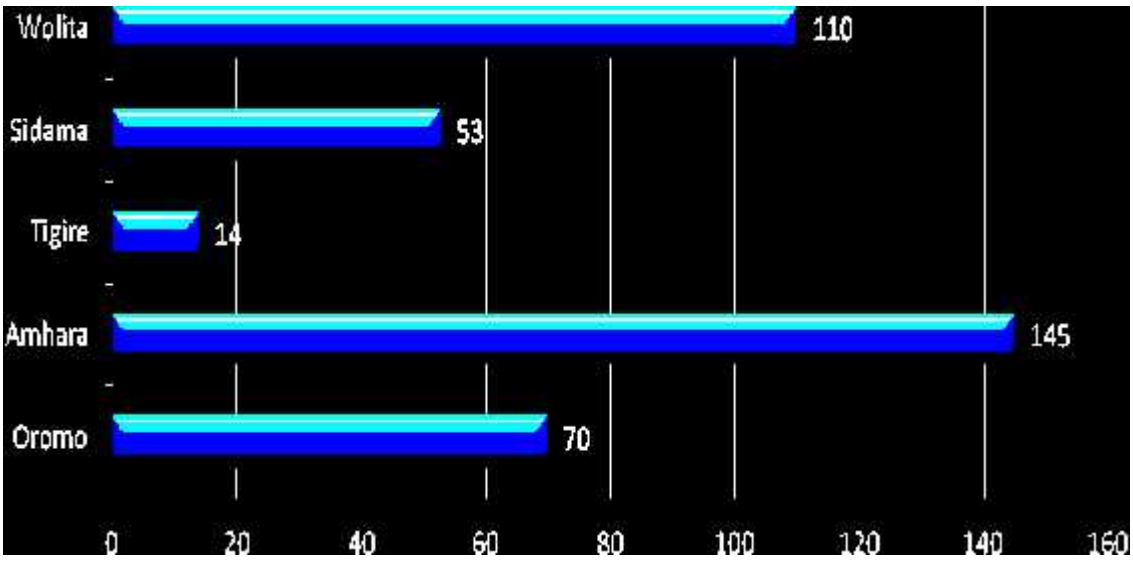

Figure -2: Bar Chart Demonstrating the Ethnic Distribution of Sample PLWHA in Hawassa University Referral Hospital. Hawassa, 2009

The result also showed the picture of marital status, occupation, income and also educational status. Pertaining to marital status, the majority (48%) were married where as 21.9% reported that they are divorced. The proportion of widower and separated was 12.9% and 0.55 respectively. The proportion of singles was reported to be 17.6%. Regarding employment status the greater proportion (78.8) reported that they are unemployed. The unemployed occupational category revels that 16% were housewives and the rest are daily laborers (22.4%) and merchants or engaged in their own small scale private businesses earning unpredictable and variable income. The greater proportion of the participants (37.8%) reported that they do earn or get less than 200 birr followed by 29.6% getting a monthly income ranged from 200-500 birr.

Table 1 – Selected Study Variables Organized by Wilson and Cleary Model of Quality of Life

S#	Variables	M	SD	Frequency	Percentage
1	**Characteristics of the Individual**				
	Sex: Female			259	66.1
	Male			133	39.9
	Total			392	100.0
	Age……	32.5	8.6		
	Marital Status ……..				
	Married			188	48.0
	Single			69	17.6
	Divorced			86	21.9
	Widowed			47	12.0
	Separated			2	.5
	Total			392	100.0
	Educational Status……				
	Illiterates			70	17.9
	Primary			145	37.0
	Secondary			136	34.0
	Collage/University			41	10.5
	Total			392	100.0
2	**Characteristics of the Environment**				
	Had enough money to cover daily expenses	6.15	4.46	103	26.3
	Financial Worries*	6.15	4.46		
	Worries About HIV Disclosure*	6.00	5.12		
	Rate of Social Support**	6.00	1.78		

Table 1 - Study Variables Organized by Wilson and Cleary Model …*Continued*….

S#	Variables	M	SD	Frequency	Percentage
3	**Biological/Physiological Factors**				
	Received an AIDS Diagnosis			22	5.6
	Co-morbidities			18	4.6
	Present with opportunistic infections (OI)			37	9.4
	Patents CD4 Count(M & SD)	347.13	202.797		
4	**Symptom Status**				
	Number of symptoms experienced today***	4.255	4.50		
	Intensity of symptoms****	6.209	7.20		
5	**Functional Status**				
	Overall functioning*	19.6	4.97		
6	**General Health Perception**.				
	Health worry*	4.00	5.52		
	Psychological condition**	7.93	1.408		
7	Overall quality of life				
	Life satisfaction*	12.00	3.36		

Rating Scales

* Scale = 1 (tow) to 5 (high)

** Scale = 1 (low) to 10 {high)

*** Total number of symptoms = 64

**** Each symptom was rated on an intensity scale of 1 *(mild)*, 2 *(moderate)*, or 3 (Severe)

As shown in Table 1, almost half (49.2%) of the participants claim that their income was totally inadequate to cover their daily living expenses where as the rest 24.5% of the participants said that their monthly income was barely adequate to cover their daily expenses respectively. At last, the educational status of the participant's revels that nearly all (322, 82.2%) are literate

Nearly all (74.2%) of the participant reported that they do have at an average about two (2) children with SD 2. Besides having children participants who reported for having children also reported that they do rear or care for at average two (2) children. While 17.9% of the participants lead lonely life the rest reported that their mean family size is 3 with SD of 2. Out of all respondents, (n=392), 55.6% claim to have good social support where as the remaining 44.4% claim poor social support.

5.2 Selected Clinical Characteristics of the Study Participants

The participants' average duration of enrolment to HIV/AIDS chronic care follow-up clinic was 22 months, ranging from 6 month to 7 years. The majority or 359(91.6%) of study participants were enrolled within the past three years, that means they were followed from 6-36 months .Their WHO clinical staging revels that most are w stage(see fig 3)

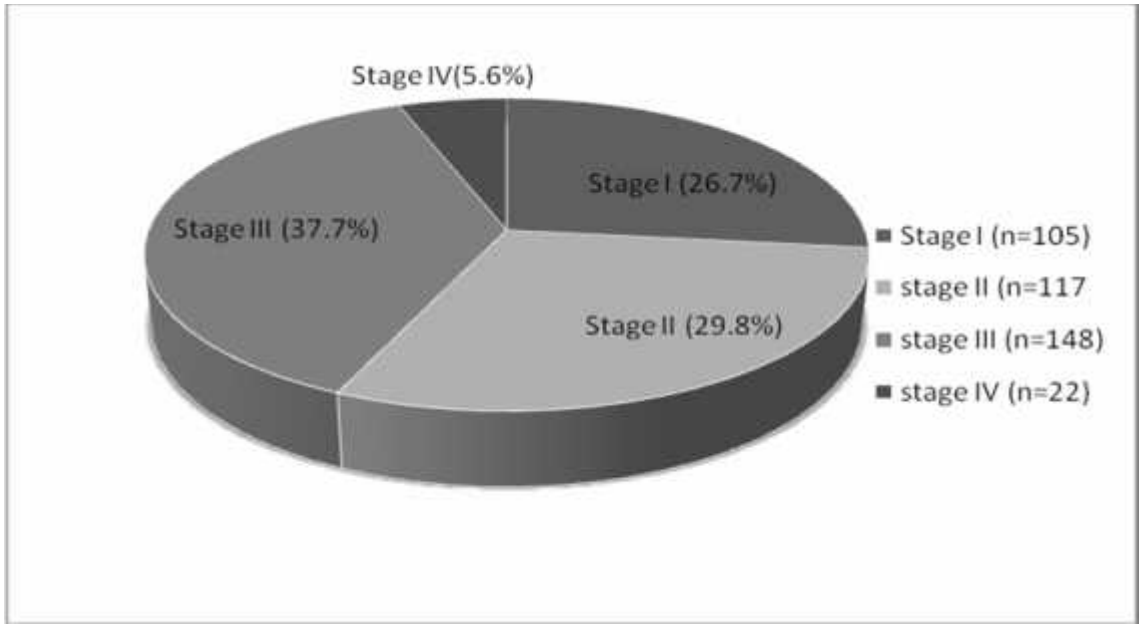

Figure -3: A Pi Chart Depicting the Clinical stage of Sample PLWHA in Hawassa University Referral Hospital. Hawassa, 2009

Nearly all participants or 310(79.1%) reported that the date confirmed for their HIV sero positivity was between the year 1998- 2002 GC. The date confirmed for HIV positive was not known for six study participants. (See Fig-4 below)

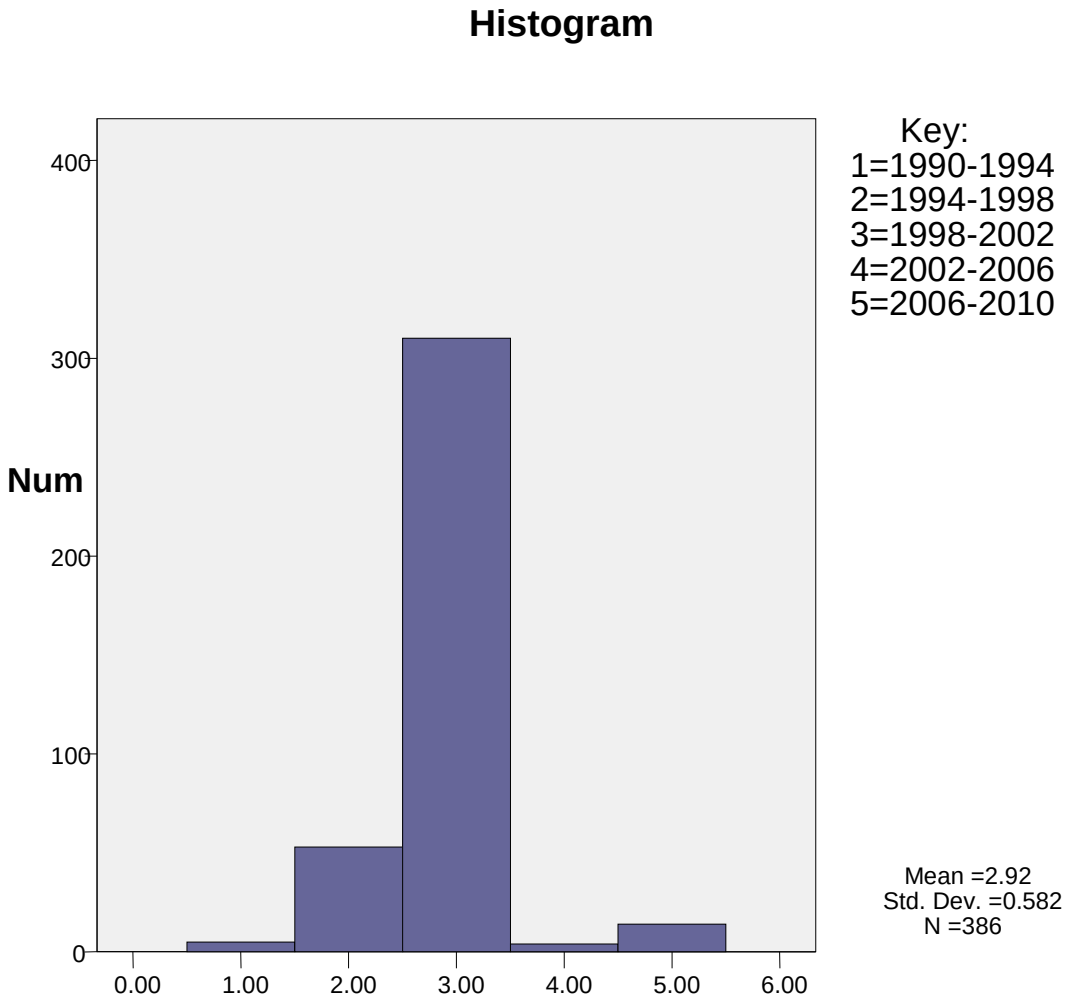

Fig-4: A Histogram demonstrating the Date/Year Confirmed for HIV Positive, Hawassa University Referral Hoispital.2009

In this study laboratory results such as CD4 cell count and hemoglobin levels were assessed. The mean CD_4 count of study participants measured within the last six months was 347.13cell/mm3 (ranging 19 to 1426cell/mm3). As per to WHO CD4 classification 26.0% have a very low CD4 count which is less than 200cell/mm3. Regarding patents hemoglobin level in the past 30 days, we could only collect result of 107 patients. The mean hemoglobin level of these participants was 13mg/dl (SD=2.3).

Table-2: Table Depicting Selected Clinical Characteristics of Persons infected with HIV in Hawassa University Referral Hospital. (2009)

Clinical Variable	M	SD	n	%
Patients on ART			284	72.4
Patients Taking Cotrimoxazole			221	56.4
Patients Functional status				
Working(W)			363	92.6
Ambulatory(A)			27	6.9
Number of Patient Presented with OIs			37	9.4
Pulmonary Tuberculosis			8	2
Intestinal parasitosis			7	1.8
STI			7	1.8
Diarrhea			6	1.6
Pneumonia			6	1.6
Acute Febrile Illness			1	.3
Co-morbid condition			18	4.6
Patients' CD4 by WHO Classification				
≤ 200 cell/mm3			102	26.0
200.1- 350 cell/mm3			129	32.9
350.1-449.9 cell/mm3			67	17.1
≥ 450 cell/mm3			94	24.0
Hemoglobin (n=107)*	13.0083	2.3703		
Male			37	35%
Male(13-18gm/dl)			22	
Male (< 13gm/dl)			15	
Females			70	65%
Female(12-16gm/dl)			54	
Female (<12gm/dl)			16	

*Hemoglobin was done only for 107 PLWHA on the current visit

While only eighteen (4.6%) individuals mentioned to have chronic or other co-morbid conditions such as hypertension, diabetes militias, epilepsy, and others, 37(9.4%) of participants were presented with opportunistic and other acute illness. The types of opportunistic infections and other acute illnesses diagnosed at the current visit were; pulmonary tuberculosis, intestinal parasites, sexually transmitted infections, acute diarrhea, bacterial pneumonia and lastly acute febrile illness. Astonishingly all of the seven cases presented with sexually transmitted infections (STI) were women. (Table 2)

Table-3: Cross-tabulation showing number of HIV infected Patients in Hawassa University Referral Hospital taking Cotrimoxazol Prophylaxis Based on their CD4 count. 2009

		Is the patient taking Cotrimoxazole ?		Total
		yes	no	
CD4WHOClassification	< or=200	92	10	102
	200.1-350	110	19	129
	350.1-449.9	12	55	67
	> or=450	7	87	94
Total		221	171	392

As shown in table-3 there are in general 221 patients taking Cotrimol prophylaxis. While 202 patients whose CD4 count ≤ 350cells found taking Cotrimoxazole phropylaxis, 29 participants with the same CD4 count were not taking. In another view, the number of patients whose clinical WHO staging reach to III and IV and started taking Cotrimoxazole prophylaxis was 113 whereas 57were not taking. Finally the observation of patents with TB and HIV co-infection shows only one out of eight patients not taking the prophylaxis.

Table-4: Table showing number of HIV infected Patients in Hawassa University Referral Hospital taking Ante retroviral Drugs (ART) Based on their CD4 count. 2009

		Is the patient on ART?		Total
		yes	no	
CD4WHOClassification	< or=200	97	5	102
	200.1-350	89	40	129
	350.1-449.9	45	22	67
	> or=450	53	41	94
Total		284	108	392

As shown in the above table (table-4), the majority (284) of patients were started on ART. Out of 102 patients whose CD4 count ≤ 200 for five cases ART were not initiated. It was only one patient, out of 22 patients with WHO clinical stage IV, who didn't took ART. One hundred four (104) participants whose CD4 count ≤ 350 were in WHO clinical stage III and 9 of these participants were not on ART.

5.3 Symptom Experience

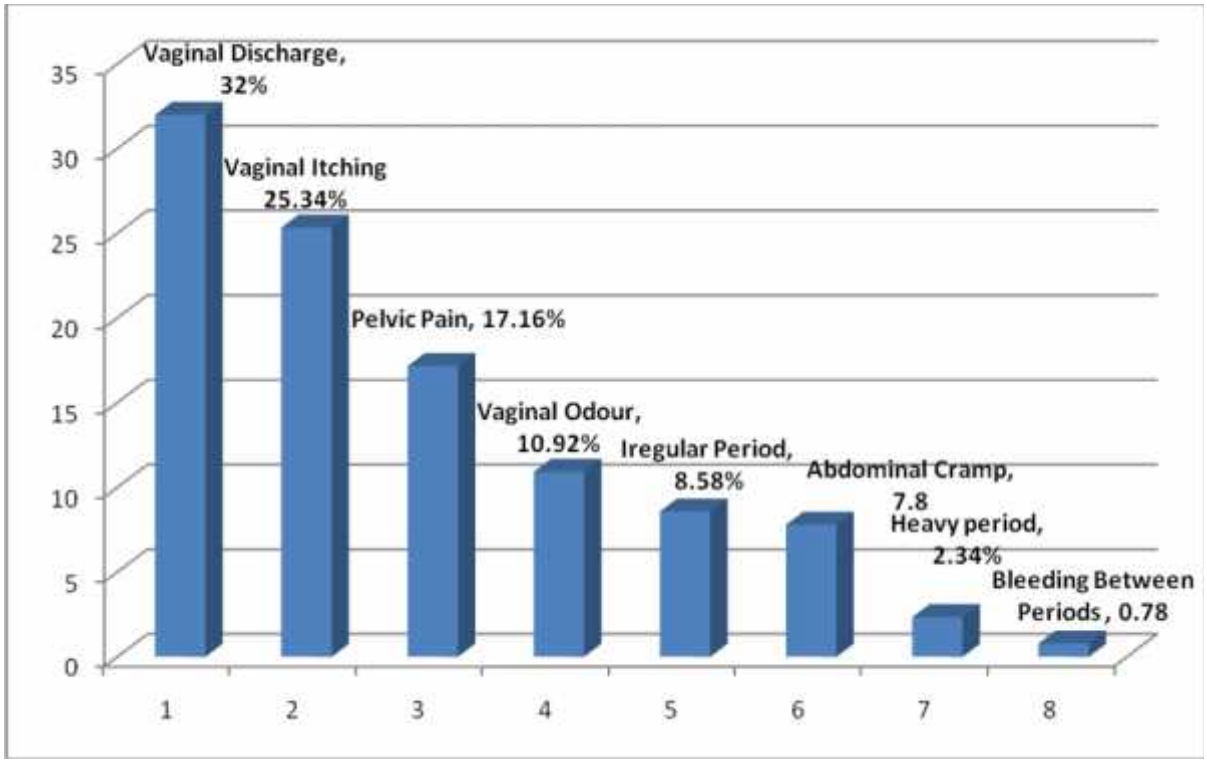

Figure 5: Number of symptoms Experienced by Women Infected with HIV in Hawassa University Referral Hospital 2008/9(n=78)

Symptom status of the patients at the current visit was assessed in terms of number of symptom and the intensity of symptom experienced on the day of the interview. For all participants the average numbers (types) of symptoms experienced on the date of the interview, out of the possible 64 symptoms, was 4.2554(With SD=4.46541). The number of patients experienced 'no symptom' on the date of visit was 91(23.2%).Women participants reported that on the date of the interview, they were experiencing hardly one gynecological symptoms(M=0.895753 and SD= 1.712002) out of a possible eight gynecologic symptoms.

Vaginal discharge (n=42), vaginal itching (n=15), and thirdly pelvic pain were the priority gynecologic symptoms experienced by the women on the date of their interview (See Fig-5). Whereas lack of appetite(n=118,30.1%), headache(n=111,28.3%), weakness (n=23, 23.7%), rash(n=79, 20.2%), itchy skin(n=74, 18.9%), numbness/tingling of legs(n=71, 18.1%), numbness/tingling of hands/fingers(n=68,17.3%), numbness/tingling of feet/toes(n=67,17.1%), numbness/tingling of arms(n=66,16.8%) and the tenth but not the last symptom blurring of Vision(n=62,15.8%) were the top ten symptoms experienced by all HIV infected men and women who participated in this study.(see table-5)

Table -5: Symptom Rank Order, Frequency, Percentage, &Mean Intensity (*n*=392)

Symptom	Rank	Frequency	Percentage	Mean Intensity*
Lack of appetite	1	118	30.1	0.38
Headaches	2	111	28.3	0.4
Weakness	3	93	23.7	0.34
Rash	4	79	20.2	0.28
Itchy skin	5	74	18.9	0.28
Numbness/tingling of legs	6	71	18.1	0.26
Numbness/tingling of hands/fingers	7	68	17.3	0.22
Numbness/tingling of feet/toes	8	67	17.1	0.24
Numbness/tingling of arms	9	66	16.8	0.21
Blurred vision	10	62	15.8	0.23
Night sweats	11	57	14.5	0.21
Coughing	12	55	14	0.2
Nausea	13	51	13	0.17
Abdominal pain	14	50	12.8	0.19
Fever	16	44	3.6	0.17
Vomiting	16	44	11.2	0.16
Concern over weight loss	16	44	11.2	0.19
Muscle aches	18	41	10.5	0.15
Burning with urination	19	37	9.4	0.13
Diarrhea	20	36	9.2	0.15
Day sweats	21	34	8.7	0.13
Painful joints	22	33	8.4	0.13
Insomnia/can't sleep	23	28	7.1	0.09
Dizziness	24	25	6.4	0.11
Chills	25	21	5.4	0.09
Chest pain	26	18	4.6	0.07
Concern over weight gain	27	17	4.3	0.09
Loose stools	28.5	15	3.8	0.05
Anxious	28.5	15	3.8	0.05
Fear/Worries	30.5	14	3.6	0.05
Rectal itching	30.5	14	3.6	0.06
Difficulty concentrating	32	13	3.3	0.05
Fatigue	33.5	12	3.1	0.05
Sore/bleeding gums	33.5	12	3.1	0.04

Table -5: Symptom Rank Order, Frequency, Percentage, and Mean Intensity (*n* 392) continued….

Symptom	Rank	Frequency	Percentage	Mean Intensity*
Thirsty	35.5	10	2.6	0.05
Weight gain in stomach area	35.5	10	2.6	0.04
Swollen feet	37	9	2.3	0.04
Hump on back of neck/shoulders	38.5	8	2	0.04
Skinny arms and legs	38.5	8	2	0.04
Sore throat	40.5	7	1.8	0.03
Nose bleeds	40.5	7	1.8	0.03
Swollen glands	42	6	1.5	0.03
Dry mouth	46	5	1.3	0.02
Memory loss	46	5	1.3	0.03
Gas/bloating	46	5	1.3	0.02
Painful swallowing	46	5	1.3	0.02
Constipation	46	5	1.3	0.02
Prominent leg veins	46	5	1.3	0.02
Rectal bleeding	46	5	1.3	0.02
Shortness of breath with activity	51	4	1	0.02
Blood in spit/sputum	51	4	1	0.02
Sores or lumps on genitals	51	4	1	0.02
Shortness of breath at rest	53.5	3	0.8	0.02
Wheezing	53.5	3	0.8	0.02
Depression	57	2	0.5	0.01
Mouth ulcers	57	2	0.5	0.01
White spots in mouth/Thrush	57	2	0.5	0.01
Heart racing	57	2	0.5	0.01
Breast pain/changes	57	2	0.5	0.01
Seizures/tremors	61.5	1	0.3	0.01
Easy bruising	61.5	1	0.3	0.01
Flushing	61.5	1	0.3	0.01
Rectal discharge	61.5	1	0.3	0.01
Nipple discharge	64	0	0	0

*. 1 (*mild*), 2 (*moderate*), 3 (*severe)*

5.3.1 Number of Symptoms Vs Symptom intensity

A Spearman rank order correlation was calculated to estimate the relationship between the rank of frequency of a reported symptom and the intensity of that symptom. The Spearman rho correlation(r) was 0.957(n =64, p =.000), suggesting a strong (higher) and positive relationship between frequency and intensity. (See Fig 6)

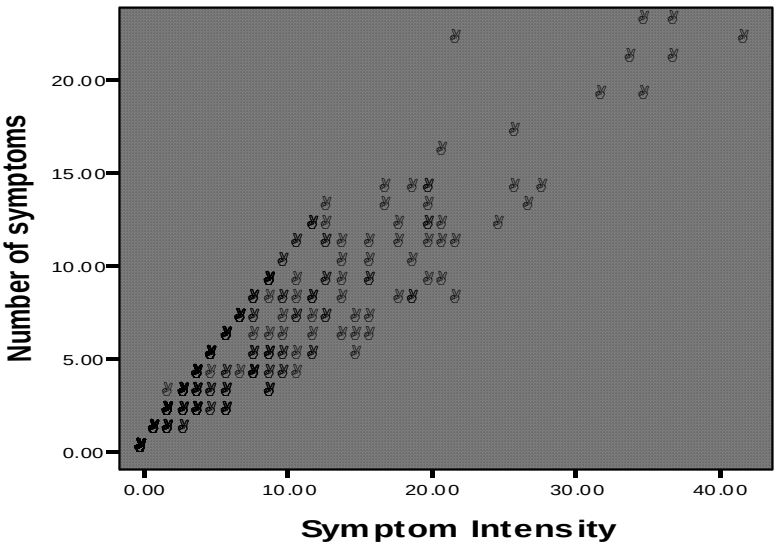

Fig-6: A scatter Plot demonstrating the correlation between types of Symptom experienced with the Severity of symptom among Sample of PLWHA in Hawassa University Referral Hospital.2009

5.4 Correlates of Quality of Life

In this study, the combination of variables in the Wilson and Cleary's model explained 65.1% of the variance in life satisfaction. This total sum of the variance is contributed primarily by symptom status or Block-1 (23.1% at P=.000, $R^2\Delta$=.231) and in descending order, functional status contributing 19.3% of the variance ($R^2\Delta$=.193, P=.000), general health perception contributing 16.1% of the variance ($R^2\Delta$=.161, P=.000), environmental characteristics explaining 5.5% ($R^2\Delta$=.055, P=.000) and finally physiological factors could explain the remaining 2.2%($R^2\Delta$=.022, P=.002) of the variance in the overall Quality of life or Patients. In this study, however, the last block or individual characteristics was not significant to explain the overall quality of life with its P-value >0.05. (See Table-6)

Among the specific components of the blocks; symptom intensity with negative β value (β=-.157, P=.000), overall functioning with positive β value (β=.533 , P=.000), health worry with negative β value (β=-.107 , P=.009), financial worry with negative β value (β= -.183, P=.001) , disclosure worry with positive β value (β=.150, P=.000), social support with negative β value(β=-.090, P=.007) , and also presence of opportunistic infections with a negative β value (β= -.097, P=.004), were found significantly associated with participants health related quality of life. Whereas as other components of the blocks such as; psychological support, receiving an AIDS diagnosis, presence of co-morbidities, Patients CD4 count, physical condition, adequacy of money, having children, family size , ethnicity, educational level, sex and marital status were not found significantly associated with an overall quality of life with their P-value ≥ 0.05.

In general, participants of the study who reported to have; decreased symptom intensity, lower health worry, fewer opportunistic infections, lesser financial worry, and also participants who reported to have lesser social support exhibited higher quality of life. In the other hand, participants experiencing greater functioning, and higher disclosure worry demonstrated a higher quality of life. (See Table 6 for details of the correlates of overall QOL)

Table-6: Hierarchical Multiple Regression Predicting Overall Life Satisfaction of persons infected with HIV in Hawassa University Referral Hospital (n = 392). 2009

Independent Variables	**Standardized Beta from last Step**	**R2**	**R2Δ for set**	**P-value**
Block 1: **Symptom Status**……		**.233**	**.231**	.000
Symptom intensity	-.157			.000
Block 2: **General Health Perception**……..		.389	.161	.000
Health Worry……	-.107			.009
Psychological Support……..	-.024			.546
Block 3: **Physiological Factor**…….		.405	.022	.007
AIDS Diagnosis……	.008			.796
Co-morbidities ……..	.010			.750
Opportunistic Infections (OI)……	-.097			.004
CD4 Count……	.005			.885
Block 4: **Functional Status**……		.600	.193	.000
Overall functioning……...	.533			.000
Physical condition…….	.013			.759
Block 5: **Environmental Characteristics**.		.651	.055	.000
Adequacy of money……..	-.002			.965
Financial Worries……..	-.183			.001
Disclosure worries…….	.150			.000
Social Support……...	-.090			.007
Have children……..……..	-.009			.806
Family Size……	.018			.634
Block 6: **Individual Characteristics**……		**.652**	**.005**	**.324**
Ethnicity: ……...	-.001			.984
Educational status.....	.070			.046
Sex: ……...	.019			.588
Age……	-.009			.793
Marital Status: …….	.002			.956

CHAPTER-SIX

DISCUSSION

Knowing the health related Quality of life of patient is a prime issue in measuring the outcome of any intervention applied toward treating, caring of a patient.(12,13)Nurses,(Clinicians), researchers, and policy makers all recognize the importance of measuring health-related quality of life in planning patient care, in managing the health care delivery and also to designing policy.(12)In spite of this fact little is known about the health related Quality of life of People in Ethiopian Context. For this reason, selection and testing of accepted conceptual models like the Wilson and Cleary (1995) model of HRQol prime role. (13) This study, therefore, has tried to address this issue by testing the adequateness of the model and also described the way how the patients' overall Quality of Life is being affected.

6.1 Symptom Experience of Patients

This is one of the first finding in Ethiopia context on the full spectrum of symptoms experienced by a sample of HIV-positive adults. The sample, both men and women participants, of the study reported a total of 64 symptoms with a mean (types) of 4 symptoms per person. (SD=4.5). Participants in this study were relatively stable or well. The symptom experiences reported in this study differs from that of the Botswana, Lesotho, South Africa, and Swaziland study (60). Participants of this southern African countries study, unlike the samples reported being reported here, were extremely ill exhibiting about 18 types of symptoms (SD=13.74). The most probable reasons for this are the impact of the chronic HIV care follow-up especially the initiation of cotrimoxazole prophylaxis and ART regimens (68), and also the cultural differences in perception and reporting of illness.

Comparison of the constellation of ranked HIV related symptom of the study participants with other studies (60, 62) shows a difference. For instance the priority symptoms for Ethiopian participants were; lack of appetite(n=118,30.1%), headache(n=111,28.3%), weakness (n=23, 23.7%), rash(n=79, 20.2%), itchy skin(n=74, 18.9%), numbness/tingling of legs(n=71, 18.1%), numbness/tingling of hands/fingers(n=68,17.3%), numbness/tingling of feet/toes (n=67,17.1%), numbness/tingling of arms (n=66,16.8%) and blurring of Vision(n=62,15.8%). In contrast a sample of 420 HIV-positive adults visiting an outpatient clinic reported that their most frequent symptoms were anxiety/fear, 17.3%; diarrhea, 16.6%; neuropathy, 11.6%; nausea/vomiting, 9.7%; depression, 8.1%; and fatigue, 7.3% (62). And in another study (64) the mean number of symptoms was nine, and symptoms experienced by more than half the sample population included lack of energy (65%), drowsiness (57%), difficulty sleeping (56%), and pain (55%). The variation in symptom frequency and their rank in these studies may be attributed to several factors, including the presence of various pathogens in the local environment, sample characteristics, stage of illness, age, sex, and availability of medications (61).

In fact participants of the study, even though lesser in their frequency, constellation of symptoms such as neurological, digestive, pulmonary, cognitive, musculoskeletal, genitourinary, gynecological symptoms involving most major organ systems and also psychological distress were reported. But the priority ten top signs identified in this study, especially, lack of appetite, headache, weakness, skin rash, numbness, and tingling sensations of the extremities are all the expected side effects of most first line ARV regimens – zidovudine, stavudine (d4t), Abacavir (Ziagen), tenofvir. (63)

Peculiarly numbness and tingling sensations (symptoms of peripheral neuropathies), which ranked 5th up to 9, might have a strong link with the side effects with stavudin (d4t). (63). These symptoms of neuropathies were also reported in two studies (65). While the first study states that “numbness/tingling in hands/feet” was endorsed equally by 44% of men and women the other study reported that neuropathy was the fourth most frequent symptom, with 70% of the men and 29% of the women endorsing that item

A Spearman rank order correlation was calculated to estimate the relationship between the rank of frequency of a reported symptom and the intensity of that symptom. The Spearman rho correlation was .957(n =64, p =.000, and CI=99%), suggesting almost perfect strong (higher and Positive) relationship between frequency and intensity. This finding is similar with the study conducted on samples from four African Countries. (*25*). This is may be a result of disease progression and multiple drug use which augment the occurrence (number of symptoms) of and intensity of symptoms especially HIV related pain. (66)

Holzimer and colleague in their study have tested the reliability and validity of the *SSC-HIVrev* instrument including the gynicolologic part filled by women. (61) But they left the occurrence of those symptoms not discussed. Even though the causation of symptoms on women may not be judged clearly, the occurrence of gynecologic symptoms such as; vaginal discharge, 32%, vaginal itching 25.34%, pelvic pain 17.16%, vaginal odor, 10.92% might have strong link with the OIs especially candidacies and also STIs. The rest symptoms related to menstrual disorders may also be the result of the disease process and stress related with the diseases.

6.2 Extent of the Wilson & Cleary (1995) Model to explain HRQOL

In this study, the combination of variables in the Wilson and Cleary's model, with a total of 20 predictor variables, explained 65.1% of the variance in life satisfaction. This, therefore, shows that about more than half of the variation in overall quality of life was explained by the model. This finding is by far greater than findings ever done using this model. For instance the Wilson and Cleary model explained only 32% of the variance in sample of HIV patients in Northern California (n=142) (28) where as in another study conducted among Ethnic minorities of United States, the Commonwealth of Puerto Rico, Taiwan, Norway, and Columbia (n = 920) the model only explained 22.9% of the variance in life satisfaction (25). But one study conducted among samples from four sub-Saharan African countries, 53.2% of the variance in life satisfaction was explained by the model (11). Even though the model was by far better for explaining the overall quality of

life of the study participants than any other studies reported so far (11, 13, 25), it has also failed to explain the remaining 34.1% of the variance in overall quality of life.

This is therefore an indication that shows the model is good or adequate enough to organize the correlates of HRQoL, and also to explain the Health related Quality of Life among people infected with HIV in Hawassa University referral Hospital. The finding also is an implication which guides an effort for exploring those factors needed to be considered to better explain the remaining 34.1% of the variance in the dependent variable.

In this study symptom status was the principal block which explained 23.1 %(P=.000, $R^2\Delta$=.231) of the variance in life satisfaction followed by functional status which could explain the second largest proportion or 19.3% ($R^2\Delta$=.193, P=.000) of the variance in the overall quality of life. In their descending order, general health perception (16.1%, $R^2\Delta$=.161, P=.000), environmental characteristics (5.5%, $R^2\Delta$=.055, P=.000) and physiological factors (2.2 %, $R^2\Delta$=.022, P=.002) could explain the remaining variances in the overall Quality of life. These findings are relatively congruent with the finding in other studies even though some variations, for instance, in their rank order. (11, 13, 25) These variations may be accounted for deference in culture, clinical conditions, availability of ARV medication, socio economic status and other related factors.

However, contrary to Wilson and Cleary (1995) model (12), in this study, individual characteristics such as, age, marital status, sex, ethnicity were not significant to explain the variance in life satisfaction both as group (block) and also individually (P-value >0.05). This is consistent with study conducted among ethnic minorities (25). The possible reasons for these might have rooted in the fact that the healthcare service is addressing them without impartiality and following client centered approach. Besides the unexplored but available support group, HIV clubs, and also the living arrangement of the society on the area might have an impact for narrowing differences among individual

characteristics and reducing their level of significance to explain their variance on the overall quality of life.

6.3 Factors determining the health related quality of life (HRQOL)

Comparison of correlates of HRQoL, with respect to their beta (β) weight, demonstrated that the functional status, financial worry and symptom intensity all ranked from first to third in their degree of influence on patients overall Quality of Life . Social support was the least which took the last (7^{th}) rank.

Participants of the study who reported to have lesser financial worry (β= -.183, P=.001), decreased symptom intensity (β= - .157, P=.000), lesser health worry (β= -.107, P=.009), fewer opportunistic infections (β= -.097, P=.004) exhibited a higher health related quality of life (all with a negative beta weight). These findings are comparable with other studies reported so far (9, 67) For instance a previous research demonstrated that higher frequency and intensity of symptoms have adverse effects upon quality of life. (62). another finding from South Africa also stated that those participants with higher-level of life satisfaction had fewer health worries, lower symptom intensity, and lower financial worries. (11).

It is clear that the reasons for these finding, as supported by other findings, are too natural or usual. Lacking adequate finance is to mean the person is lackeying money to pay for food, house medical care and other which further affect his/her symptom and functional status. Likewise decreased opportunistic infections are the probable factors which reduce the possible symptoms and improve the functional status of the patients which ultimately affect the individual's Health related quality of life.

On the other hand, participants experiencing greater physical functioning (β=.533, P=.000), demonstrated a higher Health related quality of life. This finding is unanimous with many findings that poor physical functioning is a significant associate of poor health related Quality of life (11, 13, 25). In this study the beta weight for the overall functioning was higher than all other factors. This is therefore a proof demonstrated that

it is the leading (major) factor which affects the health related quality of life of the individual. This may be justified by the fact that over all functioning is the core factor which is directly influenced by factors such as bio-physiological factors, symptom status, and also by the individual and environmental factors which ultimately influence health perception and the overall quality of life of the individual. (12). Furthermore, poorer bodily function in its worst form is the factor which puts the patient dependent for his activity of daily living and limits the person every productive movements such as work, social responsibilities and the likes.

It is logical and in line with many studies to think that availability of good social support and lesser disclosure worry to be related to higher hearth related quality of life an increased patient's life satisfaction. But, contrary to their model, in this study participants who reported to have higher disclosure worry (β=.150, P=.000) and lesser social support (β=-.090, P=.007) exhibited a higher health related quality of life (all with a negative beta weight). In fact participants of the same study who reported to have lesser social support have showmen a higher quality of life in their health related quality of life (10). The explanation for this finding is, perhaps, these HIV positive people visiting the Hawassa University referral Hospital may perceive their social support as being low or less but getting adequate social supportive network hence, are satisfied with life.

The association of higher disclosure worry with higher quality of life is perplexing. Perhaps persons living with HIV/AIDS who perceive their disclosure worry as higher may have a better and unexplored communal coping strategy which buffers or stabilizes their health related quality of life unaffected by the counter effect of their perceived higher disclosure worry.

Strength and Limitation of the study

Strengths of the study

- This study is the first in its type in the area and also in Ethiopia hence can be used as a base line for further researches
- Pretest was done and necessary corrections were made.
- High response rate (100%)

Limitation of the study

- The life satisfaction dimension of HATQOL includes only four items which may not adequately reflect the impact of HIV/AIDS of the study population
- Another limitation is the fact that cross-sectional data were collected. Therefore, inferring causal relationships between selected predictor variables and life satisfaction is impossible.

CHAPTER-SEVEN

CONCLUSION

The study tried to assess the health-related quality of life (HRQOL) for people with HIV/AIDS in Hawassa University Referral Hospital. Participants in this study were people who enrolled under the chronic HIV follow up of Hawassa University Referral Hospital. The majority were on antiretroviral treatment and/or other ways on cotrimoxazole prophylaxis. From the study findings, the following conclusions are drawn.

First, the most frequently reported symptoms represent a cluster of the signs and symptoms commonly seen in patients who are taking antiretroviral agents and prophylaxis for opportunistic infections. These symptoms are the side effects related to medications, because almost all participants were taking ARV medications and cotrimoxazole prophylaxis. But the data documented relatively very low levels of disease, co morbidities, pain, distress, and suffering. In addition when number of symptoms increase symptom severity is also increasing which ultimately affect the patients' health related Quality of life.

In this study, the combination of variables in the Wilson and Cleary's model, with a total of 20 predictor variables, explained about 65.1% of the variance in life satisfaction. This, therefore, shows that about more than half (about two third) of the variation in overall quality of life was explained by the model. Moreover the model was adequate enough to organize the correlates of HRQoL. Nevertheless the remaining 34.1% of the variance in the dependent variable needs further exploration.

Except the individual characteristics, all blocks of variable were significantly related to the overall quality of life. Their variance of influence on life satisfaction was primarily by symptom status, then functional status, and thirdly by health perception. Environmental characteristics and physiological factors were the fourth and fifth to explain the remaining variance in life satisfaction. This is, therefore, important in guiding focus of

nurse sing care which can affect the Health related Quality of life along the health care continuum. Concentrating on HRQOL allows nursing to target concerns and issues that are appropriate with respect to the recipient of care or the patient.

Participants with higher life satisfaction scores or higher health related quality of life score had higher level of functioning, lesser financial worry, had lower symptom intensity, fewer health worries, and did not have opportunistic infections. Hence those nursing, medical activities and other integrated inter-professional contributions directed toward improving patients functional status and financial status, alleviating symptom intensity, removing patients health worries, and preventing or treating opportunistic infections are all key dimensions for improving the health related quality of life of the patients.

Negative relationships between social support and disclosure worries with life satisfaction are examples of unexpected results. Similarly, a lack of significance between the variable of the individual characteristics such as education, age, sex education, marital status and life satisfaction were not observed in this study. These findings highlight the need for greater understanding of the factors associated with quality of life of people living with HIV/AIDS in Hawassa referral Hospital. Besides, discovering the secret or the meaning of social support and disclosure worries to the patients and their coping skills or strategies to buffer their quality of life unaffected is another valuable consideration to be taken.

CHAPTER-EIGHT

RECOMENDATIONS

To improve the health related Quality of life of HIV positive people, the following recommendations are made on the basis of the above findings:

1. Early identification and treatment of opportunistic infection, early detection and adjustment medication side effects, continual screening of symptoms and their early alleviation should be the focus of both nursing and medical care. (to Nurses and Medical personnel)
2. Nurses must help individuals and families develop strategies for managing and controlling symptoms.
3. The revised sign and symptom check-list for HIV (SSC-HIV rev) is important tool for continual screening of the symptom experience of HIV patients and also is also helpful in doing further research.(to Nurses and Researchers)
4. Decreasing the number of symptom experience is best strategy that reduces the intensity of symptoms experienced by the patient and ultimately improves the health related quality of life.
5. Since the constellation of symptoms experienced by HIV patients and factors affecting their quality of life are rooted in; social, cultural, economical, bio-physiological, and other dimensions, nurses should take the forefront in playing their advocacy roles and also in leading organizing and a coordinating collaborative efforts. (to Nurses, leaders, HAPCO and Policy Makers)
6. Extensive efforts are needed toward assuring universal access to ART medication.
7. By considering plans of nursing care directed toward improving patients functional status, alleviating intensity of symptoms, preventing and treating the OIs earlier, and by facilitating which may reduce health and financial worries, nurses can help patients improve their health related quality of life.
8. Due consideration should be given to the monitoring of the side effects of ARVs and other prophylaxis medications taken by all health professionals and also by the federal Ministry of HIV/AIDS Control office

9. Ways to address the socio demographic factors such as unemployment and inadequate income that are closely related with poor quality of life should be addressed for PLWHA .(micro-financing(GO), NGOs, Policy makers and all stake holders)
10. Follow up training should be given for counselors working in ART nurses and health workers in service delivery area about ways of improving Quality of life of People infected with HIV.
11. Incorporation of Quality of life dimensions and their management in nursing curriculum is valuable part of nursing education
12. Further research should be conducted to explore the remaining 35.1% factors contributed to patients overall health related quality of life.
13. Testing the Wilson and Cleary 1995 model in other areas of Ethiopia, with both cross-sectional and preferably longitudinal design triangulating with qualitative method will be more helpful to better understand the health related Quality life of HIV infected people in Ethiopia.

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ANNEXES

Annex-I- *Subject information sheet*

Addis Ababa University,

Medical Faculty,

School of Nursing

Subject Information Sheet

You are invited to participate in a research study to be conducted by a Msc. student at the Addis Ababa University, Faculty of Medicine, and School of Nursing. Please read the following statements and ask any unclear questions before you agree to participate.

1. **Topic: -** Health related Quality of life of people living with HIV/AIDS in Hawassa University Referral Hospital, Addis Ababa Ethiopia.
2. **Objectives of the study: -** The main objective of this study is to assess health related quality of life of people living with HIV/AIDS in Hawassa University Referral Hospital This study is for academic purpose with an ultimate goal of drawing conclusion and recommendation that would be help to further trainees of the university and to policy formulation of the country regarding chronic HIV care of People Living with HIV/AIDS.

3. Participation procedure and guidelines

A. Information you provide will be kept completely unanimous. That means your name will not be on any of the forms.

B. It will take about 30 minutes to complete the questionnaire. Never the less, if you don't want to participate in the study you can withdraw at any moment.

4. Participation Benefits and Risks:

A. Your participation in this study does not involve risks that are greater than those you experience in your daily life. You might be a bit stressed from your trial to understand the questions and to provide the right answer and you have to wait for some 30 minutes until you respond for all the questions.

B. You may have, in fact, no direct benefit you may get from this study. But your participation in this study may serve as an important input for peoples working to ward improvement of the quality of life of people in Ethiopia as well as in the world. These is, Therefore, the indirect benefit that you may get from this study

C. No incentive or reimbursement will be given for participating in this study.

5. Rights to Refuse or Withdraw:

Your participation is voluntary, and there is no penalty for your not wanting to participate. This means that you are free to stop at any point or to choose not to answer any particular question or all of the questions. This is not a test; there is no right or wrong answer .Besides no one is required to write his or her name on the Questionnaire

6. **Rights as a Participant:** You have the right to ask and have the answers for any questions about this research. Please direct any question you have to

Andargachew Kassa

School of Nursing,

Medical Faculty, Addis Ababa University.

Cell phone +251911 33 88 95

Email: andkassa@yahoo.com

For additional information, please contact the Addis Ababa University, Medical faculty, Institutional Review Board office (IRB) at:

Tell. 251-11-5-53 8 7 34

Fax 251-11-5-51-1-5130 99

Email: aaumfirb@yahoo.com

Po.B. 9086: Addis Ababa, Ethiopia.

7. Agree to participate

Yes_____ No_____

Signature_____ Date_____

Annex II: Informed Consent Form

Addis Ababa University
Faculty of Medicine
Centralized School of Nursing

An Informed Consent Form

(**Interviewer:** *Please read the following statement to the respondent before you begin interviewing*.)

Hello! I am ---------- I am working in the research team of Addis Ababa University medical Faculty School of Nursing. I am one of the data collectors. This is an assessment of quality of life of people living with HIV/AIDS. The survey tries to identify which factors affect health related quality of life of People Living with HIV/AIDS. Your participation will significantly contribute to improve the wellbeing of people living with HIV/AIDS and, may not bring any direct benefit to you. Your response will never be exposed to any party. And without your consent, there is no obligation to participate in the study. You have the full authority to refuse participation, refrain during interview or decline from answering some or more of the questions you do not like to answer. Your participation is voluntary, and there is no penalty for your not wanting to participate. This means that you are free to stop at any point or to choose not to answer any particular question or all of the questions. This is not a test; there is no right or wrong answer .Besides no one is required to write his or her name on the Questionnaire. No incentive or reimbursement will be given for participating in this study. Are you willing to participate? Or would you please cooperate in responding to the following Questions?

Yes_____ **No**_____

If yes: take his signature and continue the interview

Signature_____ **Date**_____

If **No**, Thank him/her and go to the next participant by writing reasons for his/her refusal. Reason for refusal_____

Annex III- Subject Information sheet (Amharic translated)

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u›Ç=e ›uv ¿’>y`e+ T@Ç="M óŸ<M+ ’`c=”Ó ƒUI`ƒ u?ƒ ¾ÉI[ U[n }T] eJ” u²=l Ø“ƒ }d ò Ÿ¨ KT>k`wM- SÖÃp SMe SeÖƒ ”Ç=}vu ÖÃnKG<:: uØ“~ KSX}õ ðnÅ˜„” ŸSÓKê- uòƒ v¡-ƒ” Ÿ²=l u ‹ ¾}cÖ<ƒ” SÓKÝ-‹ Á”wu< “ ÓMê ÁMJ’M-ƒ GXw "K ØÁo Áp`u<::

1. ¾Ø“ƒ `°c<:- uNªX ¿’<y`c=+]ð^M Jeú M ŸT> ¾J’< u›?‹ ›Ãy= zÃ[e ¾}Öl W-‹ eK QÃ¨ †¨< Åe (¾’<a `") ŸÖ?“}”¢ ”Èƒ ”ÅJ’ KT¨p ¾}²ÒË nK SÖÃp ”¨<::

2. **¾Ø“~ ¯LT:-** ¾²=l Ø“ƒ ¯LT ¾ƒ™‡ Ñ<ÇÄ‹ ¾ÓKcu<” ŸÖ?“ ›”í` ¾J’ ¾’<a Åe ¨<” ( `" Á") K=ÁÅ`Ñ<uƒ ”ÅT>‹K< KT¨p ÃV¡^M::

3. **¾}Xƒö H>Åƒ“ SS]Á-‹:-**

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K. SÖÃl” SMf KTÖ“kp ¨Å 30 Åmn ÁlM Ñ>²? Ã¨eÇM:: ’Ñ` Ó” SÖÃl” KSÚ[e õLÑAƒ ŸK?KAƒ uðKÑ<ƒ c¯ƒ Ts[Ø Ã‹LK<::

4. ¾}Xƒö ØpU“ K=ÁÒØS< ¾T>‹KA ‹Óa‹:-

G. ¾›”} }Xƒö u ÏÑ< ŸzÃ[c< Ò` ¾T>\ƒ” ¨Ñ‹ ¾’<a Åe  `"M>ŸhM ›”í` ƒMp T>“  ”ÅT>•[¨< Ã S“M:: ’Ñ` Ó” K›”}/ ›”p²ªª] ŸMJ’ kØ}— ØpU LÃ•[¨< Ã‹LM:: SÖÃl eŸ=Ö“kp ¾}¨c’ Ñ>²? SeªƒU Ã•`xM::

K. u²=l Ø“ƒ uSX}öƒ K=ÁÑ–<ƒ ¾T>‹K<ƒ ØpU ¾›”} }Xƒö ŸzÃ[c< Ò` ¾T>•\ƒ” ¨Ñ‹ ¾’<a Åe `" KMhhM ŸT>Å[Ñ¬”Ø[ƒ ›”í` ƒMp T>“  ”ÅT>•[¨< Ã S“M:: ’Ñ` Ó” K›”}/ p²ªª] ŸMJ’ kØ}— ØpU LÃ•[¨< Ã‹LM

N. u²=l Ø“ƒ KSX}õ- ¾T>Å[Ó ¡õÁ ›Ã•`U::

5. ÁK SX}õ ¨ÃU ¾Ts[Ø Swƒ:-

}Xƒö- S<K< uS<K< uðnÅ˜ƒ LÃ ¾}SW[} ”¨<:: KSX}õ vKSõkÉ- ¾T>×Mw-ƒ p×ƒU ›Ã•`U:: ÃlU TKƒ uT“†¨<U Åmn SÖÃl” ¾SSKe }Xƒö-” Ts[Ø ¨ÃU ¾ƒ—¨<”U ØÁo ÁKSSKe S<K< Swƒ ›K-ƒ::

6. ¾}X ò’ƒ Swƒ:

❖ eKØ“~ K›K-ƒ T”—¨<U ØÁo SMe ¾TÓ–ƒ Swƒ ›K-ƒ::

*** v¡-ƒ” ØÁo-‹-” uT>Ÿ}K¨< ›É^h ÃLŸ<M˜::***

K ›ÕÇÒ¬" "X'

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eM¡ lØ` 0911 338895

E-mail:- andkassa@yahoo.com

K}ÚT] S[Í ¾›Ç=e ›uv ¿'>y`e+ T@Ç="M óŸ<M+ ›="eƒ+¿i"M ]y=¨< x`É u=a" uT>Ÿ}K¨< ›É^h T'ÒÑ` Ã‹LK<::

eM¡ 251-11-5-53 8 7 34

ó¡e 25ı ıı 55ı ı 5ı 30 99

Email: aaumfirb@yahoo.com

¾SM¡ƒ XØ" lØ` 9086

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7. ¾}Xƒö eU" SÓKÝ

X}óKG<---------- ›MX}õU ----------

ò`T---------- k" ----------

Annex IV- An Information Consent (Amharic version)

¾eUU'ƒ(¾ðnÅ–'ƒ) T[ÒÑÝ þî

(KÖÁm :- ▯ v¡- Ÿ²=I u▯ ‹ ¾}²[²[¨<" Hdw KØ"ƒ }X▯ ò¨< ¨ÃU K}ÖÁm¨< Á‹Ky«ű Ÿ}eTT/ Ã‹ nKTÖÃl" ÃkØK<)

▯ "ÅU" c'u~ ▯ '@---------- ▯ vLKG<:: ¾Uc^¨<U K›Ç=e ›uv ¿'>y`e+ T@Ç="M ó¡M+ '`c="Ó ƒ/u?ƒ ¾Ø"ƒ" U`U` u<É" e` '¨<:: ÃH@ ŸzÃ[c< Ò` ¾T>*` W-‹ ŸÖ?"†¨< ›"î` uU" ÁIM ▯ `"▯ " Åe}˜ƒ ▯ "ÅT>*` KT¨p ¾T>ÁÖ" Ø"ƒ '¨<::Ø"~ ¾ƒ™‡ Ñ<ÇÄ‹" ÓKc«" ŸÖ?" ›"í` ¾J' ¾'<a Åe▯ ¨<" (▯ `"▯ ¨<") Á" K=ÁÅ`Ñ<uƒ ▯ "ÅT>‹K< KT¨p ÃV¡^M::

▯ '@U K²=I U`U` Ø"▯ © S[Í ŸT>Wueu< W-‹ ›"Æ '~:: eK²=IU ÃIØ"ƒ ›"}"/‹" eKT>SKŸƒ Ø"▯ © ØÁo-‹" GÖÃpI/i" ƒðpÉM—KI"/ i"; ¾›"} }Xƒö u▯ ÏÑ< ŸzÃ[c< Ò` ¾T›ƒ" ¨Ñ*‹ ¾'<a Åe▯ ▯`"▯ ŸM>hhM ›"í` ƒMp T>" ▯ "ÅT>*[¨< Ã▯ S"M:: 'Ñ` Ó" K›"}/ ›Ò²ªª] ŸMJ' kØ}— ØpU LÃ*[¨< Ã‹LM:: ULiI/ULii KT"U Ze}— ›"M ›ÃÑKîU:: ÁKðnÉIU uØ"~ ¨<eØ KSX}õ ›ƒÑÅÉU uØ"ƒ ¨<eØ LKS"}ƒ S<K< Swƒ ›KI/i:: u}ÚT]U SÖÃl" ËU[I/i ¾S▯ kw wKAU ÁM}S‡I" ¨ÃU KSSKe ¾TƒðMÒ†¨<" ØÁo-‹ KÃ▯ I/i ÁKSSKe SwƒKI/i:: u²=I Ø"ƒ KSX}õ- ¾T>Å[Ó ¡õÁ ›Ã*`U::

eK'I KSX}õ ðnÅ— 'I"/'i;
›- ŸJ' nKSÖl" kØM
›ÃÅKU ŸJ' ›SeÓ'¤¨</ƒ ¨ÅK?L }ÖÁm ▯Kõ
(**(KÖÁm)** ▯ v¡I Ÿ²=I u▯ ‹ u}WÖ<ƒ vÊ Yõ^~‹ LÃ ¾}ÖÁm¨<" ULi KT[ÒÑØ ò`T ›KI/i" ›ekUÖ<::

ðnÅ— WØ...M/K‹---------- ðnÅ— ›MWÖU/‹U----------

Annex V: Questionnaire (English Version)

Addis Ababa University Facility of Medicine Centralized School of Nursing

Graduate program in Maternity and reproductive Health Nursing

Questionnaire on Health Related Quality of Life of people living with HIV/ AIDS in Awassa Town. 2008/9

Instruction

This questionnaire is designed to assess factors affecting the quality of life of people living with HIV/AIDS. This study is for academic purpose with an ultimate goal of drawing conclusion and recommendation that would be help to further trainees of the university and to policy formulation of the country regarding chronic HIV care of People Living with HIV/AIDS. This is not a test; there is no right or wrong answer. But completing every question, unless not applicable, is required.

NB: No one is required to write his/ her name on the Questionnaire

Please encircle or write interviewees' response your responses directly on this booklet.

1. Background Information

1. Sex 1.1. Female 1.2. Male
2. Age _____ in years
3. Marital Status 3.1. Married 3.2. Single 3.3. Divorced 3.4. Widowed 3.5. Separated
4. Ethnicity 4.1. Oromo 1.2. Amhara 1.3. Tigigre 1.4. Sidama 1.6. Other_____
5. What is the highest level of education you have completed? (check one)
   - 5.1.1. None
   - 5.1.2. Primary School
   - 5.1.3. Secondary school
   - 5.1.4. Tertiary school
6. Occupation_____
7. Monthly income in Ethiopian
8. How adequate is your income to meet your daily living expenses?
   8.1 Enough 8.2. Barely adequate 8.3. Totally inadequate
9. Do you have any children?
   9.1. No 9.2. Yes, 9.3. If yes, how many live with you? (Family size _____)
10. Do you have any other health conditions? (For example, TB, Malaria, high blood pressure, diabetes, depression, hepatitis)
    10.1. No 10.2. Yes, if yes, please list. _____

On a scale from 1 to 10, where 1 = very poor and 10 = excellent, how would you rate these factors at this time?

1. Circle one number for each item

	Very Poor									Excellent
11. a) Your physical condition	1	2	3	4	5	6	7	8	9	10
12. b) Your psychological condition	1	2	3	4	5	6	7	8	9	10
13. c) Your social support	1	2	3	4	5	6	7	8	9	10

PART- II - CHECK LIST

This is to be filled from ART register or chronic care follow-up format by the Data collector

4.1. Patients Unique HIV number _____
4.2. Date confirmed HIV positive. Day _____Month_____ Year_____
4.3. Year of Follow-up under ART chronic care _____
4.4. His stage current Visit 1.StageI 2. Stage II 3. Stage III 4. Stage IV
4.5. The Patient CD4 count in the past 6 month _____
4.6. The patient T lymphocyte count in past six month _____
4.7. The patients Hemoglobin level in the past two months_____
4.8. Is there any OI diagnosed in this visit? If yes specify it _____
4.9. Dos the patient has been diagnosed for other chronic disease? Specify it
4.10. Is he taking COTRIMOXAZOLE?
4.11. Is he/she on ART? If yes which regimen he is taking? _____
4.12. Functional Status 1.Work (W) 2. Ambulatory (A) 3. Bedridden(B)

Part III- Sign & Symptom Check List

***Below is a list of potential problems that you may be experiencing today. If you have the problem, rate the degree of INTENSITY which best describes the extent of the problem*. If you do not have the problem, do not check a box**

NTENSITY			PROBLEM
Mild	Moderate	Severe	
			For women only
□	□	□	1. Vaginal discharge
□	□	□	2. Irregular period
□	□	□	3. Heavy period
□	□	□	4. Bad cramps
□	□	□	5. Vaginal itching
□	□	□	6. Vaginal odor
□	□	□	7. Bleeding between period
□	□	□	8. Pelvic pain
□	□	□	9. Other–list: _____

NENSIITY			PROBLEM
MILD	MODERATE	SEVERE	
□	□	□	1.Muscle aches
□	□	□	1. Weakness
□	□	□	2. Painful joints
□	□	□	3. Fatigue
□	□	□	4. Dry mouth
□	□	□	5. Thirsty
□	□	□	6. Difficulty concentrating
□	□	□	7. Depression
□	□	□	8. Memory loss
□	□	□	9. Fear/Worries
□	□	□	10. Fever
□	□	□	11. Chills
□	□	□	12. Day sweats
□	□	□	13. Night sweats
□	□	□	14. Loose stools
□	□	□	15. Diarrhea
□	□	□	16. Gas/bloating
□	□	□	17. Abdominal pain
□	□	□	18. Shortness of breath at rest
□	□	□	19. Wheezing
□	□	□	20. Shortness of breath with activ
□	□	□	21. Nausea
□	□	□	22. Vomiting
□	□	□	23. Lack of appetite
□	□	□	24. Coughing
□	□	□	25. Blood in spit/sputum
□	□	□	26. Sore throat
□	□	□	27. Painful swallowing
□	□	□	28. Mouth ulcers
□	□	□	29. White spots in mouth/Thrush
□	□	□	30. Constipation
□	□	□	31. Concern over weight loss
□	□	□	32. Concern over weight gain

CONTINUES ►			
NENSIITY			**PROBLEM**
MILD	**MODERATE**	**SEVERE**	
□	□	□	33. Insomnia/can't sleep
□	□	□	34. Anxious
□	□	□	35. Heart racing
□	□	□	36. Chest pain
□	□	□	37. Dizziness
□	□	□	38. Headaches
□	□	□	39. Blurred vision
□	□	□	40. Seizures/tremors
□	□	□	41. Numbness/tingling of arms
□	□	□	42. Numbness/tingling of hands/finge
□	□	□	43. Numbness/tingling of legs
□	□	□	44. Numbness/tingling of feet/toes
□	□	□	45. Sore/bleeding gums
□	□	□	46. Nose bleeds
□	□	□	47. Easy bruising
□	□	□	48. Flushing
□	□	□	49. Swollen glands
□	□	□	50. Swollen feet
□	□	□	51. Rash
□	□	□	52. Itchy skin
□	□	□	53. Weight gain in stomach area
□	□	□	54. Hump on back of neck/shoulders
□	□	□	55. Skinny arms and legs
□	□	□	56. Prominent leg veins
□	□	□	57. Rectal itching
□	□	□	58. Rectal bleeding
□	□	□	59. Rectal discharge
□	□	□	60. Nipple discharge
□	□	□	61. Breast pain/changes
□	□	□	62. Sores or lumps on genitals
□	□	□	63. Burning with urination
□	□	□	64. Other-list: _____

PART III- ***The following questions ask about your overall function, life satisfaction , health worries, financial worries , and disclosure worries in the past 4 weeks***	All of the time	A lot of the time	So me of the time	A little of the time	None of the time
3.1. About your <u>overall function</u> in the past 4 weeks:					
3.1.1. In the past 4 weeks, I've been satisfied with my physical activity----------	☐	☐	☐	☐	☐
3.1.2. In the past 4 weeks, I've been physically limited in my ability to do routine household chores----------	☐	☐	☐	☐	☐
3.1.3. In the past 4 weeks, pain has limited my ability to be physically active----------	☐	☐	☐	☐	☐
3.1.4. In the past 4 weeks, I've been worried about not being able to do my job/routine daily activities as I have in the past----------	☐	☐	☐	☐	☐
3.1.5. In the past 4 weeks, I've felt that having HIV has limited the amount of work I can do at my job/routine daily activities----------	☐	☐	☐	☐	☐
3.1.6. In the past 4 weeks, I've been too tired to be socially active----------	☐	☐	☐	☐	☐
3.2. About your <u>life satisfaction</u> in the past 4 weeks					
3.2.1. In the past 4 weeks, I've enjoyed living----------	☐	☐	☐	☐	☐
3.2.2. In the past 4 weeks, I've felt in control of my life------	☐	☐	☐	☐	☐
3.2.3. In the past 4 weeks, I've been satisfied with how socially active I am----------	☐	☐	☐	☐	☐
3.2.4. In the past 4 weeks, I've been pleased with how healthy I've been----------	☐	☐	☐	☐	☐
3.3. About your <u>health worries</u> in the past 4 weeks					
3.3.1. In the past 4 weeks, I haven't been able to live the way I'd like to because I'm so worried about my health----------	☐	☐	☐	☐	☐
3.3.2. In the past 4 weeks, I've been worried about my CD4 count----------	☐	☐	☐	☐	☐
3.3.3. In the past 4 weeks, I've been worried about my viral load----------	☐	☐	☐	☐	☐
3.3.4. In the past 4 weeks, I've been worried about when I'm going to die----------	☐	☐	☐	☐	☐
3.4. About your <u>financial worries</u> in the past 4 weeks					
3.4.1. In the past 4 weeks, I've been worried about having to live on a fixed ----------	☐	☐	☐	☐	☐
3.4.2. In the past 4 weeks, I've been worried about how to pay my bills----------	☐	☐	☐	☐	☐
3.4.3. In the past 4 weeks, money has been too tight for me to care for myself the way I think I should----------	☐	☐	☐	☐	☐

The following questions ask about your overall function, **life satisfaction , health worries, financial worries , and disclosure worries** in the past 4 weeks	All of the time	A lot of the time	Some of the time	A little of the time	None of the time
3.5. About your <u>disclosure worries</u> in the past 4 weeks					
3.5.1. In the past 4 weeks, I've limited what I tell others bout myself----------	☐	☐	☐	☐	☐
3.5.2. In the past 4 weeks, I've been afraid to tell other people that I have HIV----------	☐	☐	☐	☐	☐
3.5.3. In the past 4 weeks, I've been worried about my family mer finding out that I have HIV----------	☐	☐	☐	☐	☐
3.5.4. In the past 4 weeks, I've been worried about people at my job/routine daily activities finding out that I have HIV-----	☐	☐	☐	☐	☐
3.5.5. In the past 4 weeks, I've been worried that I'll lose my source of income if other people find out that I have HIV	☐	☐	☐	☐	☐

Thank You!

Annex -VI - Questionnaires (Amharic version)

nK SÖÃp

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ýaÓ^U

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 v¡- ¾}ÖÁm¨<" ULi ukØ u²=l iƒ LÃ uT¡uw ¨ÃU

uSíõ ÃS'Ñu<

ክፍል አንድ

1. ፆታ 1.1. ወንድ 1.2. ሴት
2. እድሜ ---------- አመት
3. የጋብቻ ሁኔታ
3.1. ያገባ/ች3.2.ያላገባ/ች 3.3.የተፋታ/ች 3.4.እማበለት 3.5.ያልተፋቱ/ተራርቀው የሚኖሩ?
4. ብሔር 4.1. ኦሮሞ 4.2 አሚራ 4.3 ትግሬ 4.4. ሲዳማ
4.5. ሌላ ካላ ይጠቀስ ------
5. የትምህርት ደረጃ
5.1 ያልተማረ 5.2. አንደኛ ደረጃ 5.3 ሁለተኛ ደረጃ 5.4. ኮሌጅ/ዩኒቨርሲቲ
6. ሥራ ----------
7. የወር ገቢ (በኢትዮጵያ ብር)_____
8. የወር ገቢህ የእለት ተእለት ወጪዎን ለሟፈን ምን ያህል በቂ ነው
8.1 በቂ ነው 8.2 በማጡ በቂ ነው 8.3 በፍፁም በቂ አይደለም
9. ልጆች አለህ/አሉሽ
9.1 አዎን
9.2 የሉኝም
9.3 አዎን ከሆነ ሥጋት ልጆች አለዎት
9.4 ሥጋቶቹ ከእርስዎ ጋር ይኖራሉ ----------
9.5 አጠቃላይ የቤተሰብ ብዛት ----------
10. ተደራራቢ ህመም ለምሳሌ እንደ ልብ ህመም የስኳር በሽታ፣ ደም ግፊት የመሳሰሉት አለብዎት
10.1 አዎን 10.2 የለብኝም
10.3 ካለዎት ምን አይነት ህመም----------

ከአንድ እስከ አሥር ከተጠቀሱት ደረጃዎች ቁጥር አንድ (1) "በጣም ደካማ" የሆነ ሜልሰን ሲመክል ቁጥር አሥር (10) ደግሞ "እጅግ በጣም ጥሩ" የሆነ ምላሽዎን ይወክላል፡፡ ከዚህ በታች ለሚቀየቁት ሦሥት ጥያቄዎች የቱን ደረጃ ይሰጥዋቸዋል፡፡

<u>ለእያንዳንዱ ጥያቄ አንድ ቁጥር ሚጠው ያክብቡ</u>

	<u>እጅግ በጣምደካማ</u>	<u>እጅግ በጣም ጥሩ</u>
11. የአካል ብቃትዎ/ጠንነት ሁኔታ	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	
12. የስነ ልቦናዎ ሁኔታ	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	
13. የሚህበረሰቡ ድጋፍ ሁኔታ የቤተሰብ/ንረቤት…ወዘተ)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	

<u>ክፍል ሁለት</u>

ይህ ከግለሰቡ/ቧ የክትትል ፎርም (ማዘገብ) የሚሞላ ሲሆን የግለሰቡን/ቧን ወቅታዊ ሚጃ ብቻ የሚካትት ይሆናል፡፡

14. የበሽተኛው ልዩ ረቲ ቁጥር _____

15. ኤች አይቪ ቫይረስ በደመ/ሚ እንዳለ የተረጋገጠበት ቀን--------ወር------ዓ.ም ----

16. ለምን ያህል ጊዜ በኤረቲ ክሮኒክ ኬር ክለኒክ ክትትል ሲደረግላቸው ቆይተዋል _____

17. የበሽታው ደረጃ በዚህኛው ቀጠሮ (ጉብኝት ወቅት)

17.1. ኤች አይቪ ደረጃ አንድ 17.2. ኤች አይቪ ደረጃ ሁለት

17.3. ኤች አይቪ ደረጃ ሦስት 17.4. ኤች አይቪ ደረጃ አራት

18. የበሽተኛው ሲዲፎር (CD4) ቁጥር ላለፉት ስድስት (6) ወራት ወስጥ ---------

19. የበሽተኛው ቲሊሞፎሳይት ቁጥር ---------- የተወሰደበት ቀን ----------

20. የበሽተኛው ሐምላስቢን ማጠን በዚህ ቀን (ወር) የተሰራ -------

21. በዚህ ጉብኝት ወቅት የተገኘ አፖርቹኒስቲክ ኢንፊክሽን ካለ ይጠቀስ -------

22. ሌላ የቆየ በሽታ (chronic disease) ካለ ይጠቀስ

23. በሽተኛው ከትራይሞክስለል ይወስዳል ----------

24. በሽተኛው የእድሜ ሚዛማዊ መድሐኒት ይወስዳል

25. የበሽተኛው እንቅስቃሴ ሁኔታ (functional status)

25.1. የሚሰራ 25.2 የሚሰራ ግን የሚቀሳቀስ 27.3 የአልጋ ቁራኛ

ክፍል ሶስት

የኤች አይቪ በሽታ ምልክትና ስሜቶች ጠቋሚ ቅፅ'

ከዚህ በታች ከቫይረሱ ጋር የሚኖሩ ሰዎች ሊያጋጥማቸው እንደሚችሉ የሚመዙ ምልክቶችና ስሜቶች ተዘርዝረዋል፡፡

ከዚህ በታች ከቫይረሱ ጋር የሚኖሩ ሰዎች ሊያጋጥማቸው እንደሚችሉ የሚመዙ ምልክቶችና ስሜቶች ተዘርዝረዋል፡፡ አንተም/አንችም ከዚህ በታች ከተጠቀሱት ወስጥ በዛሬው እለት እየተሰማህ ያሉ ስሜቶችና እየታዩህ ያሉ ምልክቶች ካሉ በማጠቆም ምን ያህል ችግር (የህመም ስሜት) እንደፈጠሩብህ/ሽ ማጡን 'በጥቂቱ' መካከለኛ' ወይንም 'በጣም ከፍተኛ በማለት) ግለፅ/ጪ፡ ችግሩ (ስሜቱ/ምልክቱ) ከሌለብህ ምልክት ማድረግ አያስፈልግም፡፡

ለሴቶች ብቻ የሚሰየቅ

የችግሩ ማጠን (የስሜቱ ማጠን)			ስሜት/ምልክቶች
በጥቂቱ	መካከለኛ	እጅግ ከፍተኛ ስሜት	
☐	☐	☐	1. ከብልት የሚመጣ ፈሳሽ
☐	☐	☐	2. መደበኛ ጊዜወን የሚጠበቅ የወር አበባ
☐	☐	☐	3. እጅግ የበዛ የወር አበባ መፍሰስ
☐	☐	☐	4. ከባድ የሆነ የታችኛው ሆድ ላይ ቁርጠት
☐	☐	☐	5. የብልት ማሳከክ
☐	☐	☐	6. የብልት ጠረን መለወጥ
☐	☐	☐	7. በወር አበባ መሃከል የደም መፍሰስ
☐	☐	☐	8. የታችኛው የሆድ ክፍል ህመም (pelvic pain)
☐	☐	☐	9. ሌላ ካለ ይጠቁስ_____

¾‹Ó\/¾YT@ቱ SÖ”			eT@„‹/UM¡„‹
uØm~	S"ŸK—	ÏÓ Ÿõ}‐	
			1. ¾Ö<ኀቻ ISU 2. SÉŸU 3. ¾SÑ×ÖT>Á-‹ ISU 4. S³M 5. ¾›õ É`kƒ 6. SÖTƒ/¾¨<NØU
			7. ¾Ndw ›KSWwWw (Su }”) 8. Éw`ƒ (Depression) 9. ¾Te ¨e ‹Ó` 10. õ`Nƒ/ß”kƒ
			11. ƒŸ<Xƒ 12. w`É w`É 13. uk” ÁMwNM 14. K?K=ƒ ÁMwNM
			15. ¨Å}pTØ ÁÅL WÑ^ 16. }pTØ 17. ðe“/ ÓXƒ 18. ¾JÉ ISU
			19. u [õƒ LÃ XKI/XKi ›¾` ÁØ`hM/NM 20. eƒ}’õe/g= c=Ø/c=Ø ¾T>M ÉUî Ã¨×M ¨Ã 21. uY^ LÃ XKI/XKi ›¾` ÁØ`hM/NM
			22. TpKiKi 23. Te¨¡ 24. ¾UÓw óLÔƒ Sk’e XM 25. u›¡ ¨<eØ ÅU ›K¨Ã 26. ¾Ñ<aa SlWM 27. eƒ¨<Ø/Ü ISU ÃcSGM/hM 28. ¾›õ leKƒ 29. ’Ýß ’Ñ` u›õ“ ULeሀ LÃ ›K ¨Ã

¾‹Ó\/¾eT@ƒ SÖ”			eT@„‹ UM¡„‹
uØm~	SኅŸK—	ÏÓ Ÿõ}	
☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	30. É`kƒ (¾WÑ^) 31. eK ¡wÅƒ SÚ'p evKI/i 32. eK ¡wÅƒ SÚS`
☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	33. ”pMõ T×ƒ 34. ¾S[ui/¾SÚ'p eT@ƒ 35.. ¾Mw õØ'ƒ SÚS` 36. ¾Å[ƒ ISU
☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	37. ^e Tµ` (ue`›ƒ TWw ›KS‰M) 38. 2. ¾^e U ƒ 39. Wኻቃ 40. S”kØkØ/S”ð^ÑØ
☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	41. ¾ Ï SÅ”²'/¾Sጥቃጥቃ eT@ƒ 42. ¾»ƒ/£L«Ù SÅ”²'/¾Sጥቃጥቃ eT@ƒ 43. £ˆ·Y SÅ”²'/¾Sጥቃጥቃ eT@ƒ 44.. £ˆ·Y »ƒ SÅ”²'/¾Sጥቃጥቃ eT@ƒ
☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	45.. ¾ÉÉ SlWM ¨ÃU SÉTƒ 46. ¾›õ”Ý 'Y` 47. ukLK‹ SlWM (SuK') 48. ¾òƒ SpLƒ
☐ ☐	☐ ☐	☐ ☐	49. ¿ÙÖr 50. £ˆ·Y TuØ
☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐	51. iõ 52 TdŸ¡ 53. ¾x`ß SÚS` 54. ¾Ý”n“ ƒŸh SÖ” SÚS` 55. ¾ Ó` “ Ð‹ SpÖ” 56. ¾Ó` ªNRZv ¸Gs Lq£r
☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	57.. ¾ò”Ö=× TXŸ¡ 58. ¾ò”Ö=× SÉTƒ 59. Ÿò”Ö=× ¾T>¨× ðXi
☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐	60'. ŸÖ‹ƒ Ýõ ¾T>¨× ðXi 61.. ¾Ö‹ƒ ISU/K¨‹Ø 62. uwMƒ LÃ wÖƒ/leKƒ 93. ui”ƒ Ñ>²? TnÖM 64. K?L ካK ይጠቀስ ------------------

¡õM 3 - ¾T>Ÿ}K<ƒ ØÁo-‹ eK }Óv` ¡"ª'@‡ ¾lÃ¨ƒ ?'"?‡ eKÖ?"- SÚ'p‡ eKÑ"²w Ñ<ÇÃ SÚ'p ? "U ¾U'S^ ¨<Ö?ƒ" eKTX¨p ÁK Ndw u}SKŸ}

vKð¨< 4 XU"ƒ ¨<eØ ÁÒÖS-ƒ" G<'@? ÃÖ£,Þ‹M	G<M Ñ>²?	w²< Ñ>²?	›Mö ›Mö	Ømƒ Ñ>²?	U"U Ñ>²?
3.1. **eK›ÖnLÃ ¾}Óv` ¡"'<"- KvKóƒ 4 XU"ƒ** 3.1.1. KvKóƒ 4 XU"ƒ ? "penc? ? [¡‰KG< 3.1.2. KvKóƒ 4 XU"ƒ u}¨W' SMŸ< ¾u?ƒ W^-Š" KSY^ƒ ‹Ó` 'u[w˜ 3.1.3 Kvóƒ 4 XU"ƒ lSU ? "ÅMu? ? "ÇM"kdk€ÓÊ˜ 'u` 3.1.4 KvKóƒ 4 XU"ƒ ? "Å¨ƒaÂ }"kdpg? ¾? Kƒ}? Kƒ SY^ƒ vKS‰K? u×U ›dex—M:: 3.1.5 KvKóƒ 4 XU"? ƒ ›?‹ ›Ãy= MW^ ¾U‹K¨<" ÁIM SÖ" ? 'ÇMc^ ? "ÇÅ[Ñ}WU„—M:: 3.1.6 KvKóƒ 4 XU"? ƒ ¾Tlu^© É[hÂ" S¨×ƒ ? "ÇM‹M Å¡T@ 'u`::					
3.2. **eK lÃ¨ƒ ? `"? u}SKŸ} (KvKóƒ 4 XU"ƒ)** 3.2.1 KvKóƒ 4 XU"? ƒ u'<aÂ Åe}— 'u`Ÿ< 3.2.2 KvKóƒ 4 XU'? ƒ ¾lÃ€" G<'@? Sq×Ö` ‹Â 'u` 3.2.3 KvKóƒ 4 ƒ ƒ ¾Tlu^© É`hÂ" S¨×ƒ uS‰K? Åe}— 'u`Ÿ< 3.2.4 vKóƒ 4 XU"? ƒ ¾Ö?"'} G<'@? ›eÅe„˜ 'u`					
3.3. **Ö?"'ƒ-? u}SKŸ} eK'u[Ndw(KvKóƒ 4 XU"ƒ)** 3.3.1 uvKóƒ 4 XU"ƒ eKÖ?"'‹ Ñ<ÇÃ uSÚ'p S*` ? "ÅUðMÑ¨< S*` ›M‰MŸ<U 3.3.2 uvKóƒ 4 XU"? ƒ ¾c=Ç=ö` lØ` ›dex—M 3.3.3 uvKóƒ 4 XU"? ƒ uÅT@ ¨<eØ ÁK¨< ¾zÃ[e SÖ" ›Xex—M:: 3.3.4 uvKóƒ 4 XU"? ƒ ¾SV‰Â k" SŠ K=J" ? "ÅT>‹M uTcw eÚ'p 'u`::					
3.4. **eKÑ''w TWw" u}SKŸ}(KvKóƒ 4 XU"ƒ)** 3.4.1 KvKóƒ 4 XU"? ƒ ¨<eØ uJ' Ñu=Â ¾S*_ G<'@? c=ÁXeu˜ 'u`:: 3.4.2 uvKóƒ 4 XU"? ƒ uÁKw˜ ¾? Ç-‹ (¾Sw^ƒ ¾¨<H ¨²} ¡õÁ) Ñ<ÇÃ c=Ádeu˜ 'u`:: 3.4.3 uvKóƒ 4 XU"? ƒ K^c? ¾T>ÁeðMÑ<˜" 'Ña‹ TÉ[Ó ? "ÇM‹M ¾Ñ"²w ›pT@ ¨<eØ 'u`::					

vKð¨< 4 XU"ƒ ¨<eØ ÁÒÖS-ƒ" G<'@ ÃÖ‚ቃM	G<M Ñ>²?	w²< Ñ>²?	›Mö ›Mö	Ømƒ Ñ>²?	U"U Ñ>²?
3.5. (vKóƒ 4 XU" ƒ) zÃ[c< " ÇKw˜ KK?KA‹ TX¨p u}SKŸ} ያሳሰበዎትን ሀኔታ 3.5.1 uvKóƒ 4 XU" eK^c? KW-‹ የ ማመራውን ቀንሻለሁ 3.5.2 ባለፉት 4 ሳምንታት ቫይረሱ በደሜ እንደሜር ስለሌሎች መናገርን ፈርቼ ነበር 3.5.3. በባለፉት 4 ሳምንታት ቤተሰቦቼ ቫረሱ እንዳለብኝ ሊያወቁብኝ ይችላሉ ብዬ ሠግቼ ነበር 3.5.4 በባለፉት 4 ሳምንታት የስራ ባልደረቦች (አጋሮቼ) ቫይረሱ እንዳለብኝ ሊያወቁብኝ ይችላሉ ብዬ ሠግቼ ነበር 3.5.5. በባለፉት 4 ሳምንታት ሌሎች ሰዎች ቫይረሱ እንዳለብኝ ካወቁ የገቢ U"Û K=s[Ø Ã‹LM wÂ ecÒ 'u`::					

Annex -VII - Curriculum Vitae (CV) of Principal Investigator and the Advisor

Personal

Name: **Andargachew Kassa**
Sex: *Male*
Nationality: Ethiopian
Marital Status: Married

Address
Andargachew Kassa
Addis Ababa University
Faculty of Medicine
School of Nursing
Tel. +251-911-33-88-95
Email- andkassa@yahoo.com

Education

- Currently mastering M.Sc. in Maternity and Reproductive Health Nursing at Addis Ababa University, Faculty of Medicine School of Nursing (2nd year student)
- Awarded BSc in Nursing, From School of Nursing, Public health Faculty, Jimma University, Jimma Ethiopia, July 3, 2004 Ec.
- Awarded Diploma in Public Health Nursing(PHN), Department of Public Health Nursing, Faculty of Public Health, Haromaya University , Haromaya Ethiopia, July, 10, 1999 Ec.
- High school completed From Harrar senior Secondary School, Harrar 1998 Ec.

Employment and Work experience

- Five (5) years Experience of Higher Institution teaching with the following Academic ranks. (in Hawassa University)
  - Ass. Lecturer (as of June 8, 2005)
  - Grad Ass II (From June 8, 2004 – June -8- 2005ec)
  - Tec ASS II (From July 2000- July-2001 ec)
  - Tec Ass I (From July 1999 – july2000 ec)

Special Trainings

- Certified For Emergency Clinical Skills in Jimma university Specialized Hospital, Jimma Ethiopia 2003 Ec
- Certified for Reproductive health and Post Abortal Care specially in MVA specialty, Yergalem Hospital organized , Debub University , Yergalem Ethiopia, Feb 2005
- Certified in Training of Trainers (TOT) for HIV/AIDS (ART treatment) Treatment organized By The world Health Organization (WHO,UN) and Hwassa University 2006 ec
- Special training on teaching skills (Pedagogical) Training 2004

Research and Publications

- **Published**: Module on Nursing Management of patient with Leshmaniasis
- **Unpublished**:
  - Factors affecting Self-Brest examination among woman health professional working in Addis Ababa government hospitals.
  - Trends of per formal appraisal in Black lion Hospital
  - Concept Analysis on Adherence to Medication
- **Currently on Progress**:
  - The Health Related Quality of life of People living with HIV/AIDS in Hawassa Univerty Referral Hospital
- **Accepted for Publication by Global Public Health** : Towards a global interdisciplinary evidence-informed practice: Intimate Partner Violence in the Ethiopian Context

Social service and Membership

- Member of Ethiopian Nurses Association(ENA)
- Life time member of Ethiopian Public Health Association(EPHA)
- Member of Ethiopian Red cross Association
- Served as Trainer of Volunteer Home Based Care providers in collaboration with Medan acts Project.

References

- Dejene Hailu (M.Phil in Health Sciences)
  Dean, Faculty of Public Health
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  Tel: +251-916-829271
- Abraham Alano (BSc. MPH)
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Annex -VIII –Letter of Declaration

DECLARATION

I the undersigned, declare that this thesis is my original work in partial fulfillment for the requirement of Masters Degree in Maternity and Reproductive Health Nursing. All the sources of the materials used for this thesis, and all people and institutions who gave support for this work are fully acknowledged.

Name of student ----------

Signature ----------

Place of submission Centralized School of Nursing,
Medical faculty, Addis Ababa University,
School of Graduate Studies

Date of submission ----------

This thesis work has been submitted for examination with my approval as University Advisor.

Advisor ----------

Signature ----------