

**INFLUENCE OF PSYCHO-SOCIAL SUPPORT
PROGRAMME ON RETENTION OF HIV PATIENT IN
AMPATH CARE BASED CLINIC IN ELDORET, KENYA.**

BY

STELLA GICHURU

**THIS RESEARCH PROJECT REPORT IS SUBMITTED IN PARTIAL
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DECLARATION

I hereby declare that this project is my original work and has not been presented for examination in any other university.

Sign.....Date.....

STELLA GICHURU

REG NO; L50/77693/2015

This project has been submitted for examination with my approval as University Supervisors.

Sign.....Date.....

LECTURER

DR. STEPHEN OKELO

UNIVERSITY OF NAIROBI

DEDICATION

I dedicate this research project to my beloved husband Kennedy Kenina and my sons Ivan Jabali and Tai Kenina for their untiring moral support and love during the entire study, thank you.

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I would first of all like to acknowledge my supervisors Dr. Stephen Okelo for his tireless effort which greatly assisted me in the development of the research idea and went on to guide me systematically in writing this project. His wealth of knowledge, experience, immense wisdom and understanding contributed greatly to success of this project. I would like to acknowledge Mr Yona Sakaja for giving me directions in the initial stages when I was stranded. I would also like to acknowledge my mother Mrs. Truphie Gichuru, in many occasions when I wallowed in the desert of confusion, she motivated me.

ABSTRACT

Psycho-social support for HIV infected patients is critical in ensuring these patients remain connected to the health facility. This is because HIV patients need medication attention and support that should always be within their reach. Ensuring these patients get the necessary psychosocial support increases their opportunities to be in touch with the health care institutions and these would be paramount to their health status. Despite provision of free medicine offered by the organizations, many HIV infected patients have not often been attending the clinics to collect the drugs and there has continued to be a decline in the number of those attending the clinic after being tested and put on treatment, the number of those attending the clinic continuing declining. With this in mind this study investigated the influence of psycho-social support with a focus to disclosure counseling, transport facilitation, peer educator groups and adherence monitoring on the retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya. The purpose of the study was to assess the influence of psycho-social support programme on retention into care based clinic among patients with HIV in Eldoret, Kenya. This study was guided by the following specific objectives, to; establish how disclosure counseling influence retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya, examine how transport reimbursement influence retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya, investigate how peer educator groups counseling influence retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya and to determine how adherence counseling influence retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya. The study adopted a descriptive survey study design. The target population for this study included 355 respondents made up of 325 patients and 30 caregivers/providers (staff). Therefore for this study 30% of 325 patients were sampled to give 97 sample sizes of patients and 30 health care providers. The study used two research instruments namely the questionnaire and guided interview schedules. In this study, questionnaires were piloted in a pilot survey using 8 patients and interview schedules to 2 psychosocial staff from Mosoriot AMPATH clinic. The reliability tests for all the variables revealed a coefficient of 0.863 which was above 0.70. The variables were therefore reliable for use by the study. Data was organized and analyzed using descriptive statistics and inferential statistics. This study used tables to present the information. The study findings from the regression model indicated that there was a significant relationship between Disclosure Counseling and Retention of HIV Patients ($p=0.000$). The study concluded that the level of self-competence of the healthcare providers determines the quality of care and retention of HIV patients. The study recommended that the health care providers should enrich proper records for the people who attend clinic and peer educator groups in order to clearly understand the increase or decrease in the numbers of patients attending to these services.

LIST OF ABBREVIATIONS AND ACRONYMS

AIDS:	Acquired Immune Deficiency Syndrome
AMPATH:	Academic Model Providing Access to Healthcare
ART:	Antiretroviral Therapy
ARV:	Antiretroviral
CDC:	Clinics for Disease Control and Prevention
HAART:	Highly Active Antiretroviral Therapy
HIV:	Human Immunodeficiency Virus
LMIC:	Low and Middle-Income Countries
MTRH:	Moi Teaching Referral Hospital
NGOs:	Non Governmental Organizations
PEPFAR:	President's Emergency Plan for AIDS Relief
PLHIV:	People Living with HIV
PMTCT:	Prevention of Mother-To-Child HIV Transmission
SMS:	Short Message Service
USAID:	United States Agency for International Development
WHO:	World Health Organization
CART:	the acronym for "combination antiretroviral therapy." It employs the use of three or more antiretroviral drugs, either taken individually or in fixed dose combinations.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

After thirty years, the HIV/AIDS pandemic remains a significant problem for individuals, communities and even nations especially in regards to low and middle-income countries (LMIC). As of 2010, over 34 million people were living with HIV across the globe (Williamson, 2011). Sixty-eight percent of all those infected with HIV globally reside in low and middle-income countries, even though these countries account for just 13% of the world's population. Additionally, the HIV epidemic in low and middle-income countries has had a major impact on their social and economic development (Shao, 2012). Advances in the treatment and care of HIV/AIDS have improved the health outlook for people living with HIV/AIDS (Volberding, 2003). Retaining patients infected with human immunodeficiency virus in medical care is a major priority for both providers and public health organizations. Since the advent of highly active antiretroviral therapy (HAART) in 1996, health outcomes have dramatically improved for persons living with HIV infection. Continuing improvement depends on connecting HIV-infected patients with and maintaining them in ongoing care.

In USA patient retention is as important as the recruitment of appropriate patients for clinical trials. In order to keep the patients in our studies, we have dedicated staff members that are Patient Retention Specialists. These individuals meet with the patients at their first appointment and give them a new patient packet of information with contact phone numbers, a copy of their informed consent, and their scheduled visits for the entire trial so that the patient can plan their calendar. Having this schedule prepared for the patient decreases the no-show rate and visits that might fall out of window. These people are responsible for consistent contact of reminder and

other calls with the patient for the duration of the trial. These efforts give the patient yet another member of our staff to go to if there are questions and an individual they can feel has their interest at heart. Research Across America boasts a 87 % retention rate among their study participants. In order to encourage study completion, patients are given a welcome packet at their first visit. A strong emphasis on communication and the importance of the relationship between site staff and study volunteers is of primary importance (Jeffrey, 2012).

In UK a total of 6,000 persons (4,500 men and 1,500 women) were newly diagnosed with HIV in the 2013 Retention in care has been one of the major areas for the survival of HIV patients; retention into care has been one of more emphases in patient (Mischke, 2014). Use of health talks and home visits have proved to be important, community health workers are inter-linked with the patient to provide counseling services to them and make clinical appointments follow up. The number of newly enrolled and retained men and women has increased over the years from 4,890 in 2004 to 2,490 in 2013 due to strategy for follow up of patients (Ford-young, 2013).

In India retention in care among HIV patients is characterized associated with missed appointments include either a history of or current injection drug use(Dekker, 2003). lower perceived social support, less engagement with the health care provider and shorter duration of follow-up since baseline (Cheever LW 2011). Although currently studies have identified patient characteristics associated with high retention rates due to new strategies in HIV retention field. Community health workers have been put on front line to remind patients about thier missed appointments and encourage them to come clinic (Mallinson, 2010). The provision of counseling services and provision of transportation to HIV patients that reduces on conflicts with work schedules, lack of child care or transportation, family illness, and hospitalization has increase retention in care of HIV patients (Sendzik D 2004). Phone followups done by psychosocial team

has proved to reduced missed appointment for clinical dates which as increase retention in India (Giordano TP, Gifford AL, White AC Jr, et al 2011).

In Nigeria, Uganda, and Tanzania studies show that employing peer group educators has increased retention in HIV care ((Massaquoi, 2010). In Tanzania Patients are retained in care through social relationships in disclosure groups and health talks from the psychosocial teams has increase retention in care of HIV patients up to 65% (Giordano, 2011). In Kenya psychosocial has helped in overcoming barriers to care through the force of social expectations, reduced lost to followup, and poor adherence and can also be used to obtain material benefits that make remaining in care possible (Nyandiko, 2010). In Tanzania, qualitative interviews with 42 patients revealed that many felt fulfilling responsibility to their children formed a motivating factor for retention in care.

The USAID–AMPATH Partnership in Eldoret runs a psychosocial outreach program that offers disclosure counseling, transport reimbursement, peer educators and adherence monitoring to improve patient retention. Each patient’s address is recorded at enrolment and updated as necessary by HIV-infected outreach workers with perfect clinic attendance or cART adherence. If a scheduled appointment is missed, the patient is contacted by phone or visited (Hannan, 2010). The need to follow up more non-attendees has led to a system for prioritizing patients for outreach. First, adult patients who started cART within the previous 3 months and all children on cART are sought within 24 hours of a missed appointment. Then, adult patients who have been on cART for more than 3 months are sought 7 days after a missed visit and it is expected that they were found within 28 days. Lastly, individuals who are not receiving cART are sought 28 days after a missed appointment and it is expected that they were located within 8 weeks (Tierney, 2010).

1.2 Statement of the Problem

Psycho-social support for HIV infected patients is critical in ensuring these patients remain connected to the health facility. This is because HIV patients need medication attention and support that should always be within their reach. Ensuring these patients get the necessary psychosocial support increases their opportunities to be in touch with the health care institutions and these would be paramount to their health status. Since the sentinel publication by Gardner and colleagues (Gardner, 2011) on the HIV care cascade, there has been increasing awareness of the importance of engagement in medical care. Retention in care improves survival, and HIV viral control and decreases race- or ethnicity-related healthcare disparities. Yet in the United States, it is estimated that only 75% of HIV-diagnosed patients are linked to care, and only 66% of those linked to care are successfully retained in medical care.

Despite provision of free medicine offered by the organizations, many HIV infected patients have not often been attending the clinics to collect the drugs and there has continued to be a decline in the number of those attending the clinic after being tested and put on treatment, the number of those attending the clinic continuing declining. There is possibility that the rate of infection and re-infection may go up and the number of death from HIV may increase, as the rate of infection going up may reduce the labor market and hence retard economy. These may also put burden on the families that are struggling to maintain those already infected, the result of not participating in treatment may also lead to drug resistance among those who are already in the program, with this in mind this study investigated the influence of psycho-social support with a focus to disclosure counseling, transport facilitation, peer educator groups and adherence monitoring on the retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya (AMPATH report 2015).

1.3 Purposes of the Study

The purpose of the study was to assess the influence of psycho-social support programme on retention into care based clinic among patients with HIV in Eldoret, Kenya

1.4 Research Objectives

This study was guided by the following specific objectives:

1. To investigate how disclosure counseling influence retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya
2. To examine how fair reimbursement influence retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya
3. To investigate how peer educator groups counseling influence retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya
4. To determine how adherence counseling influence retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya

1.5 Research Hypothesis

H₀₁ There is no significant relationship between disclosure counseling and retention of HIV patients in AMPATH care based clinic in Eldoret

H₀₂ There is no significant relationship between fair reimbursement and retention of HIV patients in AMPATH care based clinic in Eldoret

H₀₃ There is no significant relationship between peer educator group and retention of HIV patients in AMPATH care based clinic in Eldoret

H₀₄ There is no significant relationship between adherence counseling and retention of HIV patients in AMPATH care based clinic in Eldoret

1.6 Significance of the Study.

The findings of this study provided Academic Model Providing Access to Health care projects staffs with key information to use in their donor- based reporting which may in turn determine future retention in care of patients with HIV in Academic Model Providing Access to Health care clinic Eldoret funding by the donors. The research also hopes that the findings of this study may enlighten psycho-social stakeholders who include; patients, staff, and management in that it may make them aware of forces that work for or against them in matters relating to retention in care of patients with HIV. There are also hopes that AMPATH funded projects, psychosocial program that has been charged with the responsibility of retention in care of patients with HIV may benefit from the findings. This study might provide most of the answers to questions that this task force has tabled regarding retention in care of HIV patients. They readily use the findings of this study to strategize on the way forward as far retention in care is concerned. Finally, the researcher hopes that the findings of this study might form basis on which future research might built and that information from the study might use by other organizations dealing with retention in care of patients with HIV.

1.7 Limitations of the Study

The study was limited with access to information because of stigma related issues with patients hence hard to disclose the information. However the researcher being one of the staff members in AMPATH Centre, patients opened up. The researcher also anticipates limitation of classified and confidential information due to health concerns. This could lead to poor, low or erratic response. The limitation of disclosing client information was solved by obtaining a letter of introduction from the university and the respondents were assured of confidentiality of their responses.

1.8 Delimitations of the Study

The study was conducted at AMPATH Health care and Treatment clinic in Eldoret, Kenya. AMPATH grew out of partnership established in 1989 between Indiana University, Moi University and Moi Teaching and Referral Hospital. AMPATH provides free antiretroviral therapy as well as comprehensive psycho-social support, and economic development to patients. This study involved one of the urban clinics, which has been in operation since 2001 in MTRH grounds, in Eldoret Town Uasin Gishu county. Moi teaching and referral hospital-AMPATH module one clinic that deals with adult patients aged 18 years and above, the clinic was chosen because it handles the first normal, walking and clients without complications to either start or continue with treatment.

1.9 Basic Assumptions

The basic assumption of the study included;

- 1) That by targeting AMPATH adult 18 years and above in module one patients, particular those who are retained in care and active the study accessed respondents who volunteer to fill in the questionnaire.
- 2) The respondents gave the correct responses

1.10 Definitions of Terms

Retention in care based program: Implies remaining connected to medical care, once entered

HIV infected patients: people living with Human immunodeficiency virus.

Health care providers: services provided by health care professionals, an example is mental health counseling, adherence counseling, clinical examination, drug dispensing group support, and many other such services. , it aims at preventing distress and suffering developing into something more severe, help people cope better and become reconciled to everyday life and helping patients to resume their normal lives.

Counseling Services: one on one session that helps to relief stress related problems of the person.

Fair reimbursement: money given to a patient as his/her transport facilitation.

Peer educator group: educational session delivered by trained HIV infected patients

Adherence counseling: helping patients to adhere to the prescribed drugs

1.11 Organization of the Study

Chapter One consisted of background of the study, statement of the problem, purpose of the study, objectives, research questions, and significance of the study, limitation, delimitations, basic assumptions and the organization of the study. Chapter Two consist of literature review, introduction, and the concept of retention in care among HIV infected patients, concept of psychosocial support program, review of literature basing on objectives, theoretical framework, conceptual framework and summary of literature review and gaps.

Chapter Three consist of research design, target population, sample size and sample procedure, research instrument, validity and reliability, data collection procedures, data analysis and presentation, ethical considerations and operationalization of variables.

Chapter four dialed with data analysis, presentations and inter-presentations and chapter five will deal with summary of the findings, conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter focused on the review of related literature more specifically literature on the concept of retention in care among HIV infected patients, disclosure counseling project on retention in care among HIV infected patients, fair reimbursement project on retention in care among HIV infected patients, peer educator groups on retention in care among HIV infected patients, adherence monitoring project on retention in care among HIV infected patients Philip (2003). It reviewed the past studies that helped the researcher to understand and identify the problems being studied more appropriately. summary of literature review and conceptual framework.

2.2 The Concept of patient Retention

Retention implies remaining connected to medical care, once enrolled. Patient retention is to keep the number of patients in care to avoid lost to follow up of the patient. If patients are kept in care, their health outcomes can be easily monitored.

Retaining patients infected with human immunodeficiency virus (HIV) in medical care is a major priority for both providers and public health organizations. Since the advent of highly active antiretroviral therapy (HAART) in 1996, health outcomes have dramatically improved for persons living with HIV infection. Continuing improvement depends on connecting HIV-

infected patients with and maintaining them in ongoing care. Engaging and retaining patients in HIV care and treatment is an ongoing, dynamic process. Patient retention in care assesses the ability of a provider or care system to maintain a continuous relationship with a patient (Crawford, Sanderson, & Thornton, 2013). Retention is measured in different ways and intervals. Among HIV patients, it is an independent predictor of survival and mortality rates are significantly lower among patients seen three (3) or four (4) times per year versus once or twice annually. Previous studies have shown that patients retained in care are more likely to have better health outcomes - such as: improved CD4 count, suppressed viral load, and fewer hospital admissions/emergency room visits – compared to defaulters. Continuous retention in care has benefits similar to those of timely entry, and a number of strategies have been developed to promote retention such as intensive case management, patient navigation, peer support groups, access to social services, flexible clinic and appointment hours, and mobile outreach to find clients who were lost to follow-up (Tedaldi EM et al 2014).

The National HIV/AIDS Strategy calls for establishment of a seamless system to immediately link people to continuous and coordinated quality care when they are diagnosed with HIV and emphasizes removing barriers that impede patient access to HIV primary care (National HIV/AIDS strategy for the United States 2014). Despite the data available on the importance of retention in care, its linkage to health outcomes, and recent public health attention on the issue, more needs to be done to understand retention issues because of the increased need to promote and support development of interventions that bring people in or back to care and keep them engaged (Thompson MA et al 2012).

2.3 Disclosure Counseling and Retention of HIV patients

The four points of continuum can be identified as: Pre-Antiretroviral Therapy: When a patient is registered for Antiretroviral Therapy but is Antiretroviral Therapy naive, initiation of Antiretroviral Therapy: When a patient is prepared for Antiretroviral Therapy initiation and initiates Antiretroviral Therapy, stable on Antiretroviral Therapy: When a patient is on Antiretroviral Therapy at least for 2 years and had no major episode of non adherence, and ageing with HIV: Patients on Antiretroviral Therapy over 50 years of age. Salient features of counselling intervention to optimize adherence at these defined 4 points of continuum of care are retention counselling, adherence counselling, counselling related to opportunistic infections, retention and adherence counselling within patients' own socio-cultural context (Weidman, 2011).

In USA, Washington state failure to follow up after HIV testing is a common scenario in the HIV care cascade. Several studies have convincingly demonstrated that engagement in HIV care begins at the testing site. How closely the HIV counseling, testing, and referral (CTR) experience correlates with subsequent linkage to care appears to be related to the tone and expectation for future engagement in care established during CTR (Hogg, 2012). The Never in Care Project conducted in 5 locales with mature HIV epidemics highlights the importance of this experience. HIV infected individuals who never sought care beyond testing were predominantly male (71%) and African American (54%), with almost half being younger than 30 years (Samji, 2012). Dissatisfaction with the CTR experience was a pervasive theme. Some of the factors reported were lack of empathy, insufficient counseling, and incorrect information (Garland, 2011). Being given the wrong address for a practitioner discouraged some individuals from pursuing care (Hightow, 2011).

A study in South Africa also found that clients had inadequate information on PMTCT services, given that they could not recall the information communicated to them during counseling (Butler, 2011). Clients only made use of counseling services once during their first visit and not on subsequent visits irrespective of HIV-1 status, suggesting limited rapport between providers and clients. Experiences of those with HIV-1 positive results confirmed privacy and confidentiality were inadequate, as other clients knew the HIV-1 results of their colleagues. Findings indicated that 68% of the participants received less than 5 minutes of posttest counseling, 21% had 5–10 minutes, and only 10.7% had more than 10 minutes of posttest counseling (Mayon, 2011).

Similar findings were found in a study conducted in Malawi where antenatal mothers thought that they were inadequately prepared to undergo HIV-1 testing. Positive mothers also thought that PMTCT had no benefit for them since ART was seen as not a part of PMTCT program. Mothers also complained of delays in getting service at ANC (Matia, 2004). A study conducted in Ivory Coast revealed that mothers were afraid of being scolded at by health staff and that health workers were not attending to them when they had come for follow-up visits (Chetty, 2011). At the individual level, enhanced counseling could be a dynamic tool to optimize adherence to ART. It is important not only to focus on pill taking behavior of patient but it is equally critical to retain patients under the HIV treatment continuum beginning from the pre-ART registration.

Various opportunities for counseling intervention are ARV initiation, preparing for initiation, patients stable on ART and finally ageing with ART. There are opportunities to intervene at all these four points of the continuum wherein patient enabling factors, attitude towards medication, programmatic level factors like switching and/ or transitioning to other

systems of medicine, retention activities/ counseling at all 4 points would need to be addressed(Chetty, 2011).

A Ugandan study by Da Silva et al 2013, revealed that shortage of PMTCT staff, shortages and interrupted supplies of materials, shortage of space for counseling were some of the reasons leading to loss of clients in PMTCT program. The constraints led to long waiting periods for posttest counseling, and some women left without getting their HIV-1 test results. The constraints also compromised privacy and confidentiality of mothers (L. D. Bwirie et al 2011). Reasons for loss to follow-up among mothers registered in a prevention-of-mother-to-child transmission program in rural Malawi were similar to those in Kenya. Among the participants sampled in the studies; 92% complained about lack of privacy in counseling rooms (with more than two people in a room at any given time) as indicated by the presence of more than 2 people in the room. In Ethiopia, a study revealed that poor monitoring of PMTCT services by health workers was one of the reasons to poor followups in PMTCT program because health facilities did not have registered information on HIV-1-positive mothers who enrolled in PMTCT but failed to return for follow-up care (Newell, 2011).

Disclosure counseling as social determinants of retention in care has also been found to be important in a number of settings. Ware et al 2010 conducted the largest qualitative study to date in Africa on patterns of accessing care among HIV-infected patients in Nigeria, Uganda, and Tanzania through 252 qualitative interviews. Patients reported that the way disclosure counseling improved their stay in care and improved their social relationships. Can also help in overcoming barriers to care through the force of social expectations and can also be used to obtain material benefits that make remaining in care possible (Bassett IV, Wang B, Chetty S, et al 2009). In Tanzania, qualitative interviews with 42 patients revealed that stigma and fear for death from

HIV was reduced through disclosure counseling, many felt fulfilling responsibility to their children formed a motivating factor for retention in care (Wringe A., et al 2009) disclosure counseling support interventions for vulnerable groups appear to be promising interventions to improve retention. In a study from Kenya, a targeted program providing disclosure counseling and social support for youths found retention was better at the intervention clinic with 70% remaining in active care versus 55% at the general site for the same age group (Otieno V, et al 2008) Disclosure which has been hypothesized to be a marker of social support was found to be associated with a 70% rise in the odds of retention in 3362 patients in the PMTCT Plus network supported by ICAP (Nash D, et al 2008). Although qualitative interviews from South Africa found stigma did not represent a big challenge to retention (Ekouevi DK, et al 2010). In a study from Malawi, stigma led to non-retention in 45.8% of pre-ART and 25% of on-ART patients.

2.4 Fair Reimbursement and Retention of HIV Patients

There has been an expanded access to antiretroviral therapy (ART) in South Africa. (Brinkhof, 2010). Despite this expansion to access, ART programs continue to document high mortality rates during early stages of disease. An important contributor to poor outcomes is suboptimal retention of patients between HIV diagnosis and ART initiation, when mortality rates are highest and approximately 20–50 % of patients are lost to care. Structural barriers to care in resource-limited settings, including transportation costs is a major contributor to poor linkage (Hardon, 2011). For example, reporting and responding to abnormal clinical investigations typically requires patients to return for a repeat clinical visit, which comes at significant cost and time away from economic activity for patients (Honge, 2013). In cases of an indication for ART initiation, treatment failure, severe treatment complications, or evidence of opportunistic infection, such reporting and intervention delays result in adverse outcomes and/or compromise

future treatment options. In rural Malawi, 35% of patients who were lost and traced cited the high cost of transport to the clinic as the reason for absence (Siedner, 2013).

The International Clinic for AIDS Care and Treatment performed a multisite analysis in Western, Eastern, and Southern Africa using a 6-month absence as the outcome. The study found that if travel time to clinic exceeded 2 hours, the risk of non-retention was doubled (Larson, 2013). In Cambodia, among 6688 patients of whom 4150 were on ART, living out of province was the only risk factor for failure to return to clinic (Hunt PW, et al 2013). In Rajasthan, India, among 106 patients who failed to return for 3 or more months, 20% cited distance and lack of transportation (Serwadda, 2011) Scalable interventions that mitigate structural barriers to clinical care in resource-limited settings are urgently needed. Mobile health (mHealth) applications hold promise in this area by leveraging existing cellular phone infrastructure to improve patient-provider communication and prioritize care delivery for those most in need.

Cellular phone coverage in sub-Saharan Africa increased from 5 to 70 % of the population during the past decade, while personal subscriptions increased from 16 to 380 million (Siedner.2013). While short message service (SMS) reminders have been shown to improve ART adherence (de Walque, 2011). There has been limited data to evaluate the efficacy of Health interventions to improve clinical care. We previously reported results of a survey to assess the acceptability of an SMS-based laboratory results notification system to communicate abnormal laboratory results to patients at a publicly operated Human Immunodeficiency Virus clinic in rural, southwestern Uganda (Chung, 2010). We found that acceptance was nearly 100 % and that benefits of improved patient-provider communication outweighed potential concerns about breaches of confidentiality. We now report results of a follow-up intervention trial to evaluate an mHealth laboratory result notification system coupled with transportation stipends to improve

care for people living with HIV undergoing critical laboratory tests in rural Uganda. We hypothesized that the mHealth application coupled with transportation reimbursements would reduce time to clinic return and time to ART initiation for patients with low CD4 count results.

Distance to clinic and transportation are major barriers to retention in care in a wide variety of settings in Africa and Asia. In rural Uganda, among 111 patients lost to follow-up, the most common reasons for absence were lack of transportation in 50% and excessive distance in 42% (Bangsberg, 2014). In pre-ART patients in Jinja, Uganda, 44% of patients who were eligible for ART but did not start cited transportation as the major reason for failure to initiate. In Western Kenya, one study found that among pre-ART patients, travel time was only significantly associated with failure of retention among women (OR = 1.07; 95% CI = 1.00–1.16) (Lester, 2010). The consistent relationship between transportation and distance on retention has prompted the only randomized trial we are aware of studying retention. In this trial, conducted in Mbarara, Uganda, individuals were randomized to receive a cash transfer of 10,000 to 15,000 Uganda Shillings (\$5–\$8) to be used for transportation. Only 14 (18%) patients were lost from the intervention group, versus 23 (34%) lost from the control group ($P = 0.04$) (Martin JN, Hunt PW, et al 2013). Financial constraints also figure prominently in non-retention and “tracing” studies. Lost patients consistently report finances as a limiting factor: 34% in a South African study (Walensky, 2010) and 35% in rural Ugandans. Among poor families, work and childcare responsibilities can compete with retention in care. In over 50,000 patients in The Academic Model Providing Access to Healthcare programs in Kenya, 21% of women cited family commitments for missing a clinic appointment and 24% of men cited work commitments.

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al 2010) and 35% in rural Ugandans. Among poor families, work and childcare responsibilities can compete with retention in care. In over 50,000 patients in The Academic Model Providing Access to Healthcare (AMPATH) programs in Kenya, 21% of women cited family commitments for missing a clinic appointment and 24% of men cited work commitments (Ware NC, Idoko J, Kaaya S, et al 2010) Lack of food or hunger particularly concurrent with reversal of cachexia and improving health after ART initiation has been cited as a reason for poor adherence (Otieno V, et al 2008) and may compromise retention in care as well. In Jimma zone in Ethiopia an area that has faced food shortages in the last decade 17.6% of patients who defaulted reported lack of food as a reason for absence from clinic (Horstmann et al 2010). In Western Kenya, one study found that among pre-ART patients, travel time was only significantly associated with failure of retention among women. The consistent relationship between transportation and distance on retention has prompted the only randomized trial we are aware of studying retention.

2.5 Peer Group Educator and Retention of HIV Patients.

In USA and Britain, HIV programs use support group educators as an opportunity for health care workers to provide information to people living with HIV (PLHIV). HIV post-test clubs were among the first support groups to be utilized to provide support to clients who tested positive for HIV. The World Health Organization (WHO) proposes support groups as an intervention to address retention and adherence among people living with HIV receiving ART. Both WHO and the President's Emergency Plan for AIDS Relief (PEPFAR) promote peer support groups facilitated by trained people living with HIV to address the special needs of fellow people living with HIV and their partners President's Emergency Plan for AIDS Relief. Accessed August 1, 2014 Such groups serve the purpose of sharing experiences, encouraging disclosure, reducing stigma and discrimination, improving self-esteem, enhancing patients'

coping skills and psychosocial functioning and supporting medication adherence and improved retention in HIV care (Richter, 2014).

These benefits can be maximized further if the support groups are formed around specific populations such as men who have sex with men, pregnant women, adolescents, or couples in discordant relationships. Support groups are also considered an intervention in the management of mental health issues, including alcohol and other substance abuse disorders. Support groups are generally initiated and supported by non-governmental organizations (NGOs), civil society or community-based organizations and may convene in a health facility or in the community. Disclosure of HIV positive status, one of the potential benefits of support groups, has broad prevention implications and is emphasized by both the WHO and the Centers for Disease Control and Prevention (CDC) in all HIV testing protocols. (Kaplan, 2015). The Mentor Mother support group model utilizing mothers living with HIV is a key strategy in the United Nations Global Plan for elimination paediatric AIDS by 2015 and for keeping mothers alive. The Mentor Mothers is considered an effective intervention to improve maternal and infant well-being among women living with HIV. They work alongside health care workers in the clinic and at community meetings to provide health education, to promote adherence to antiretroviral therapy (ART), and to promote disclosure of HIV status among other services. Although the WHO and PEPFAR promote the role of support groups (PEPFAR. Accessed August 1, 2014), evidence of their impact on key health outcomes has not been assessed. This article presents the results of a systematic review of studies examining the evidence of impact of support groups on mortality, morbidity, retention in care, quality of life, and HIV transmission, and determining whether they are cost-effective.

In south Africa Peer education programs are based on the rationale that peers have a strong influence on individual behavior (Population council, 2000). As members of the target group, peer educators are assumed to have a level of trust and comfort with their peers that allows for more open discussions of sensitive topics (Campbell & macphail 2002). Similarly, peer educators are thought to have good access to hidden populations that may have limited interaction with more traditional health programs (Sergeyev et al., 1999). Peer education programs may be empowering to both the educator (Milburn, 1995: strange, forrest & Oakley, 2002) and to the target group by creating a sense of solidarity and collective action Interventions using peers can also be more cost-effective than interventions that rely on highly trained professional staff (Hutton Wyss & n' Diekhor, 2003).

Peer education interventions are a frequently utilized strategy for preventing HIV and other sexually transmitted infections (STIs) worldwide. Such interventions select individuals who share demographic characteristics (e.g. age or gender) or risk behaviors with a target group (e.g. commercial sex work or intravenous drug use) and train them to increase awareness, impart knowledge and encourage behavior change among members of that same group. Peer education can be delivered formally in highly structured settings (such as classrooms) or informally during the course of everyday interactions. Peer education interventions have been used with a number of target populations in developing countries, including youth (Agha & Van Rossem, 2004). Yet to date, there has been no systematic evaluation of the effectiveness of these interventions in changing HIV related knowledge, attitudes, and behaviors in these settings. To address this gap, we conducted a systematic review and meta-analysis to assess the effect of peer education interventions on HIV knowledge, injection drug equipment sharing, condom use, and STI infection in developing country settings.

In RLS (resource limited setting), social determinants of retention in care have also been found to be important in a number of settings. Ware, (2010) conducted the largest qualitative study to date in Africa on patterns of accessing care among HIV-infected patients in Nigeria, Uganda, and Tanzania through 252 qualitative interviews. Patients reported that social relationships can help in overcoming barriers to care through the force of social expectations and can also be used to obtain material benefits that make remaining in care possible (DeeksSG,2011).In Tanzania, qualitative interviews with 42 patients revealed that many felt fulfilling responsibility to their children formed a motivating factor for retention in care. Social support interventions for vulnerable groups appear to be promising interventions to improve retention. In a study from Kenya, a targeted program providing social support for youths found retention was better at the intervention clinic with 70% remaining in active care versus 55% at the general site for the same age group (Rosen, 2011) Disclosure which has been hypothesized to be a marker of social support was found to be associated with a 70% rise in the odds of retention in 3362 patients in the PMTCT Plus network supported by ICAP (Kuyenda, 2011). Although qualitative interviews from South Africa found stigma did not represent a big challenge to retention in a study from Malawi, stigma led to non-retention in 45.8% of pre-ART and 25% of on-ART patients (Massaquoi, 2010).

Peer group counseling reduces negative mind of Toxicities of ARVS which is to be a relatively less common reason for disengagement from care. In the Themba Lethu Clinic in Johannesburg, among 70 patients who were lost to follow-up (defined here as a single missed visit), only 1.4% cited side effects as a reason for failure to return to clinic (Rosen S, Kethlhapile M 2010) and in a later study at the same site, only 4.1% reported toxicity as a reason for absence (Dalal RP, Macphail C, Mqhayi M, et al. 2008). In another clinic in Johannesburg, only 2.9% of

90 lost patients reported toxicity as a reason for absence. However, in another Johannesburg study, among 30 lost patients, 19% noted medication toxicity (Chan AK, Mateyu G, Jahn A, et al 2010). Among 49 defaulting patients in Malawi, 12.8% reported toxicity. In Tanzania, qualitative interviews with 42 patients revealed that many felt fulfilling responsibility to their children formed a motivating factor for retention in care (Bedelu M, Ford N, Hilderbrand K, Reuter H 2007). Social support interventions for vulnerable groups appear to be promising interventions to improve retention. In a study from Kenya, a targeted program providing social support for youths found retention was better at the intervention clinic with 70% remaining in active care versus 55% at the general site for the same age group (Ochieng-Ooko V, Ochieng D, Sidle JE, et al 2010). Disclosure which has been hypothesized to be a marker of social support—was found to be associated with a 70% rise in the odds of retention in 3362 patients in the PMTCT Plus network supported by ICAP (Amuron B, et al 2009). Although qualitative interviews from South Africa found stigma did not represent a big challenge to retention, in a study from Malawi, stigma led to non-retention in 45.8% of pre-ART and 25% of on-ART patients.

2.6 Adherence counseling and retention in care among HIV infected patients.

Strict adherence to antiretroviral therapy (ART) is key to sustained HIV suppression, reduced risk of drug resistance, improved overall health, quality of life, and survival, World Health Organization WHO 2003 as well as decreased risk of HIV transmission.(Chesney, 2013). Conversely, poor adherence is the major cause of therapeutic failure. Achieving adherence to ART is a critical determinant of long-term outcome in HIV infected patients. For many chronic diseases, such as diabetes or hypertension, drug regimens remain effective even after treatment is resumed following a period of interruption. In the case of HIV infection, however, loss of

virology control as a consequence of non-adherence to ART may lead to emergence of drug resistance and loss of future treatment options.

Many patients initiating ART or already on therapy are able to maintain consistent levels of adherence with resultant viral suppression, CD4+ T-lymphocyte (CD4) count recovery, and improved clinical outcomes. Others, however, have poor adherence from the outset of ART and/or experience periodic lapses in adherence over the lifelong course of treatment. Identifying those with adherence-related challenges that require attention and implementing appropriate strategies to enhance adherence are essential roles for all members of the treatment team (Kuyenda, 2011).

In USA recent data underscore the importance of conceptualizing treatment adherence broadly to include early engagement in care and sustained retention in care. The concept of an HIV “treatment cascade” has been used to describe the process of HIV testing, linkage to care, initiation of effective ART, adherence to treatment, and retention in care. The U.S. Centers for Disease Control and Prevention estimates that only 36% of the people living with HIV in the United States are prescribed ART and that among these individuals, only 76% have suppressed viral loads Centers for Disease Control and Prevention (Linkage to and retention in HIV Medical Care, 2012). Thus, to achieve optimal clinical outcomes and to realize the potential public health benefit of treatment as prevention, attention to each step in the treatment cascade is critical. Therefore, provider skill and involvement to retain patients in care and help them achieve high levels of medication adherence are crucial.

In India a report from Mumbai in India has shown viral suppression to be associated with participant self-reported adherence (Mustikawati, 2010). Self reporting is the most commonly

used measure of adherence in resource- limited settings because it is easy to include in routine clinical practice. However, reliability of answers to the adherence assessment questions might get influenced by patients' desires to provide socially acceptable answers or mere forgetfulness on the part of the patients(Rachlis, 2011). Additionally, adherence also depends on patient provider relationship. These concerns about reliability of adherence by self report get attested by several studies that have shown discrepancy between self reported adherence and biomedical markers(Ghidinelli, 2011).

Various tools and methods have been used for assessing adherence in randomized controlled trials and these are also evaluated in comprehensive reviews and meta-analyses. There is no 'gold standard' for adherence assessment. There are some of the objective measures of adherence generally used in research. These measures have been found to be more sensitive than patients' self-reports for detecting medication adherence. Clinical studies have employed medication event monitoring system (Batavia, 2010), pharmacy refill data, providers' estimates and directly observed therapy (DOT) or directly administered ART (DART) either alone or in combination to measure ART adherence. The current national ART programme in India uses pill count method for assessing adherence. But this method might not give exact compliance calculation as it does not match with number of missed pills (self) reported by patient (Cauldbeck, 2010) leading to discrepancies between pill count by provider and self report by patient. After being on ART for some time, the patient gets habituated to pill count exercise and manages to bring exact.

The South African Department of Health (NDoH) has developed the National Adherence Guidelines for Chronic Diseases (HIV, TB and NCDs)" and is in the process of implementing these nationally (KwaZulu, 2011). The guidelines outline the provision of a minimum package of

interventions which are designed to increase linkage to and retention in care and adherence to treatment. In order to inform the national roll-out, HE2RO and Boston University, in collaboration with the National Department of Health and The World Bank, will be evaluating implementation of the minimum package interventions using a cluster randomized design. Twelve matched pairs of primary health clinics and community health clinics have been selected in four provinces that is Gauteng, Natal, Limpopo and North West and facilities randomly allocated to control and intervention within each pair (Wits Health Consortium University of Witwatersrand, 2014). Malawi a small resource-poor country in southern Africa has been engaged in ART scale-up for nearly 3 years.

In Kenya and Uganda other measures of adherence include pharmacy records and pill counts. Pharmacy records can be valuable when medications are obtained exclusively from a single source so that refills can be traced. Pill counts are commonly used but can be altered by patients. Other methods of assessing adherence include the use of therapeutic drug monitoring and electronic measurement devices e.g., MEMS bottle caps and dispensing systems. However, these methods are costly and are usually done primarily in research settings (Operario, 2010).

Research generally shows low-to-moderate correspondence between self-report adherence measures and clinical outcomes, and estimates are highly variable by chronic disease area and measure (Simoni JM, Kurth AE, Pearson CR, et al 2006). Two syntheses of research conducted with adult HIV/AIDS patients offer strong evidence that self-report medication adherence measures can significantly and meaningfully predict clinical outcomes (Velligan DI, Lam YW, Glahn DC, et al 2006). Across pooled studies containing over 15,000 HIV patients, Nieuwkerk and Oort 2006 determined that those who self-report non-adherence (at any cutoff level) were 2.31 times more likely to have clinically detectable HIV viral load than those who

self-report high adherence. Simoni and colleagues 2006 examined 77 studies and found statistically significant correlations between self-report adherence rates and viral load in 84 % of assessment intervals, with correlation coefficients ranging from 0.30 to 0.60. The consistent correspondence of self-report adherence to HIV viral load led (Simoni et al 2006). To conclude that “even brief self-report measures of antiretroviral adherence can be robust”. Recent meta-analyses further support the criterion validity of self-report adherence measures in HIV/AIDS when used with pediatric, child, and adolescent patients and their caregivers Nguyen TM, Caze AL, Cottrell N. (2013)

2.7 Theoretical Frame Work

The study was guided by the theory Health Belief Model (HBM) which was developed in the early 1950s by social scientists at the U.S. Public Health Service in order to understand the failure of people to adopt disease prevention strategies or screening tests for the early detection of disease. Later uses of HBM were for patients' responses to symptoms and compliance with medical treatments. The HBM suggests that a person's belief in a personal threat of an illness or disease together with a person's belief in the effectiveness of the recommended health behavior or action will predict the likelihood the person will adopt the behavior. The HBM derives from psychological and behavioral theory with the foundation that the two components of health-related behavior are 1) the desire to avoid illness, or conversely get well if already ill; and, 2) the belief that a specific health action will prevent, or cure, illness. Ultimately, an individual's course of action often depends on the person's perceptions of the benefits and barriers related to health behavior. There are six constructs of the HBM. The first four constructs were developed as the original tenets of the HBM. The last two were added as research about the HBM evolved. The

theory relates to the study in the way that the beliefs influences the perception of people in seeking for medical care ever

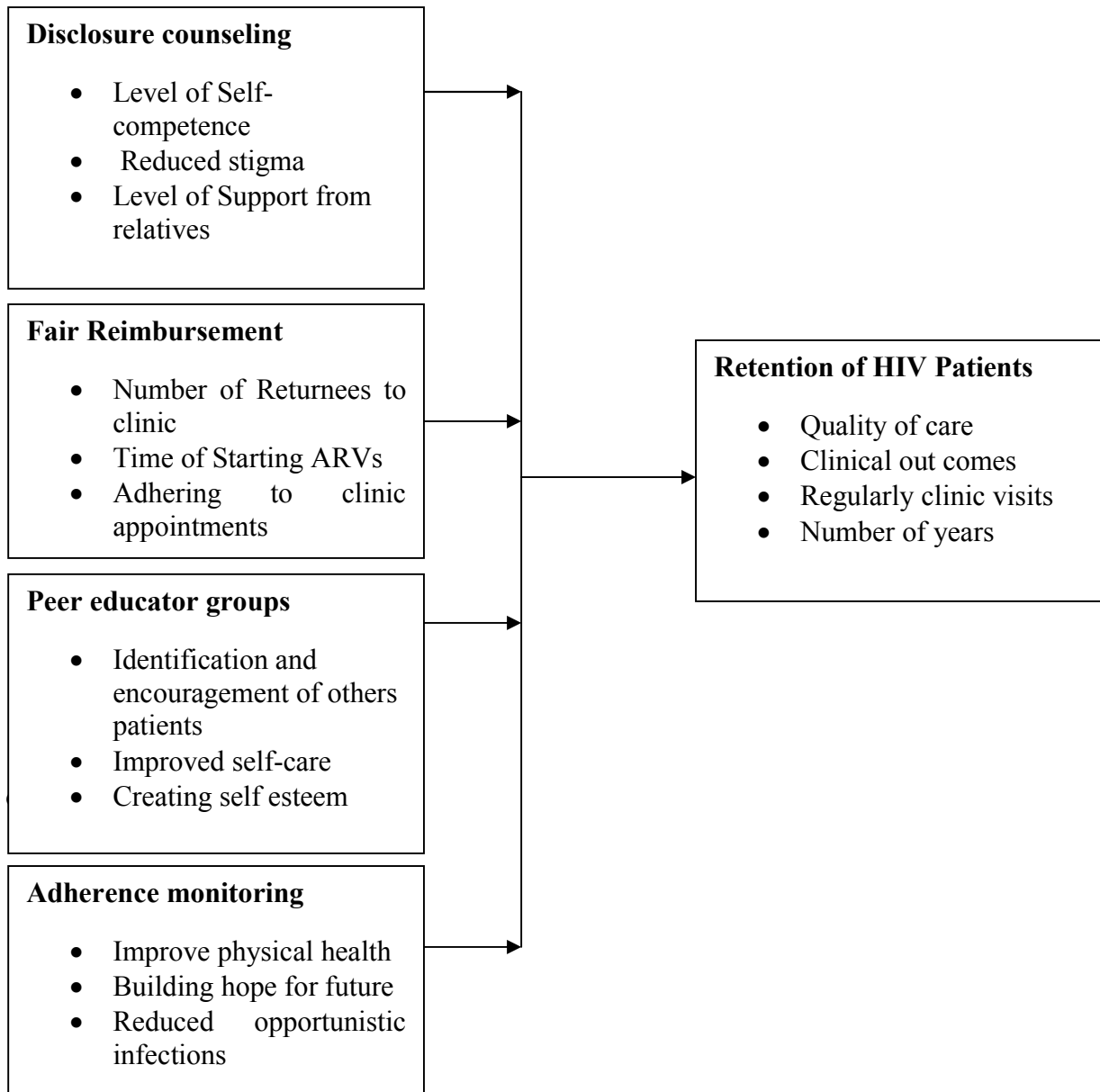
2.8 Conceptual Framework

The conceptual framework presents the relationship between the dependent variable and the independent variable. From the conceptual framework, the independent variable is psychosocial support programme and its components or indicators are disclosure counselling, fair reimbursement, peer group educator and adherence monitoring the dependent variable is retention of HIV infected patients. There is also moderating variable which is survival ship of the patient that plays an important role in the relationship between the independent and the dependent variable to complete the cycle in retention of HIV infected patients. Figure 1 shows the conceptual frame work.

Figure 2.1 Conception Frame Work

Independent Variable

Dependent Variable



2.8 Summary of Literature Review and Gaps

Disclosure counseling several studies have convincingly demonstrated that engagement in HIV care begins at the testing site. How closely the HIV counseling, testing, disclosure and referral (CTR) experience correlates with subsequent linkage and retention to care appears to be related to the tone and expectation for future engagement in care established during CTR (Hogg, 2012). The Never in Care Project conducted in 5 locales with mature HIV epidemics New York City, Philadelphia, and sites in Indiana, Washington state, and New Jersey highlights the importance of this experience. 12 HIV infected individuals who never sought care beyond testing and disclosure were predominantly male (71%) and African American (54%), with almost half being younger than 30 years. Dissatisfaction with the CTR experience was a pervasive theme. Some of the factors reported were lack of empathy, insufficient counseling, and incorrect information (Garland PM, Valverde EE, Fagan J, et al 2011).

Fair reimbursement and Distance to clinic are major barriers to retention in care in a wide variety of settings in Africa and Asia. In rural Uganda, among 111 patients lost to follow-up, the most common reasons for absence were lack of transportation in 50% and excessive distance in 42% (Lankowski AJ, 2014). In rural Malawi, 35% of patients who were lost and traced cited the high cost of transport to the clinic as the reason for absence (SiednerMJ, 2013). The International Clinic for AIDS Care and Treatment (ICAP) performed a multisite analysis in Western, Eastern, and Southern Africa using a 6-month absence as the outcome. The study found that if travel time to clinic exceeded 2 hours, the risk of non-retention was doubled (Larson, 2013). In Cambodia, among 6688 patients of whom 4150 were on ART, living out of province was the only risk factor for failure to return to clinic (Siedner, 2013).

Peer educator groups, studies in south Africa shows that Peer education programs are based on the rationale that peers have a strong influence on individual behavior (Population council, 2000). As members of the target group, peer educators are assumed to have a level of trust and comfort with their peers that allows for more open discussions of sensitive topics (Campbell & Macphail, 2002). Similarly, peer educators are thought to have good access to hidden populations that may have limited interaction with more traditional health programs (sergeyev, 1999). Peer education programs may be empowering to both the educator (Milburn, 1995: strange, forrest & Oakley, 2002) and to the target group by creating a sense of solidarity and collective action. Interventions using peers can also be more cost-effective than interventions that rely on highly trained professional staff (Hutton, 2003).

Adherence monitoring, studies have shown that strict adherence to antiretroviral therapy (ART) is key to sustained HIV suppression, reduced risk of drug resistance, improved overall health, quality of life, and survival, (World Health Organization WHO 2003) as well as decreased risk of HIV transmission. (Chesney MA. 2013) conversely, poor adherence is the major cause of therapeutic failure. Achieving adherence to ART is a critical determinant of long-term outcome in HIV infected patients. For many chronic diseases, such as diabetes or hypertension, drug regimens remain effective even after treatment is resumed following a period of interruption in India, South Africa, Uganda and Kenya different methods have been used to boost adherence and achieve retention in care of HIV patients. Many studies have been done on individual psychosocial elements that influence retention however, there are no known studies that focus on psychosocial as a whole aspect in influencing retention in care of patients with HIV.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter presented details of the research design, target population, sample and sampling procedures, description of research instruments, validity and reliability of instruments, data collection procedures, pilot testing, data analysis techniques and ethical considerations while conducting the study.

3.2 Research Design

The study adopted a descriptive survey study design. According to Ogula (2005) a descriptive survey design allows the researcher to gather information, summarize, present and interpret it for the purpose of clarification. It also allows the researcher to describe record, analyze and report conditions that exist or existed. This design will allow the researcher to generate both numerical and descriptive data that will be used in measuring correlation between variables. It is a process of gaining insight into the general picture of a situation, without utilizing the entire population (Gall, Borg and Gall, 1996).

3.3. Target Population

A population refers to any group of institutions, people or objects that have common observable characteristics Ogula, (2005). The target population for this study included 355 respondents made up of 325 patients and 30 healthcare providers (staff). Patients were those who sought medical care and were active either on ARVS and septrin or Septin alone) at AMPATH clinic module one. The target population was to be made up of adult patients aged 18 years and above and the caregiver providers (staff) at module one clinic at AMPATH.

Table 3.1: Target population

Target Population Frame	
Strata	Target population
Patient under	325
Health care provider staffs	30
TOTAL	355

Source: Ampath Program annual report (2015).

3.4 Sample Size and Sampling Procedure

3.4.1. Sample Size

According to Kothari (1999), an optimum sample size is one that fulfills the requirement of efficiency, representative, reliability and flexibility. The sample size selected was considered large enough to use powerful statistics and generalize results to the population (Creswell, 2002). According to Mugenda and Mugenda (2003), for a population of less than 100, 100% of the population is taken to calculate the sample size, for a population of between 100 to 1,000, 30% of the population is taken, for a population of 1,000 – 10,000, 10% of the target population is taken to represent the target population and finally for any target population above 10,000, 1% is taken to calculate the sample size to be employed in the study. Therefore for this study 30% of 325 patients were sampled to give a sample size of 97 patients and 30 health care providers.

3.4.2 Sampling Procedure

A total number of 97 Patients in module one were sampled and 30 health care providers staff were censured since they were smaller population.

Table 3. 2 Sampling Procedures

Category of Population Sample	Population	Sample Procedure	Sample
Patient under care	325	30/100*325	97
Health care provider staff	30	30/100*30	30
Total	355		127

The above table show a breakdown of the target population and the sample size. It represents 30% of the total target population of both patients and health care providers.

3.5 Data Collection Methods

The study used two research instruments namely the questionnaire and guided interview schedules.

One questionnaires was used for this study, patients attending clinic in module one AMPATH. The questionnaires contained closed-end questions. Closed-end questions were used so that information could be quantified and used in marginal tabulation. Marginal tabulation provided the researcher with a description of how the total sample had distributed itself on the response alternatives for each questionnaire item. Responses to individual items was also be used to explore possible relationships between two or more variables.

A guided interview schedule was used to target psychosocial staff who deal with retention of patients in moduel one AMPATH clinic. The interview schedules collected information relating to retention of patients in AMPATH module one clinic and the researcher used open ended questions to the repondents.

3.5.1. Pilot testing of the instruments.

A pilot study is a mini-version of a full scale or a trial run done in preparation of the complete study, it is mostly done to pre-test the research instruments. In this study, questionnaires was piloted in a pilot survey using 8 patients and interview schedules to 2 psychosocial staff from mosoriot AMPATH clinic. The results were used to determine the reliability of the instruments. The respondents of the subjects were checked against the research objectives. The content selected and included in the questionnaire was checked to see the relevance to the variables being investigated (Azzi-Lessing, 2009). The results from the pilot study were tested using Cronbach's Alpha reliability test (Cronbach, 1951). That was administered to a similar study population to one which was used in the research.

3.5.2 Validity and Reliability

In order to improve validity, the researcher ensured that the indicators in the independent and dependent variables are consistent with questions fomulated in the questionnaires. The expert opinion of the supervisor evaluated validity of research instruments.

A test re-test was used to ensure reliability of research instruments. The instruments was administered to ten respondents at first. After two weeks, the instruments were administered to them again. Results from the two sets of instruments were analyzed using Pearson Product Moment Correlation to indicate closeness of relationship (value of between 1 to 0.7 = close related, and value between 0 to 0.4 = not related). Closeness in relation indicates realibility of the instruments and vise versa.

Table 3.3 Validity and Reliability Results of all Variables Used for the Study

Reliability Statistics	
Cronbach's Alpha	N of Items
0.863	4

The reliability tests for all the variables revealed a coefficient of 0.863 which was above 0.70. The variables were therefore reliable for use by the study

3.6 Data Collection Procedures

Before initiation of the actual field work, two research assistants were identified to assist the researcher in administration of the questionnaire. The two assistants were briefed about the project and its objectives and then trained on the administration of the questionnaire to the subjects. After this, in the actual study, the subjects were first briefed on the purpose of the study and assured that all the information collected was kept confidential. To ensure high return of questionnaires, the researcher personally collected data from the respondents directly.

3.7 Data Analysis and Presentation

The data obtained from the questionnaires were coded, organized and analyzed by the use of descriptive statistics i.e. mean, percentages and standard deviation and presented using frequency tables and percentages. The methods ensure easy understanding of presented data and information.

ϵ = Error of margin

This study used tables to present the information.

3.8 Ethical Considerations

The researcher sought authority through a letter of introduction from University of Nairobi. Equally authority was sought from the heads of AMPATH Psycho-social and from patients to allow the researcher gather the required data from the respondents in the clinic. The principle of confidentiality and voluntary participation of respondents was adhered to as questionnaires did not require respondents to write their names. The researcher disclosed the reasons for carrying out the study to the respondents as purely meant to satisfy an academic requirement and not for any other reason.

3.9 Operation Definition of Variables.

Objective	Type of variables	Indicator	Scale of measurement	Statistical Test
To establish how disclosure counseling influence retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya.	Independent:	Level of Self-competence.	Normal	Correlation will be used to establish the relationship between disclosure and retention of patients
	Disclosure counseling	Reduced stigma	Ordinal	
	Dependent:	Level of Support from relatives		
	Retention of HIV Patients			

To examine how fair reimbursement influence retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya.	Independent:	Number of Returnees to clinic	Ordinal	Regression will be used to examine whether fair Reimbursement influences retention of patients
	Fair Reimbursement	Time of Starting ARVs	Normal	
		Adhering to clinic appointments		
	Dependent:		Normal	
			Ordinal	
		Retention of HIV Patients		
To investigate how peer educator groups influence retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya.	Independent:	Identification and encouragement of others patients	Ordinal	Correlation was used to establish the relationship between peer educator groups and retention of patients
	Adherence monitoring	Improved self-care		
		Creating self esteem		
	Dependent:			
		Retention of HIV Patients		
To determine how adherence monitoring influence in Retention of HIV patients in AMPATH care	Independent:	Improve physical health	Ordinal	Correlation was used to establish the relationship between adherence monitoring and retention of patients
	Peer educator groups	Building hope for future		
		Reduced opportunistic		

based clinic in Eldoret, Kenya.	infections
Dependent:	
Retention of HIV Patients	

Table 3.1 Operation Definition of Variables

CHAPTER FOUR

DISCUSSION AND INTERPRETATION OF FINDINGS

4.1 Introduction

This chapter covers the discussion and interpretation of findings for influence of psycho-social support programme on retention of hiv patient in ampath care based clinic in Eldoret, Kenya in accordance with the study objectives which include disclosure counseling, fair reimbursement, peer educator groups counseling and adherence counseling influence on retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya.

4.2 Respondents Rate

A total of 87 out 97 respondents fully completed and returned the questionnaires. The study findings were presented below;

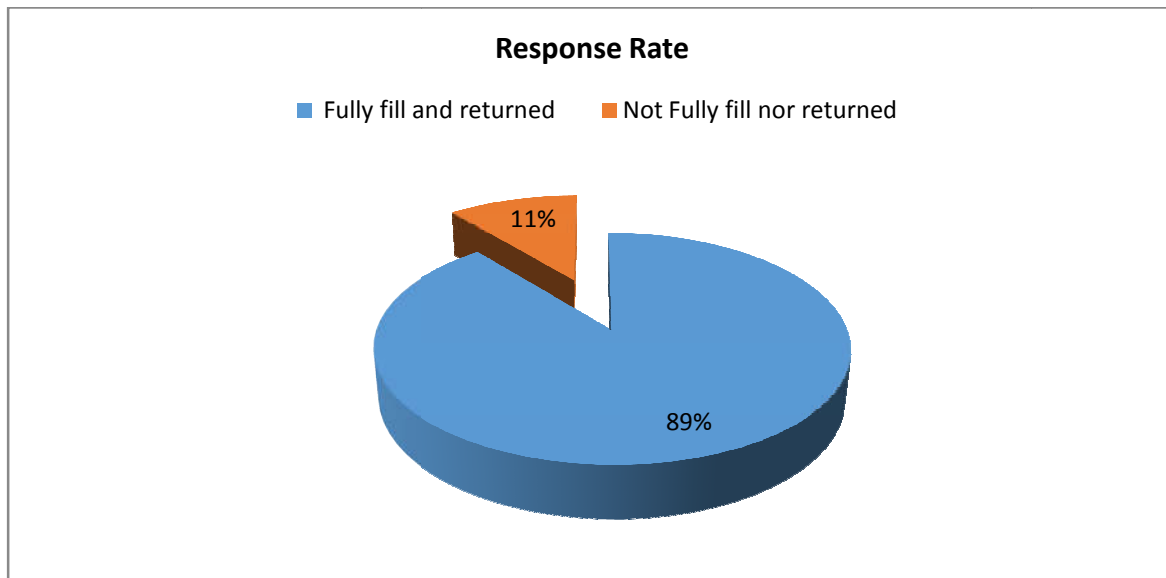


Figure 4.1 Response Rate

The study findings indicate the response rate of the study was 89.2% which was therefore considered adequate enough to avail the information on influence of psycho-social support programme on retention of HIV patient in AMPATH care based clinic.

4.3 Background information of the respondents

The study sought to find out the background information of the respondents

4.3.1 Gender

The study sought to establish the gender of the respondents. The study findings were presented below;

Table 4.1 Gender

Gender	Frequency	Percent
Male	39	44.8
Female	48	55.2
Total	87	100

The study findings indicate that 44.8% of the respondents were male while 55.2% of the respondents were female. This implies that the study covered both genders and that the number of female was higher because most of HIV infected patients who responded to questionnaires were female compared to male patients.

4.3.2 Age Bracket

The study sought to find out the age of the respondents. The study findings were presented below;

Table 4.2 Age Bracket

Age bracket	Frequency	Percent
-------------	-----------	---------

Below 20	19	21.8
21-25	25	28.7
26-30	22	25.3
Above 31	21	24.1
Total	87	100

The study found out that most respondents were of age between 21 – 25 representing 28.7% of the total respondents. The study also found that the number respondents aged between 26-30 represented 25.3%, above 31 represented 24.1% and below 20 at 21.8%. This shows that the study collected data from all the age brackets represented in the study.

4.3.3 Marital Status

The study sought to find out the marital status of the respondents. The study findings were presented below;

Table 4.3 Marital Status

Marital status	Frequency	Percent
Single	15	17.2
Married	42	48.3
Divorced	14	16.1
Widow	16	18.4
Total	87	100

The result findings indicate that 17.2 % of the respondents were Single, 48.3 % of the respondents were Married, 16.1 % of the respondents were Divorced while 18.4 % of the respondents were Widow. This implies that data was collected from all respondents across the required marital status.

4.3.4 Level of Education

This study sought to know the education level of the respondents. The study findings were presented below;

Table 4.4 Level of Education

Level of education	Frequency	Percent
Certificate	25	28.7
Diploma	30	34.5
Degree	26	29.9
Masters	6	6.9
Total	87	100

The results findings indicate that 34.5% had diplomas, 28.7 % had certificates, 29.9 % had degrees and 6.9 % had masters. This implies that the study collected data from all the levels of education represented in the study.

4.4. Analysis of the specific Objectives

In this section, the study analyzes the specific objectives of the study relating to influence of psycho-social support programme on retention of HIV patient in AMPATH care based clinic in Eldoret, Kenya.

4.4.1 Disclosure Counseling

The study also sought to establish how disclosure counseling influence retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya. The table below indicates the findings.

Table 4.5 Disclosure Counseling

Statements	SD	D	U	A	SA	TOT	MEA	%	SD
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						AL	N	MEAN		
Disclosure counseling support helps in continued revisits to clinic and remaining in care.	F	5	6	20	20	36	87	3.87	77.5	1.199
	%	5.7	6.9	23.0	23.0	41.4	100			
The level of self-competence of the patients determines the quality of care and retention of HIV patients	F	0	1	10	25	51	87	4.45	89.0	0.743
	%	0	1.1	11.5	28.7	58.6	100			
Reduced stigma as a result of disclosure counseling influences the regularity of clinical visits by the HIV patients	F	2	1	23	22	39	87	4.09	81.8	0.984
	%	2.3	1.1	26.4	25.3	44.8	100			
The level of support from relatives toward the patients on the aspect of disclosure counseling influence the retention of HIV patients	F	0	3	15	30	39	87	4.21	84.1	0.851
	%	0	3.4	17.2	34.5	44.8	100			

The study results revealed that 77.5 % of the respondents were of the opinion that disclosure counseling support helps in continued revisits to clinic and remaining in care, 89.0% of the respondents were of the view that the level of self-competence of patients determines the quality of care and retention of HIV patients, 81.8% were of the opinion that reduced stigma as a result of disclosure counseling influences the regularity of clinical visits by the HIV patients and 84.1% of the respondents were of the opinion that the level of support from relatives toward the patients on the aspect of disclosure counseling influence the retention of HIV patients.

The study findings indicate that majority of the respondents were of the opinion that the level of self-competence of patients determines the quality of care and retention of HIV patients. This implies that care appears to be related to the tone and expectation for future engagement in care established during care provision and enhanced counseling by self-competence of patients determines the quality of care and retention since it's a dynamic tool to optimize adherence and retention.

Also, according to the staff response on disclosure counseling influence on retention of HIV patients in AMPATH care based clinic, with respect to the interview schedule majority of the respondents were of the opinion that disclosure counseling as social determinants of retention in care is important. Patients reported that disclosure counseling improves their stay in care and improved their social relationships. Disclosure counseling also helps in overcoming barriers to care through the force of social expectations and can also be used to obtain material benefits that make remaining in care possible. Also disclosure counseling support interventions for vulnerable groups appear to be promising interventions to improve retention and rise in the odds of retention.

A study by Hightow, (2011) are in line with this study findings that the level of self-competence of patients determines the quality of care and retention of HIV patients in that dissatisfaction with the CTR experience was a pervasive theme. Some of the factors reported were lack of empathy, insufficient counseling, and incorrect information being given by the practitioner discouraged some individuals from pursuing care. Several. The study convincingly demonstrated that engagement in HIV care begins at the testing site. How closely the HIV counseling, testing, and referral (CTR) experience correlates with subsequent linkage to care appears to be related to the tone and expectation for future engagement in care established during CTR. The project conducted in 5 locales with mature HIV epidemics highlights the importance of this experience. HIV infected individuals who never sought care beyond testing were predominantly male (71%) and African American (54%), with almost half being younger than 30 years and was associate to the conduct of the practitioners.

Another study by Butler, (2011) also indicate that clients only made use of counseling services once during their first visit and not on subsequent visits irrespective of HIV-1 status, suggesting

limited rapport between providers and clients. Experiences of those with HIV-1 positive results confirmed privacy and confidentiality were inadequate, as other clients knew the HIV-1 results of their colleagues. Findings indicated that 68% of the participants received less than 5 minutes of posttest counseling, 21% had 5–10 minutes, and only 10.7% had more than 10 minutes of posttest counseling.

4.4.2 Fair Reimbursement

The study also sought to find out how fair reimbursement influence retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya. The table below indicates the findings.

Table 4.6 Fair Reimbursement

Statements		SD	D	U	A	SA	TOTAL	MEAN	% MEAN	SD
Fair reimbursements influence the retention of HIV patients and remaining in care.	F	0	3	31	21	32	87	3.94	78.9	0.932
	%	0	3.4	35.6	24.1	36.8	100			
Number of returnees to the hospital for care is determined by the availability of fair reimbursements	F	4	0	43	17	23	87	3.63	72.6	1.024
	%	4.6	0	49.4	19.5	26.4	100			
The time of starting ARVs by the patients is due to fair reimbursements and influences regular clinical visits	F	1	3	42	20	21	87	3.66	73.1	0.925
	%	1.1	3.4	48.3	23.0	24.1	100			
Adherence to clinical appointments influence the retention of HIV patients through fair reimbursements	F	0	2	32	26	27	87	3.90	77.9	0.876
	%	0	2.3	36.8	29.9	31.0	100			

The study findings revealed that 78.9% of the responses were of the opinion that fair reimbursements influences the retention of HIV patients and remaining in care, 72.6% of the responses were of the opinion that number of returnees to the hospital for care is determined by the availability of fair reimbursements, 73.1% of the responses were of the view that the time of starting ARVs by the patients is due to fair reimbursements and influences regular clinical visits while 77.9% of the responses were of the opinion that adherence to clinical appointments influence the retention of HIV patients through fair reimbursements.

The study findings indicate that majority of the respondents were of the opinion that fair reimbursements influences the retention of HIV patients and remaining in care. This implies that transportation costs is a major contributor to attendance since retention typically requires patients

to return for a repeat clinical visit, which comes at significant cost and time away from economic activity for patients and thus this tend to compromise future treatment options in which fair reimbursements influences this notion.

Also, with respect to the interview schedule, majority of the respondents were of the opinion that fair reimbursement influence retention of HIV patients in AMPATH care based clinic in that most patients cite the high cost of transport to the clinic as the reason for absence and defaults. This outlines a picture of insufficiency in fund for transpport and in which when provied for through reinbusments, may influence their revisits although it may not be enough and still the problem will the exist.

A study by Serwadda, (2011) is in line with this findings that fair reimbursements influences the retention of HIV patients and remaining in care in which this study performed a multisite analysis in Western, Eastern, and Southern Africa using a 6-month absence as the outcome. The study found that if travel time to clinic exceeded 2 hours, the risk of non-retention was doubled. In Cambodia, among 6688 patients of whom 4150 were on ART, living out of province was the only risk factor for failure to return to clinic. Among 106 patients who failed to return for 3 or more months, 20% cited distance and lack of transportation. Scalable interventions that mitigate financial barriers to clinical care in resource-limited settings are urgently needed and the reinbursment applications hold promise in this area by leveraging existing and prioritize care for those most in need.

Another study by Horstmann E, Brown J, Islam F, et al 2010) found that among pre-ART patients, cost of travel was only significantly associated with failure of retention among women. The consistent relationship between transportation and distance on retention has prompted the

only randomized trial we are aware of studying retention. In this trial, conducted in Mbarara, individuals were randomized to receive a cash transfer of 10,000 to 15,000 Uganda Shillings (\$5–\$8) to be used for transportation. Only 14 (18%) patients were lost from the intervention group, versus 23 (34%) lost from the control group ($P = 0.04$).

4.4.3 Peer Educator Groups Counseling

The study also sought to find out how peer educator groups counseling influence retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya. The table below indicates the findings.

Table 4.7 Peer Educator Groups Counseling

Statements		SD	D	U	A	SA	TOTAL	MEAN	% MEAN	SD
Peer group educator enables individuals to be able to encourage other patients to attend clinics	F	6	7	13	23	38	87	3.92	78.4	1.241
	%	6.9	8.0	14.9	26.4	43.7	100			
Attendance of peer groups influences and improves the need for self-care and retention of patients	F	5	11	15	23	33	87	3.78	75.6	1.243
	%	5.7	12.6	17.2	26.4	37.9	100			
Peer educator groups enables the patients create self-esteem and regular clinical visits	F	3	10	15	22	37	87	3.92	78.4	1.174
	%	3.4	11.5	17.2	25.3	42.5	100			
Peer educator groups encourages quality of care for the patients and thus retention of HIV patients in clinics	F	4	5	4	44	30	87	4.05	80.9	1.022
	%	5.7	12.6	17.2	26.4	37.9	100			

The study findings revealed that 78.4% of the responses were of the opinion that peer group educator enables individuals to be able to encourage other patients to attend clinics 75.6% of the

responses were of the opinion that attendance of peer groups influences and improves the need for self-care and retention of patients, 78.4% of the responses were of the opinion that peer educator groups enables the patients create self-esteem and regular clinical visits and 80.9% of the responses were of the opinion that peer educator groups encourages quality of care for the patients and thus retention of HIV patients in clinics.

The study findings indicate that majority of the respondents were of the opinion that peer educator groups encourages quality of care for the patients and thus retention of HIV patients in clinics. This implies that not only does peer education interventions are a utilized strategy for preventing HIV. Such interventions select individuals who share demographic characteristics or risk behaviors with a target group and train them to increase awareness, impart knowledge and encourage behavior change among members of that same group in order to improve on their health status and encourages quality of care thus revisits and retention.

Also from the results of the interview schedule majority of the respondents on peer educator groups counseling influence on retention of HIV patients in AMPATH care based clinics also indicated that the use of peer educator groups gives opportunity for health care workers to provide information to people living with HIV and that this groups serve the purpose of sharing experiences, encouraging disclosure, reducing stigma and discrimination, improving self-esteem, enhancing patients' coping skills and psychosocial functioning and supporting medication adherence and improved retention in HIV care

A study by Massaquoi, (2010) is in line with this findings that peer educator groups encourages quality of care for the patients and thus retention of HIV patients in clinics in that peer education can be delivered formally in highly structured settings. In RLS (resource limited setting); social

determinants of retention in care have also been found to be important in a number of settings. The study conducted the largest qualitative study to date in Africa on patterns of accessing care among HIV-infected patients in Nigeria, Uganda, and Tanzania through 252 qualitative interviews. Patients reported that social relationships for instance peer educator groups can help in overcoming barriers to care through the force of social expectations and can also be used to obtain material benefits that make remaining in care possible. In Tanzania, qualitative interviews with 42 patients revealed that many felt fulfilling responsibility to their children formed a motivating factor for retention in care. Peer educator group support interventions for vulnerable groups appear to be promising interventions to improve retention. In a study from Kenya, a targeted program providing peer educator groups support for youths found retention was better at the intervention clinic with 70% remaining in active care versus 55% at the general site for the same age group. Disclosure which has been hypothesized to be a marker of peer educator group support was found to be associated with a 70% rise in the odds of retention in 3362 patients in the PMTCT Plus network supported by ICAP. Although qualitative interviews from South Africa found stigma did not represent a big challenge to retention in a study from Malawi, stigma led to non-retention in 45.8% of pre-ART and 25% of on-ART patients.

4.4.4 Adherence Counseling

The study also sought to find out how adherence counseling influence retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya. The table below indicates the findings.

Table 4.8 Adherence Counseling

Statements		SD	D	U	A	SA	TOTAL	MEAN	% MEAN	SD
Adherence help to improve life expectancy of HIV infected persons and retention of patients	F	2	7	19	28	31	87	3.91	78.2	1.052
	%	2.3	8.0	21.8	32.2	35.6	100			
Adherence help to improve life physical health of HIV infected persons and regular clinical visits	F	0	3	16	29	39	87	4.20	83.9	0.860
	%	0	3.4	18.4	33.3	44.8	100			
Adherence monitoring influences the risk of opportunistic infections and clinical outcomes	F	5	7	10	22	43	87	4.05	80.9	1.210
	%	5.7	8.0	11.5	25.3	49.4	100			
Adherence monitoring influences hopes for the future and retention of patients	F	4	9	11	23	40	87	3.99	79.8	1.196
	%	4.6	10.3	12.6	26.4	46.0	100			

The study results revealed that 78.2% were of the view that adherence help to improve life expectancy of HIV infected persons and retention of patients, 83.9% were of the opinion that adherence help to improve life physical health of HIV infected persons and regular clinical visits, 80.9% were of the opinion that adherence monitoring influences the risk of opportunistic infections and clinical outcomes, 79.8% were of the view that adherence monitoring influences hopes for the future and retention of patients.

The study findings indicate that majority of the respondents were of the opinion that adherence help to improve life physical health of HIV infected persons and regular clinical visits. This implies that to achieve optimal clinical outcomes and to realize the potential improve life physical health, attention to each step in the treatment cascade is critical to the patients. Therefore, the need for and involvement in care in order to help achieve high levels of medication adherence.

Also, with respect to the interview schedule majority of the respondents were of the opinion that adherence to counseling influence on retention of HIV patients in AMPATH care based clinic, majority of the respondents were of the opinion that Strict adherence is key to sustained HIV suppression, reduced risk of drug resistance, improved overall health, quality of life, however, have poor adherence from the outset of ART and/or experience periodic lapses in adherence over the lifelong course of treatment. Adherence also depends on patient provider relationship

A study by Rachlis, (2011) is in line with these findings that adherence help to improve physical health of HIV infected persons and regular clinical visits in that self reporting is the most commonly used measure of adherence in resource- limited settings because it is easy to include in routine clinical practice. However, reliability of answers to the adherence assessment questions might get influenced by patients' desires to provide socially acceptable answers or mere forgetfulness on the part of the patients. Additionally, adherence also depends on patient provider relationship. The research generally shows low-to-moderate correspondence between self-report adherence measures and clinical outcomes, and estimates are highly variable due to the need for physical health.

4.5 Retention of HIV Patients Indicators

The study also sought to establish extent to which respondents agreed in relation to retention of HIV patient's indicators. The table below indicates the findings;

Table 4.9 Retention of HIV Patients

Statements		SD	D	U	A	SA	TOT AL	MEAN	%ME AN	SD
The quality of care indicates patients retention or otherwise	F	5	12	16	18	36	87	3.78	75.6	1.280
	%	5.7	13.8	18.4	20.7	41.4	100			
Clinical outcomes indicates whether there would patients retention or otherwise	F	5	16	11	21	34	87	3.72	74.5	1.309
	%	5.7	13.8	18.4	20.7	41.4	100			
Regularly clinic visits indicates patients retention	F	3	11	17	18	38	87	3.89	77.7	1.205
	%	3.4	12.6	19.5	20.7	43.7	100			
Attendance for a number of years indicates patients retention	F	7	13	22	21	24	87	3.48	69.7	1.265
	%	8.0	14.9	25.3	24.1	27.6	100			

The study findings show that 75.6 % of the respondents were of the opinion that the quality of care indicates patients retention or otherwise, 74.5 % of the respondents were of the opinion that clinical outcomes indicates whether there would patients retention or otherwise, 77.7 % of the respondents were of the opinion that regularly clinic visits indicates patients retention and 69.7% were of the opinion that attendance for a number of years indicates patients retention

The study results indicate that majority of the respondents were of the opinion that regular clinic visits indicates patients retention. This implies that patient retention in care assesses the ability of a provider or care system to maintain a continuous relationship with a patient that in the long run insinuates the patient's ability and determination for regular visits.

A study by Crawford, Sanderson, & Thornton, (2013) is in line with these study findings that regular clinic visits indicates patients retention. The study outlined that retention is measured in different ways and intervals among HIV patients, it is an independent predictor of survival and

mortality rates are significantly lower among patients seen three (3) or four (4) times per year versus once or twice annually. The study show that patients retained in care are more likely to have better health outcomes - such as: improved CD4 count, suppressed viral load, and fewer hospital admissions/emergency room visits – compared to defaulters. Continuous retention in care has benefits similar to those of timely entry, and a number of strategies have been developed to promote retention such as intensive case management, patient navigation, peer support groups, access to social services, flexible clinic and appointment hours, and mobile outreach to find clients who were lost to follow-up.

4.5Regression Analysis

The study sought to determine the relationship between the independent variables and the dependent variables. The study sought to determine the relationship between. Disclosure Counseling, Fair Reimbursement, Peer Educator, Adherence Monitoring and Retention of HIV Patients

Table 4.10 Regression Results

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.851 ^a	.725	.711	.34119	53.924	0.000
Coefficients^a						

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)					
Disclosure Counseling	-.659	.410		-1.609	.111
Fair Reimbursement	.227	.058	.232	3.899	.000
Peer Educator groups	.132	.053	.147	2.497	.015
Adherence Monitoring	.272	.063	.300	4.305	.000
	.555	.066	.581	8.385	.000

a. Dependent Variable: Retention of HIV Patients

The model summary from the regression model indicated that about 72.5 % of the data could be accounted for in the regression while it indicated a significant relation (p= 0.000) to imply that the data that had been employed in the regression model had not been computed by chance. From the coefficients, the study was able to illustrate the completion of projects as indicated in the equation below:

Retention of HIV Patients = -0.659 + 0.232 (Disclosure Counseling) + 0.147 (fair reimbursement) + 0.300(peer educator groups) + 0.581(adherence monitoring) + 0.410 (Error rate).

The study findings from the regression model indicated that there was a significant relationship between disclosure counseling and Retention of HIV Patients (p=0.000), there was a significant relationship between Fair Reimbursement and Retention of HIV Patients(P=0.015), there was a significant relationship between Peer Educator and Retention of HIV Patients(p=0.000) and there was a significant relationship between Adherence Monitoring and Retention of HIV Patients(p=0.000).

From the regression equation, adherence monitoring was the most important factor contributing significantly to Retention of HIV Patients. It contributed 58.1% followed by peer educator groups which contributed 30.0%, Disclosure Counseling which contributed 23.2% and fair reimbursement which contributed 14.7%. These findings could be interpreted to mean Retention of HIV Patients of petrol stations in AMPATH care center depends on certain factors which could be among these factors highlighted in the model.

4.6 Hypotheses Testing

Hypothesis was tested at 5% alpha level of significance.

There is no significant relationship between disclosure counseling and retention of HIV patients in AMPATH care based clinic in Eldoret

The findings from regression model shows that there was significant relationship between disclosure counseling and retention of HIV patients in AMPATH care based clinic in Eldoret ($P=0.000$) hence the finding to rejected the Null Hypothesis.

There is no significant relationship between fair reimbursement and retention of HIV patients in AMPATH care based clinic in Eldoret

The finding from regression model shows that there was a significant relationship between fair reimbursement and retention of HIV patients in AMPATH care based clinic in Eldoret ($P=0.015$) hence the finding to rejected the Null Hypothesis.

There is no significant relationship between peer educator group and retention of HIV patients in AMPATH care based clinic in Eldoret

The finding from regression mode shows that there was significant relationship between peer

educator group and retention of HIV patients in AMPATH care based clinic in Eldoret (p=0.000) hence the finding to rejected the Null Hypothesis

There is no significant relationship between adherence counseling and retention of HIV patients in AMPATH care based clinic in Eldoret

The finding from regression model shows that there was significant relationship between adherence counseling and retention of HIV patients in AMPATH care based clinic in Eldoret (p=0.000) hence the finding to rejected the Null Hypothesis.

CHAPTER FIVE

SUMMARY OF FINDINGS SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter is divided into three major sections, namely Discussions Summary and Recommendations. These divisions were informed by the purpose of the study and the results.

5.2 Summary of findings

The study results revealed that 77.5 % of the respondents were of the opinion that disclosure counseling support helps in continued revisits to clinic and remaining in care, 89.0% of the respondents were of the view that the level of self-competence of patients determines the quality of care and retention of HIV patients, 81.8% were of the opinion that reduced stigma as a result of disclosure counseling influences the regularity of clinical visits by the HIV patients and 84.1% of the respondents were of the opinion that the level of support from relatives toward the patients on the aspect of disclosure counseling influence the retention of HIV patients.

The study findings revealed that 78.9% of the responses were of the opinion that fair reimbursements influences the retention of HIV patients and remaining in care, 72.6% of the responses were of the opinion that number of returnees to the hospital for care is determined by the availability of fair reimbursements, 73.1% of the responses were of the view that the time of starting ARVs by the patients is due to fair reimbursements and influences regular clinical visits while 77.9% of the responses were of the opinion that adherence to clinical appointments influence the retention of HIV patients through fair reimbursements.

The study findings revealed that 78.4% of the responses were of the opinion that peer group educator enables individuals to be able to encourage other patients to attend clinics 75.6% of the

responses were of the opinion that attendance of peer groups influences and improves the need for self-care and retention of patients, 78.4% of the responses were of the opinion that peer educator groups enables the patients create self-esteem and regular clinical visits and 80.9% of the responses were of the opinion that peer educator groups encourages quality of care for the patients and thus retention of HIV patients in clinics.

The study results revealed that 78.2% were of the view that adherence help to improve life expectancy of HIV infected persons and retention of patients, 83.9% were of the opinion that adherence help to improve life physical health of HIV infected persons and regular clinical visits, 80.9% were of the opinion that adherence monitoring influences the risk of opportunistic infections and clinical outcomes, 79.8% were of the view that adherence monitoring influences hopes for the future and retention of patients.

The study findings show that 75.6 % of the respondents were of the opinion that the quality of care indicates patients retention or otherwise, 74.5 % of the respondents were of the opinion that clinical outcomes indicates whether there would patients retention or otherwise, 77.7 % of the respondents were of the opinion that regularly clinic visits indicates patients retention and 69.7% were of the opinion that attendance for a number of years indicates patients retention

The study findings from the regression model indicated that there was a significant relationship between Disclosure Counseling and Retention of HIV Patients ($p=0.000$), there was a significant relationship between Fair Reimbursement and Retention of HIV Patients ($P=0.015$), there was a significant relationship between Peer Educator and Retention of HIV Patients ($p=0.000$) and there was a significant relationship between Adherence Monitoring and Retention of HIV Patients ($p=0.000$).

5.3 Conclusion of findings

The study concluded that the level of self-competence of the healthcare providers determines the quality of care and retention of HIV patients. This implied that care appears to be related to the tone and expectation for future engagement in care established during care provision and enhanced counseling by self-competence of the healthcare providers determines the quality of care and retention since it's a dynamic tool to optimize adherence and retention.

The study concluded that fair reimbursements influence the retention of HIV patients and remaining in care. This implied that transportation costs is a major contributor to attendance since retention typically requires patients to return for a repeat clinical visit, which comes at significant cost and time away from economic activity for patients and thus this tend to compromise future treatment options in which fair reimbursements influences this notion.

The study concluded that peer educator groups encourage quality of care for the patients and thus retention of HIV patients in clinics. This implied that not only does peer education interventions are a utilized strategy for preventing HIV. Such interventions select individuals who share demographic characteristics or risk behaviors with a target group and train them to increase awareness, impart knowledge and encourage behavior change among members of that same group in order to improve on their health status and encourages quality of care thus revisits and retention.

The study concluded that adherence help to improve life physical health of HIV infected persons and regular clinical visits. This implies that to achieve optimal clinical outcomes and to realize the potential improve life physical health, attention to each step in the treatment cascade is

critical to the patients. Therefore, the need for and involvement in care in order to help achieve high levels of medication adherence.

The study concluded that regular clinic visits indicates patients retention. This implies that patient retention in care assesses the ability of a provider or care system to maintain a continuous relationship with a patient that in the long run insinuates the patient's ability and determination for regular visits.

From the regression equation, the study concluded that adherence monitoring was the most important factor contributing significantly to Retention of HIV Patients followed by peer educator groups, Disclosure Counseling and fair reimbursement.

5.4 Recommendations of the Study

The following recommendations are made based on the study findings

The health care providers should enrich proper records for the people who attend clinic and peer educator groups in order to clear understand the increase or decrease in the numbers of patients attending to these services.

Health care providers should ensure that time taken to serve the clients should be minimal to avoid long queuing of the patients in lines waiting for care that results into drop out from care.

Adherence monitoring should go beyond self-report and bill counting to include electronic monitoring which will reduce on the lies associated with self-report.

All patients should register for, in a way of ensuring rightful distant where they come from, just to receive the amount worth the transport costs.

5.5 Suggestions for Further Research

The researcher recommends for a similar study to be done at a wider scope say a nation as a whole. This will enable the researchers consider the problems from a broad perspective which will benefit all HIV/AIDS patients in Kenyan.

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APPENDICES

APPENDIX I: INTRODUCTORY LETTER

I am a masters student and as a partial requirement of the coursework assessment, I am required to submit a research report on: **INFLUENCE OF PSYCHO-SOCIAL SUPPORT PROGRAMME ON RETENTION OF HIV PATIENT IN AMPATH CARE BASED CLINIC IN ELDORET, KENYA.** I would highly appreciate if you could kindly complete the Questionnaire/ interview schedule to assist me collect data. Your information alongside others will help me in my research and was used strictly for academic purposes and was treated as confidential, therefore, do not write your name on the questionnaire.

Thank you in advance,

Yours faithfully,

STELA GICHURU.

APPENDIX II; QUESTIONNAIRE

This questionnaire contains two sections A, & B. Influence of Psycho-social proram on retention in HIV care based patients in AMPATH. Please mark () with each of the statements by ticking one category that mostly corresponds to your desired response.

Section A

Socio-Demographic Characteristics

1. What is your gender?

Male []

Female []

2. What is your age bracket?

Below 20 years [] 21 – 25 years [] 26 – 30 years [] above 31 years []

3. What is your marital status?

Single []

Married []

Divorce []

Widow []

4. What is your education level?

Certificate []

Degree []

Masters []

Other (specify)

Section B:

Kindly rate the extent to which you agree with the following statements on the effect of disclosure counseling on retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya

Statement	SA	A	UD	D	SD
Disclosure counseling support helps in continued revisits to clinic and remaining in care.					
The level of self-competence of the patients determines the quality of care and retention of HIV patients					
Reduced stigma as a result of disclosure counseling influences the regularity of clinical visits by the HIV patients					
The level of support from relatives toward the patients on the aspect of disclosure counseling influence the retention of HIV patients					

Kindly rate the extent to which you agree with the following statements regarding how transport reimbursement influence retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya

Statement	SA	A	UD	D	SD
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Transport reimbursements influence the retention of hiv patients and remaining in care.					
Number of returnees to the hospital for care is determined by the availability of transport reimbursements					
The time of starting ARVs by the patients is due to transport reimbursements and influences regular clinical visits					
Adherence to clinical appointments influence the retention of HIV patients through transport reimbursements					

Kindly rate the extent to which you agree with the following statements regarding peer educator groups counseling influence on retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya

Statement	SA	A	UD	D	SD
Peer group educator enables individuals to be able to encourage other patients to attend clinics					
Attendance of peer groups influences and improves the need for self-care and retention of patients					
Peer educator groups enables the patients create self-esteem and regular clinical visits					

Peer educator groups encourages quality of care for the patients and thus retention of HIV patients in clinics					
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Kindly rate the extent to which you agree with the following statements regarding adherence counseling influence on retention of HIV patients in AMPATH care based clinic in Eldoret, Kenya, Kenya

Statement	SA	A	UD	D	SD
Adherence help to improve life expectancy of HIV infected persons and retention of patients					
Adherence help to improve life physical health of HIV infected persons and regular clinical visits					
Adherence monitoring influences the risk of opportunistic infections and clinical outcomes					
Adherence monitoring influences hopes for the future and retention of patients.					

APPENDIX III; INTERVIEW SCHEDULE FOR HEALTH CARE PROVIDERS

How disclosure counseling influence retention of HIV patients in AMPATH care does based clinic?

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How does transport reimbursement influence retention of HIV patients in AMPATH care based clinic?

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To what extent does peer educator groups counseling influence retention of HIV patients in AMPATH care based clinic?

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To what extent does adherence counseling influence retention of HIV patients in AMPATH care based clinic?

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