# HIV/AIDS Care and changes that have occurred in Kenya and Finland

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**Abstract:**

The aim of this study was to investigate the HIV/AIDS care quality improvements in Finland and in Kenya in the last ten years. Three specific research questions were posed to ascertain whether there were structural process and outcomes care quality for patients with HIV/AIDS in Finland and in Kenya.

The study was conducted as a literature review to investigate the research questions. The study selection criteria included inclusion and exclusion criteria whose main key words were Articles with one of the following keywords HIV/AIDS Care quality, Health care quality in Kenya, Health care quality in Finland, HIV/AIDS structural care quality in Kenya and Finland, HIV/AIDS Process care quality in Kenya and Finland, HIV/AIDS outcome care quality in Kenya and Finland. More than 1000 articles were identified from the various scientific databases. The articles were included if they were in English language, were published later than 2007 and if they were full text. The study focused on empirical studies which narrowed the investigation to ten articles.

The findings showed that Finland had the best care quality that was exemplified in the number of facilities in a municipality; this was unlike in Kenya where the study found that healthcare workers were not well remunerated which significantly affected their performance. However, there are limited or very few studies whose focus has been on HIV/AIDS care and how it can be addressed to reduced mortality rates among people living with HIV/AIDS .The study noted that there were free diagnoses, tests and ARV treatments in Finland which made the patients perceive quality of care in the hospitals where they were treated. On the contrary in Kenya, there were challenges in the diagnoses of patients as well as in the recommendation of treatments since in most instances especially in rural areas there was scarcity of specialists and it was nurses who were diagnosing and treating patients.

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## Acronyms

**ART-** Anti Retroviral Therapy

**ARV-** Anti Retro- Viral

**CD4-** Form of white blood cells otherwise known as T-cells that is responsible for protecting the body from infections. They send signals to the immune system when they detect virus or infections.

**EMR** – Electronic Medical Records

**HITS** - HIV information tracking System

**HIV**- Human Immunodeficiency Virus **AIDS**- Acquired Immunodeficiency Syndrome

**PHC** - Primary health care services

**Quality Care**- The extent to which the medical, nursing and health services are consistent with the current professional capabilities to ensure increase in desired health outcomes

**Viral Load-** The amount of HIV in the body fluids

# 1 INTRODUCTION

There are over 36.7 million people who are currently infected with HIV/AIDS globally as of 2015 (WHO, 2016). More than half of the infected people are in the developing countries more so the Sub-Saharan Africa. The large number of infected people demands more resources be spent towards eradicating the disease as well as in the minimisation of mortality rates and deaths that result from the HIV infections. One of the suggested ways in which people living in the HIV can increase their lifespan is through quality care (Dang, Westbrook and Black, 2013). Quality care has been highlighted by Kamal (2016) as the provision of medical care that has positive outcomes towards the overall physical and psychological being of the patients. Nevertheless there are fewer studies that have explored ways in which clinical care quality could be improved in order to help people with HIV to have prolonged life and productivity. Theoretically, a study that focuses on the quality of care in hospitals in sub Saharan Africa is necessary because most of the studies have mainly focused on other aspects of health such as minimisation of infections without paying much attention to how the infected people can be taken care of. Fox et al (2014) noted that previous studies that explored on quality care mainly focused on quality of services such as reliability, responsiveness of the staff as well as empathy. However Turan et al (2008) argued that the dimensions were best suited for hospitality services but not for medical quality care, therefore it was necessary to have an investigation that explored how the various healthcare facilities handled quality of care among patients, this study would therefore contribute immense knowledge to the knowledge repositories by showcasing how the various aspects of quality care such as process and structural care affecting people with HIV.

Several previous studies by Cleven et al (2006) and Ahonkai et al (2012) have mainly focused on mitigating new infections in their countries. Yakob and Ncama (2016) have highlighted how awareness campaigns have to be carried out in order to minimise new infections. According to Cleven et al (2016) the manner of care provided to persons infected with HIV affects their chances of survival. In developing countries such as Kenya, diagnosis with HIV/AID is considered to lead to stigmatisation although this is changing due to increased awareness about HIV/AIDS (Ahonkhai et al, 2012). Howev-

er, in countries with specialised care and treatment HIV is mainly regarded as a chronic illness and treated accordingly through specialised nursing care (Dang, Westbrook and Black, 2013). This study therefore strives to compare the various aspects of nursing care that play a significant role on addressing mortality rates among people living in HIV/AIDs in developed and in developing countries.

The aim of this research is to compare quality care practices in the two countries and determine whether there have been care quality improvements in the last ten years in the two countries. Specifically the study focuses on the three major aspects of care quality which are structural care quality, process care quality and outcome care quality to determine whether there are improvements in these aspects of care quality.

The first chapter of this study is the introduction and it explains the aim of this study and the research questions as well as the background of the study. The second chapter is the background of the study and it includes a review of previous studies on HIV/AIDS care in the two countries. It looks into how structural care has improved over the years. It also looks into the studies that have examined how the HIV/AIDS care process improvements have been made in the two countries. The section also looks into the quality care outcome improvements between the two countries. Chapter three discusses the theoretical framework that has formed the basis of this study. The fourth chapter presented aims and specific objectives of this investigation. The fifth chapter is the methodology chapter and it discusses the research methods applied by the researcher. The sixth chapter is the results of the study and it contains outcomes of the study. The seventh section is the discussion of the findings and it assesses whether the objectives of the study were attained by the investigation and compares those findings with other previous studies. The final section is the conclusion and it discusses the strengths of the study, the limitations of the study and the areas which future research should focus on.

# 2 BACKGROUND

HIV/AIDS is a renowned epidemic that has affected humanity immensely. Since the discovery of HIV/AIDS the pandemic has killed millions of people in various parts of the world (D'arc et al, 2017). Various countries have put on measures to mitigate prevalence of HIV/AIDS. Some of the countries have put on measures that have been very successful in mitigating HIV/AIDS while others have not been successful.

Finland is one of the countries with the least number of infections globally as it only recorded zero new infections in 2015 (UNAIDS, 2015). The country has the least number of people of people living with HIV with less than 200 people having HIV in the whole country. The number of infants with HIV/AIDS is zero while the number of HIV related deaths in the country are zero. The number of mothers with HIV/AIDs in Finland is zero. This makes the country to be a model for countries wishing to combat HIV/AIDS. Finland has one of the highest structural HIV/AIDS care quality. This is because the country has very high doctor to patients' ratio of 2: 1000 indicating that the patients receive much attention from the doctors. The country has some of the best health care facilities with the accessibility of the healthcare facilities being high as they are located within close proximity of less than a kilometre as every square Kilometre has a health facility.

However, countries in Africa are highly affected by HIV. Countries such as Kenya has 6% of the population living with HIV and ten thousands of new infections every year (UNAIDS 2016). More than 10000 die every year due to HIV related infections. Over 50, 0000 children are infected with HIV with over 1.5 million adults having HIV/AIDS in Kenya. Therefore a study that shows how to cope with the high rate of HIV infections and mortality rates can be very helpful. According to Fox et al (2014) HIV has negative implications on the countries' economy especially labour as it minimises manpower in the workplaces and expends countries resources towards mitigating the epidemic.

The quality of care is a major issue affecting healthcare provider's in the globe. Patients not only want treatment but they want the best care possible. Fox et al (2014) noted that there has been rise in terminal illness and chronic diseases, which have diversified the focus on quality treatment. Previously diagnoses of an illness and the subsequent full treatment of an illness were considered to be the highest medical quality care. However

in the advent of chronic illnesses such as HIV AIDS quality care has become an essential aspect of healthcare provision, some of the conditions that the patients have need to be closely managed because full healing and cure of the illness may not be possible. Therefore the patients have to be carefully managed to minimise the effects of the illnesses and to ensure that the patient has improved lifespan and health.

The HIV medical care has transitioned from being a highly specialised care to a primary care system as Johnston et al (2015) indicated. The primary healthcare (PHC) is mainly based on the provision of affordable healthcare through involvement of the community, caregivers and the environment. This is unlike specialised healthcare, which is not affordable and only involves the patient and specialised caregivers. This transition has seen HIV cease from being a condition that is managed in specialised hospital to a condition that can be managed by the patients with assistance of the community and the healthcare facility staff.

Odeny et al (2013) noted that focus of most healthcare providers was mainly the outcome of the healthcare service. This means that the most important part of the healthcare provision has been diagnoses and treatment. Other aspects of healthcare provision such as the welfare of the employees, hiring the best and the most qualified doctors, immunisations, tests are not given attention yet they are an imperative aspect of the healthcare quality. Moore et al (2015) agreed that much attention of healthcare has a lot to do with the diagnosis and treatment and tests but does not include other aspects of quality improvements such as the patient and the doctor ratios, patient bed ratio. Asiedu, Jin and Kanyama (2015) noted that developed countries had managed to achieve their medical care quality with the countries having the highest number of doctor patient ratio compared with the developing countries that have limited number of doctors as well as limited number of facilities. Leatherman et al (2010) noted that the healthcare structure care included the number of facilities available in a country. The larger the number of facilities meant that there were reduced congestion as there were more doctors committed to countries that had few doctors for instance in the Sub Saharan Africa patients have to travel long distances sometimes for more than ten kilometres to access a basic healthcare facility. This implies that the quality of medical of acre in these countries is very low. This because patients with HIV/AIDS have to travel long distances to access care since the facilities are not readily available. Cleven et al (2016) also noted that the

number of the healthcare service providers such as doctors and nurses were also few as doctor to patient ration in Kenya is 1:17000 thus affecting the quality of care in the public facilities negatively.

Other than the provision of the healthcare facilities, the other imperative aspect of healthcare quality among people with HIV/AIDS was that of the process quality. The process aspect was also the most compromised aspect of healthcare quality, as some of the processes were not given much attention when it came to HIV/AIDS patients. Mapunjo and Urassa (2007) noted that processes in the HIV/AIDS included diagnosis, the tests, immunisations for unborn infants and mothers, prophylaxis of infections, screening, provision of antiretroviral therapy and drugs. Listoola (2013) noted that while all these services were present in the developed countries such as Finland where all the patients with HIV/AIDS had free access to the prophylaxis of opportunistic infections and provision of antiretroviral drugs, HIV/AIDS patients in Kenya have limited access to the antiretroviral drugs due to the high cost of the drugs. This affects the quality of care negatively with a large number of patients failing to access the antiretroviral therapy. However, there has been development even in the developing counties such as Kenya with the provision of free HIV/AIDS tests and counselling in all the major public and private hospitals. This has been noted to increase the quality of care of process care because it ensures that the people with the virus are identified at the onset of HIV/AIDS making it possible to be screened and introduced to the antiretroviral therapy. Nevertheless the rate of HIV infections is still higher in Kenya compared to Finland indicating that still some more improvements are required in the HIV care quality processes such as diagnoses, screening and provision of antiretroviral therapy.

Practically, much of the studies such as that of Preau et al (2012), Park et al (2007) on HIV /AIDS have focused on the provisions of antiretroviral drugs and the effect that anti-retroviral drug have on patients' health. Other studies such as that of Kamal et al (2016) have focused on the accessibility of the antiretroviral drugs. Others have explored on infant mortality and ways of curbing new infections. Therefore, little or no attention has been paid to the other factors that influence the quality of life of HIV/AIDS patients. Nevertheless, Manary, Boulding, and Staelin, (2013) noted that in countries where there was high quality of care for people living with HIV there were lesser mortality rates among people infected with HIV compared in countries where

there was little or no quality of care practices. Dang, Westbrook and Black (2013) concurred that quality of care improved the immunity and the overall well-being of HIV/AIDS patients which enabled them to live normally and with minimal opportunistic infections. Fox et al (2014) study noted that people who had high quality of care had high chances of survival than those who had lower level of care. Mohajan (2014) agreed that developed countries usually had higher level of growth compared to the developing countries. Manary, Boulding and Staelin (2013) noted that countries that had invested resources in acquisition of quality care of people with HIV not only had lower mortality rates but also had lower new infections compared with countries that lacked quality care. This prompted the need to embark on a study that investigated the role that care quality played in minimising the mortality rates among people living with HIV/AIDS. Most importantly there are limited studies that have compared how countries that have competed the quality care practice between the countries with low HIV infections and countries that have very high HIV infections, Odeny et al (2013) suggested that it possible that quality of care has a lot to do with the new HIV infections, mortality rates among people with HIV as well as infant infections by mothers. Therefore this study is of essence in unearthing the roles played by care quality in managing HIV by comparing practices between the developed nations such as Finland and developing countries such as Kenya.

# 3 THEORETICAL FRAMEWORK

## 3.1 Care Quality model

Since the realisation of HIV/AIDS as an epidemic illness with fatal consequences on the victims, countries have put on stringent measures to address the quality of care to assist the patients. There are various studies that have focused on the quality of services offered in hospitals. There are hospitality service quality measures applicable in the hospitals such as the reliability, assurance and empathy. Moore et al (2015) indicated that the most appropriate conceptual framework for hospitals related to the confidence that patients had in the facilities as well as the nurses and healthcare workforce capability to change the health status and behaviour of the patient. Based on this understanding Seo et al (2010) argued that there were three main measures of health care quality and they were the structure of the care, the process of healthcare and the outcomes of healthcare. The Donabenian model was highly acclaimed for its ability to navigate through areas of concern in healthcare services such as the quality of treatment and diagnoses, as well as the quality and nature of equipment's and facilities used in the health facility (Leatherman et al, 2013). The Donabenian model classified all the issues in the healthcare industry into three categories, which were the structure healthcare issues, process healthcare issues and the outcome healthcare issues. Odeny et al (2013) agreed that patients were mostly concerned with all the three aspects of the healthcare services. The figure below shows the framework based on the Donabenian model:

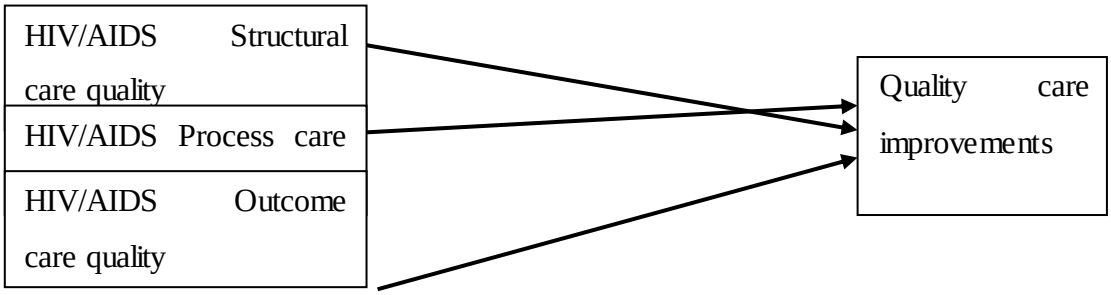


Figure 1: Donabenian quality care model

Source: Seo et al (2010)

## 3.2 The structural care quality and HIV/AIDS

The structure of HIV/AIDS care mainly related to the hospital infrastructure and system. According to Asiedu, Jin and Kanyama (2015) there have been improvements in the hospital infrastructures both in Kenya and Finland. There are now more hospitals with the capacity and drugs for HIV/AIDS care quality. This is unlike in the past where drugs were not available or were very expensive hence out of reach. However, there have been challenges in the structure improvements of healthcare as the facilities in developed countries usually are not located within proximity of victims (Dang, Westbrook and Black, 2013). In countries such as Kenya, the patients have to travel long distances to receive care in public hospitals. Also the structural care includes the remuneration of the nursing staff to ensure that they are well motivated. In the developing countries such as Finland there have been significant improvements in regard to HIV nursing care remuneration. Despite this Mapunjo and Urassa (2007) found that in developing countries the remuneration has been stagnant making the nursing staff to be less motivated.

## 3.3 The process care quality and HIV/AIDS improvements

On the issue of process improvements, in the nursing care for people with HIV, Kamal (2016) noted that there was less emphasis on quality of the care processed in hospitals. The quality process mainly involves aspects of the nursing process such as diagnoses, treatments, and patient education. Alemayehu, Bushen and Muluneh (2013) intimated that in the developing countries such as Kenya, there were major cases of misdiagnoses and lack of preventive treatment. In as much as there are studies in quality care there is a lack of studies that have explored HIV/AIDS quality care process improvements (Mohajan, 2014). Nevertheless, Fox et al (2014 argued that there are limited studies that have explored care quality process improvements and hence it would be relevant to have a study.

There are other process quality aspects that are usually neglected when it comes to HIV-AIDs care quality and they are the counselling, eating and diet. Catumbela et al's (2013) study on the process care quality intimated that counselling was part of care. The patients needed moral and psychological support to enable them overcomes societal stigma and low self-esteem that characterised most HIV/AIDS patients. The patients needed

moral social support systems that were relevant to them. Catumbela et al (2016) noted that in developing countries such as India there were no such systems, which highly affected the quality of care offered to HIV/AIDs patients. Lack of support system led patients to suicide while it led others to abandon treatment such as anti- retroviral therapy leading to high level of patient mortality amongst patient s living with HIV/AIDs. Moore et al (2010) concurred that counselling was an abandoned aspect of HIV/AIDS process quality. Lack of counsellors and sufficient staff could be considered to be the major challenge of process quality. However in developed countries like Germany counselling was part of quality care, which led to compliance and self-acceptance of the patients that the condition they had was treatable, (opportunistic infections) and could be managed successfully. Such countries had lower death rates amongst patients with HIV/AIDs. High process care quality also included the diet used by the patients. Patients who took better diets had more positive outcomes than patient whose nutrition was not balanced. Land, Nixon and Ross (2011) noted that healthcare system for HIV/AIDS patients had to ensure that it provided balanced diet to the patients. This would ensure that the patients had higher immunity. Vo et al (2012) argued that one of the reasons why combating HIV/AIDs was difficult was due to poor nutrition of the patients. Malnourished patients could hardly overcome the opportunistic infections. Therefore there was poor care quality in developing countries. Preau et al (2012) observed that patients who used the recommended diet remained healthy for a long time compared to those who did not use the recommended nutrition. Chow, Li and Quine (2011) however observed that the recommended diet was costly and some people could not afford it.

## 3.4 The outcome care quality and HIV/AIDS improvements

The outcome of the nursing care is a crucial aspect that affects the HIV quality care (Leatherman et al, 2010). This is the extent of satisfaction that the customers have with the quality of care and services provided by the nursing facility, it is the behaviour change that results from treatments (Manary, Boulding and Staelin, 2013). High quality nursing care results in positive outcomes such as change in the patient behaviours and complete wellness of the patient (Moore et al, 2015). It may include improved lifespan,

improved immunity and minimisation of opportunistic infections among people living with HIV.

Outcome care quality focused on the quality of the expected outcomes. In the case of HIV/AIDs the expected outcomes were mainly higher CD4 count. Moore et al (2010) concurred that positive CD4 count improvement was one of the expected antiretroviral therapy results. It was expected that patients undertaking the antiretroviral therapy would have higher immunity boost compared to patients who were not having such treatment. These outcomes depicted high quality care. It also included higher level of positive attitude among patient towards their health condition. Patients who underwent the treatment successfully had higher esteem and had more positive outlook of life when compared to patients whose treatment was not successful. High quality care of HIV/AIDS patients include ensuring that the antiretroviral drugs are working for the patients. It includes reduced stigma in the society. The outcome of HIV/AIDS treatment should eliminate stigma. Instead it should reduce stigmatisation of the disease by showing that it is manageable and people can live healthy lived even when having the virus. Vo et al (2012) concurred that treatment outcomes were very necessary to the outcome quality care. The other major HIV/AIDS outcomes quality care was that of having lower death rate among people with HIV/AIDs. The higher the death rates the higher the ineffectiveness of the structural and process care quality. Land, Nixon, and Ross (2011) intimated that the higher the death rates of people living with HIV/AIDs the lower the quality care. Zwahlen et al (2009) concurred that the higher the quality care the lower the death rates of people living with HIV/AIDs. Therefore the foremost outcome of improved quality care was lower death rates. Tran et al (2011) nevertheless indicated that both the developed and developing countries have experienced lower death rates since the year 2000. This is attributed to the higher quality improvements in process and structural process care. There are more caregivers in hospital than it were previously. Also caregivers do not stigmatize people with HIV/AIDs as all patients received care and attention of caregivers irrespective of their HIV/AIDS status. The other aspect used to determine the outcome quality of the maternal infant infections. Tran (2012) noted that countries with high positive outcomes had lower mother to child transmission. On the contrary countries with poor process and structural quality did not have lower mother to child transmission. Beard, Feeley and Rosen (2009) noted that

high quality maternal care of people with HIV-AIDs had minimal mother to child transmission. In fact countries such as Finland had zero mother-to-child transmission in the last year. This is attributed to higher quality care. The other outcome care quality is that of the rate of the new infections. According to Tran (2012) the high the new infections meant that the outcome quality care was low. As per Reveles et al (2009) the number of the new infections implies that the effort expended towards prevention of new infections. Park et al (2007) noted that countries where there was lower quality care there were higher number of new infections. Quality outcomes also include positive change in behaviour. As per Miller et al (2014) in many instances HIV/AIDs is a result of risky sexual behaviour that includes having multiple sexual partners, failure to use protection during sex. HIV/AIDS outcomes quality care is concerned with the reduction of risky behaviour among patients and non-patients by encouraging positive sexual behaviour. The positive sexual behaviour is highly linked to reduced new infections. Kimmel et al (2016) concurred that outcomes quality of care included ensuring that patients have improved sexual behaviour, which included use of protection during sex. Nevertheless developing countries had less sex education or none and some of the healthcare facilities did not provide education to the patients.

## 3.5 Summary

This section explored the theoretical framework that guides the implementation of the HIV/AIDS care quality. The section identified that care quality dimensions originated from Donabenian model which showed the three major dimensions of care quality which were structural care quality, process care quality and outcomes care quality. The theoretical framework was necessary in interconnecting the HIV/AIDS research to nursing theories. This implied that nursing theories and specifically the Donabenian model could be applied by nurses in managing HIV/AIDS patients and ensuring that they have received improved care quality.

# 4 AIM AND OBJECTIVES OF THE STUDY

## 4.1 The aim of the study

This section examines the aim of the study and exemplifies the research questions and the research objectives. The aim of this study is to investigate the quality of care improvements among people living with HIV/AIDS in Kenya and Finland and the objective is to investigate the HIV/AIDS quality care structure improvements and HIV/AIDS quality care process improvements in Kenya and Finland by examining the HIV/AIDS quality care outcome improvements in Kenya and Finland. The two countries have been selected for this study due to their distinct differences in care quality and the effect that it has on HIV/AIDS outcomes in the two countries. Finland has some of the best outcomes such as zero HIV/AIDS infections in the last two years and has a less than thousand people infected with HIV. In Kenya there are 1.6 million people living with HIV and an average of 11,000 annual HIV/AIDS related deaths. Therefore a study that can assist in showing how to improve HIV/AIDS care quality based on comparisons from the two countries is necessary.

## 4.2 Research questions

In order to reach the aims of the study the following three questions were posed:

1. What are the characteristics of quality care structural improvements in Kenya and Finland?
2. How has the HIV/AIDS quality care process improvements manifested in Kenya and Finland over the last ten years?
3. What are the HIV/AIDS quality care outcome improvements for last ten years in Kenya and Finland?

# 5 RESEARCH METHODS

## 5.1 Data collection

This study was conducted as literature review to investigate the quality of care in Finland and in Kenya and thus identify ways in which care for people living with HIV/AIDS can be improved. The reason why the literature review method is given preference for this study is because there is limited time and resources to undertake a primary study investigation in the two countries. Therefore it would require the researcher to make trips to the country which could be time consuming and expensive. The other advantage of using literature review is that it is backed with evidence from other empirical studies hence it is easy to identify trends and patterns in the data. The other advantage of using literature review is that it assists in comparative studies that relates to national data. According to Denscombe (2010) it is very difficult for an individual to collect national data that relates to countries HIV/AIDS. The best source of national data is surveys that have been carried out by independents research agencies or the government. Therefore since this study is a comparative study that seeks to collect national data on HIV/AIDS as well as the nature and quality of healthcare in the respective countries, secondary data was deemed to be the most appropriate data collection strategy. Nevertheless, the secondary data is highly affected by the high chances of collecting irrelevant data. Saunders et al (2011) noted that much of the secondary sources of data did not have the requisite information required by the researcher to answer the research objectives. Denscombe (2010) concurred that the secondary data collected could be inappropriate is that it could be very old or not relevant to the research question. It could also have missed out on key issues that the researcher was interested in.

To overcome this challenge the researcher embarked on a rigorous data collection method that involved collection of data based on relevance of the sources. To ensure that the researcher had access to the most relevant and recent data on HIV /AIDS and quality of care the researcher utilised a number of databases to search for information. The databases included CINAHL, EBSCO, and Science Direct. The researcher used key words such as HIV/AIDS quality care, HIV/AIDS structural quality care, HIV/AIDS quality process, HIV/AIDS outcome quality care in Finland. The other set of phrases

includes the HIV/AIDS quality care in Kenya and Finland, HIV/AIDS structural quality care in Kenya and Finland, HIV/AIDS quality process in Kenya and Finland, HIV/AIDS outcome quality care in Finland and Kenya. There were over 1000, results from the Ebsco Host, 200 searches from CINAHL, 200 from Pubmed and 100 from NCBI and others from Google Scholar.

## 5.2 Inclusion and exclusion criteria

The study utilises the secondary research method by reviewing previous studies and articles, journals and empirical investigations that have highlighted the quality of care in Finland as well as the quality of care in Kenya and then make comparisons based on the findings from the secondary sources. The articles were included if they had relevant titles and if they were in English language and they had not been published later than 2007. Articles that had discussed other Sub Saharan countries were included in the study if they had results on HIV/AIDS care quality. Table 1 below illustrates the processes of data collection and implying the inclusion and exclusion criteria.

**Table 1: Inclusion and exclusion criteria**

| **Exclusion criteria** | **Inclusion criteria** |
|---|---|
| Articles without one of the following keywords HIV/AIDS Care quality, Health care quality in Kenya, Healthcare quality in Finland | Articles with the one of the following keywords HIV/AIDS Care quality, Health care quality in Kenya, Healthcare quality in Finland, HIV/AIDS structural care quality in Kenya and Finland,<br>HIV/AIDS Process care quality in Kenya and Finland, HIV/AIDS outcome care quality in Kenya and Finland |
| Articles without one of the following keywords: HIV/AIDS quality care in Kenya and Finland | HIV/AIDS quality care in Kenya and Finland |
| Articles not in English language | Articles in English language |
| Articles older than 2007 | Articles not older than 2007 |
| Review studies | Empirical studies |
| | Comparative studies journal articles |
| | HIV/AIDS articles on sub-Saharan Africa |

## 5.3 List of chosen articles

The following were the atricles selected from the search as they were found to have relevant keywords as well as information that was related to the research objectives:

1. Finocchario-Kessler, S., Odera, I., Okoth, V., Bawcom, C., Gautney, B., Khamadi, S., Clark,K., and Goggin, K. (2015) 'Lessons learned from implementing the HIV infant tracking system (HITSystem): A web-based intervention to improve early infant diagnosis in Kenya', *Healthcar*e, 3(4), pp. 190-195.

2. Olang'o, C., Nyamongo, I. and Aagaard-Hansen, J. (2010) 'Staff attrition among community health workers in home-based care programmes for people living with HIV and AIDS in western Kenya,' *Health Policy*, 97(2), pp. 232-237.

3. Obure, C., Jacobs, R., Guinness, L., Mayhew, S. and Vassall, A. (2015) 'Does integration of HIV and sexual and reproductive health services improve technical efficiency in Kenya and Swaziland? An application of a two-stage semi parametric approach incorporating quality measures', *Social Science & Medicine*, 151(2), pp. 147-156.

4. Smith, J., Odera, D., Chege, D., Muigai, E., Patnaik, P., Michaels-Strasser, S., Howard, A.,Yu-Shears, J. and Dohrn, J. (2016) 'Identifying the Gaps: An Assessment of Nurses' Training, Competency, and Practice in HIV Care and Treatment in Kenya', *Journal of the Association of Nurses in AIDS Care*, 27(3), pp. 322-330.

5. Oluoch,T., Kwaro, D., Ssempijja, V., Katana, A., Langat, P., Okeyo, N., Abu-Hanna, A. and Keizer, N. (2015) 'Better adherence to pre-antiretroviral therapy guidelines after implementing an electronic medical record system in rural Kenyan HIV clinics: a multicenter pre–post study', *International Journal of Infectious Diseases*, 33(4), pp. 109-113.

6. Lowther, K., Selman, L., Simms, V., Gikaara, N., Ahmed, A., Ali, Z., Kariuki, H., Sherr, L., Higginson, I. and Harding, R. (2015) 'Nurse-led palliative care for HIV-positive patients taking antiretroviral therapy in Kenya: a randomised controlled trial', *The Lancet HIV*, 2(8), pp. 328-334.

7. Papp, R., Borbas, I., Dobos, E., Bredehorst, M., Jaruseviciene, L., Vehko, T. and Balogh, S. (2014) 'Perceptions of quality in primary health care: perspectives of patients and professionals based on focus group discussions', *BMC Family Practice*, pp. 28-44.

8. Kroneman, M., Maarse, H. and Zee, J. (2014) 'Direct access in primary care and patient satisfaction: A European study', *Health policy Journal*, 23(2), pp. 33-40.

9. Nobre, N., Kylmä, J., Kirsi, T. & Pereira, M. (2015) 'Social networks of older adults living with HIV in Finland', *BMC*, 14(2), pp.144-151.

10. Paakkonen, J. and Seppala, T. (2012) 'Dimensions of health care system quality in Finland', *Government Institute for Economic Research*, 5(3), pp. 23-44.

## 5.4 Content analysis

This study used content analysis to analyse the secondary research data obtained based on the inclusion criteria identified in the previous section. According to Hsiu-Fang& Shannon (2005), Content analysis is a way of analysing textual materials by coding and use of inferences about the research data. It is mainly utilised on qualitative research where the method is considered as relevant way of analysing large amounts of textual information that is obtained from the outlined sources. There are three methods of content analysis that a researcher can put to use and they include summative method, convectional method and directed methods of content analysis. In summative analysis the researcher usually begins by identifying contents and codes, which are then compared with the theories and underlying framework of the study. In the convectional analysis, coding is usually based on the keywords and the context analysis. However those methods were inductive in nature as they were based on the previous studies and frameworks and hence could not be fully utilised in analysing information in instances where there were no existing frameworks and theoretical models.

This study therefore preferred the deductive content analyses where content analysis was based on searching and identification of articles based on the key words in the re-

search. The researcher then analysed the content of the textual materials by reading through articles that had similar keywords to those related to the research objectives.

### 5.4.1 Reading and coding

In order to effectively analyse the data the researcher first read all the ten articles that had been selected from the exclusion and inclusion criteria indicated in the previous section. The researcher then highlighted the keywords and key statements from each article that were related to the research keywords. The keywords that were searched were HIV/AIDS Care quality, Health care quality in Kenya, healthcare quality in Finland, HIV/AIDS structural care quality in Kenya and Finland, HIV/AIDS process care quality in Kenya and Finland, HIV/AIDS outcomes care quality in Kenya and Finland. The highlighted words were considered as codes of the study. Keywords for Finland were highlighted in blue and those for Kenya were highlighted in red. The researcher also made notes at the margins of the article concerning the relevance of the codes to the research topic and the specific objectives of the study.

### 5.4.2 Listing and putting the codes into categories

After combing through the articles and identifying the codes that were present in each paper. The researcher then put the codes into categories that were based on the textual content of the articles. The researcher then interpreted the articles contained in findings based in regard to the research objectives. The table attached below shows the findings. The codes and the categorisation of the codes based on the content of the article. In this research, codes that had to do with structural care quality were categorised in structural care. Those that were related to the process outcomes such as treatment and diagnoses, electronic health records were categorised as process care quality. The article content that indicated outcomes of HIV/AIDS treatment and therapies were categorised as outcomes care quality findings.

Table 2: Keywords, categories and codes used in the analysis

| **Title** | HIV/AIDS care quality improvements in Kenya and Finland | | | | | |
|---|---|---|---|---|---|---|
| **Main key-words** | HIV/AIDS care quality improvements in Finland, | | | HIV/AIDS care quality improvements in Kenya | | |
| **Codes** | HIV/AIDS structural care quality | HIV/AIDS process care quality | HIV/ AIDS outcome care quality | HIV/AIDS structural care quality | HIV/AIDS process care quality | HIV/ AIDS outcomes care quality |
| **Find-ings** | Patient to doctor ratio, nurse to patient ratio, bed to patient ratio, patient's waiting | Diagnoses, Treatment, ARV treatment, prophylaxis treatment, ARV therapy, counselling | Mother to child transmission, Viral load, CD4 Count | Patient to doctor ratio, nurse to patient ratio, bed to patient ratio, patient's waiting time | Diagnoses, Treatment, ARV treatment, prophylaxis treatment, ARV therapy, counselling | Mother to child transmission, Viral load, CD4 Count |

### 5.4.3 Emerging subthemes

From the content that was analysed there were emerging subthemes such as the doctor's remuneration, doctor to patient ratio, which was related to structural care quality. Other subthemes was the quality of diagnoses and treatment, the use of electronic health records use of HIV information tracking systems, which were related to the process care quality as well as themes such as CD4 count and viral load that were related to the HIV/AIDS care quality outcomes. Table 3 below shows the Emerging subthemes.

Table 3: Emerging subthemes

| **Title** | HIV/AIDS care quality improvements in Kenya and Finland | | | | | |
|---|---|---|---|---|---|---|
| **Sub-themes** | HIV/AIDS care quality improvements in Finland | | | HIV/AIDS care quality improvements in Kenya | | |
| **Major categories** | HIV/AIDS structural care quality | HIV/AIDS process care quality | HIV/ AIDS outcome care quality | HIV/AIDS structural care quality | HIV/AIDS process care quality | HIV/AIDS outcomes care quality |
| **Minor categories** | Patient to doctor ratio, nurse to patient ratio | Treatment, ARV therapy, diagnoses, counselling | Viral load, CD4 Count | Patient to doctor ratio, nurse to patient ratio | HIV/AIDS tracking system | Viral load, CD4 Count, maternal deaths, Mother to child transmission |

## 5.5 Research ethics

Angelica et al. (2000) emphasis that every sort of research can confront ethical issues, and According to Fry & Johnstone (2012) ethics includes a system of standards and principles which guide the actions and they function by defining the sort of behavior and conduct that are allowed, compulsory and forbidden. This research endeavoured to follow the research ethics by ensuring that the research used original sources without copying the materials directly from the source. This was done by ensuring that the sources used by the researcher were properly cited and referenced in the study according to the guidelines provided by the university. In addition, the textual information obtained from the sources was properly paraphrased to ensure that it was original and not copy pasted from the sources. The researcher also adhered to the research ethics by ensuring that sources used were original and not falsified. Also the researcher ensured that the copyrights rules regarding use of other people's work were not violated. This was guaranteed by use of open source databases and articles as well as paid for databases by the university.

Also during the process of analysing the data, the researcher ensured that the articles were analysed independently to eliminate chances of introducing personal bias, feelings and opinions in the research. This was to make the research credible and devoid of the researcher's bias. Also the research ensured that articles included in the study were all based on the inclusion and exclusion criteria that had been highlighted in the data collection method section.

The study also ensured that the privacy of participants in other previous studies were not highlighted or discussed in ways which disclosed their personal information such as names and location as study on HIV/AIDS was very sensitive.

# 6 RESULTS

The following were the results of the study based on the findings from the selected articles identified in the research methods section.

## 6.1 Results on the HIV/AIDS quality care in Finland

This section highlights the findings of the study based on the articles that were identified previously. The findings were based on the two countries, which were Kenya and Finland. The first section explained findings concerning structural care, process care, and outcomes care quality in Finland. The articles highlighted found that there was structural care quality, process care quality and outcome care quality manifestations in Finland. The second section examined the care quality in Kenya and it established that there was structural care quality, process care quality and outcome care quality manifestations in Kenya. The articles noted that Finland had better care quality than Kenya.

### 6.1.1 The improvement in the HIV/AIDS structural care quality in Finland

Paakkonen and Seppala (2012) noted that the facilities in Finland are well equipped with the services required by HIV/AIDS patients. The country has large number of nurses working in the country, which improves the level of structural care. Paakkonen and Seppala (2012) further noted that structural care included staff motivation as a result of high remuneration and benefits. Finland offers its doctors high remuneration which augured well in enabling them to care and pay attention to the HIV/AIDS patients as quoted below:

"*Finland was one of the countries with high wages for doctors. This made the doctors to offer the best services possible for the patients. Other than the doctors the other major issue on the structural quality is the hospital accommodation. Finland had a high level of patient bed ratio implying that it was possible to accommodate patients who required specialised treatment in hospitals*."

Paakkonen and Seppala (2012) urged that the high patient to bed ratio ensured that patients were well taken care of. Even though there is lower number of patients who need the bed facilities, the study highlighted that it was essential to have the facilities in

place. Study by Papp et al (2014) assessed how patients in Finland perceived the primary health care services. The participating countries were Finland, Estonia and Germany. The focus of the study was on the accessibility of the primary healthcare in the three countries. The study demonstrated that most of the participants opined that accessibility of healthcare was high as it was possible for the patients to receive healthcare services in any hospital. The study noted that Finland had large number of municipal hospitals which were highly accessible in most municipalities. However the participants indicated that the waiting time was not satisfactory. They indicated that the waiting time of more than hour was too much and very dissatisfactory as indicated in the quote below:

"*The impact of waiting time on patient satisfaction is obvious; the influence of equity and access to PHC services are more dependent on the equal distribution of settings and doctors in urban and rural area."*

This was instigated by the fact that unlike in other countries where patients could change their primacy healthcare facility, in Finland, it was not possible especially if the patient was seeking treatment in a public hospital. The other dissatisfaction was that the patients had to be referred for them to access specialised treatment. This highly affected the quality of care negatively as the patients felt that they were taking more time in hospitals than they should have.

Kroneman, Maarse and Zee (2014) found that in Finland one of the factors that affected quality of care among HIV/AIDS patients as well as among the general patients was gate keeping. This was denial of direct access to specialists and doctors without the approval of the primacy healthcare service provider. The study used survey to assess how the accessibility of specialist services, accessibility of doctors and booking appointments affected the care quality perceived by the patients. The study identified that the higher the gate keeping the lower the perceived care quality as indicated in the quotation below:

"*If more health care providers were directly accessible in a country, patients showed a higher satisfaction with general practice than in countries where more referrals were required.*

Even though the facilities had specialised treatments or HIV/AIDS patients such as antiretroviral drugs, voluntary testing and diagnoses, free counselling services, the patients still considered the gate keeping as a determinant of care quality. The physicians' communication also determined how the patients perceived quality of care. Physicians who communicated empathetically and with a sense of concern for the HIV/AIDS patients made the patients perceive higher quality of care compared to physicians who communicated authoritatively and without empathy.

### 6.1.2 The improvement in the HIV/AIDS process quality in Finland

On whether there was improvement in the HIV/AIDS process quality care, Papp et al (2014) noted that there have been significant improvements in the provision of quality care especially process care. The study highlighted that services such as diagnoses, testing and counselling were provided for free in all public health facilities in Finland which improved the perception that the country has high process quality care. Papp et al (2014) further found that the process care quality was perceived through diagnoses of the illness with patients who were diagnosed in the early stages of HIV/AIDS perceiving the country as having high process quality. Those who were diagnosed at later stages expressing dissatisfaction with the process care quality as indicate din the citation below:

"*This study shows perceptions and views of patients in interaction with PHC and opinion of processes in PHC. Findings of the thematic analysis were summarized along the following dimensions: access and equity, appropriateness (coordination, continuity, competency and comprehensiveness) and patient centeredness (diagnoses, drug availability, and prophylaxis treatment).*"

The other aspect of process quality of care was the availability of the antiretroviral drugs and antiretroviral therapy. Availability of the drugs in the public/municipalities hospitals depicted high level of process quality unlike in instances where such drugs were not available. It was further noted that these drugs were available for free in Finland's public facilities, which enhanced the perception that there was process care quality in Finland. The availability of the screening and prophylaxis treatment in most of the

major hospitals made the patients to perceive that Finland had high process quality among compared with other countries.

Kroneman, Maarse and Zee (2014) also noted that the physicians' treatment also determined the quality of care. Treatments that included administration of CD4 tests, Viral Load tests were considered to be quality treatments compared to treatments that did not assess the quality care treatments as indicated below:

"*There was higher satisfaction with patient physician communication and medical technical content of the care such as viral load tests and CD4 count monitoring.*

The other factor was that the quality care facilities or physicians that did not put into consideration anti-retroviral therapy and change of nutrition was also not considered to be of good quality. The participants of the study noted that Finland had high quality of care because antiretroviral therapy was readily available and such tests could be provided by primary healthcare facility, which minimised costs incurred by HIV/AIDS patients.

### 6.1.3 The improvement in the HIV/AIDS outcomes quality in Finland

Nobre et al (2015) sought to identify the outcomes that social networks have on people living with HIV/AIDS in Finland. The study used qualitative methods such as interviews to obtain data from people living with HIV/AIDS in Finland. The study was conducted among nine individuals who were having HIV in Helsinki. The study found that the social support networks provided health insights to patients through support groups. Also the support networks ensured that patients did not result into depression and low self-esteem as they had others to share their challenges with as indicated below:

"*Most of the participants had received positive reactions from others in terms of acceptance and staying in the relationship regardless of their HIV infection. For them these positive reactions were taken as support*."

The emphasis of social support networks in Finland was noted by participants to have improved their health outcomes such as having high CD4 count and having reduced Viral Load. Also the fact that Finland had the least number of people with HIV infections

proved that having social networks or people with HIV was effective in having high outcome care quality.

## 6.2 Results on HIV/AIDS quality care improvement in Kenya

### 6.2.1 Improvements in HIV/AIDS structural quality care in Kenya

Olang'o, Nyamongo and Aagaard-Hansen (2010) study looked into the aspect of staff attrition among the community based workers and nurses dealing with HIV/AIDS patients. The aim of the study was to identify the causes of staff attrition among HIV/AIDS workers and the effect that it has on HIV/AIDS structural care quality. The study utilised observation, focus group and in-depth interviews to obtain information from thirty participants that were involved in the study. The study noted inadequate funds allocated to HIV/AIDS treatment, poor pay of nurses and community based workers negatively influenced quality of care through staff attrition and low motivation. The study noted that by the end of the study less 30% of the workers had left the service while the remaining workers were constrained in taking care of people living with HIV in western Kenya.

"A staff attrition decrease rate was observed among the Community Health Workers. The reasons for dropout included: the cultural environment within which CHWs operated; lack of adequate support from area NGOs; poor selection criteria for CHWs; and power differences between NGO officials and CHWs which fostered lack of transparency in the NGOs' operations."

The study claimed that the structural care quality of care was highly influenced by the staff motivation as the higher the staff motivation the higher the number of staffs that were taking care of people with HIV. Also lack of funds to provide better salaries and better working conditions led to staff dissatisfaction which led to lower care and concern for people living with HIV/AIDS in Kenya. This made the provision of HIV/AIDS services to rely on volunteers and community based workers who were not well trained on HIV/AIDS care quality negatively affecting the quality of care provided to people with HIV/AIDS.

Obure et al (2015) study looked into the determinants of technical efficiency of HIV/AIDS services. They examined the factors that affected the technical or structural quality of care quality offered in health facilities in Kenya and in Swaziland. The study obtained data by examining forty health facilities in Kenya and Swaziland. The facilities quality was examined in regard to the ratio of staff and patients, the location of the health facilities and equipment's available in the heath facility as well as the number of hours that its took the patients to receive HIV/AIDS related services in the health facility. The study found that the level of technical efficiency and quality ion the health facilities in Kenya and Swaziland to be very low as indicated by the quote below:

"*The number of additional HIV services in the maternal and child health unit, public ownership and facility type, have a positive and significant effect on technical efficiency. However, number of additional HIV and STI services provided in the same clinical room, proportion of clinical staff to overall staff, proportion of HIV services provided, and rural location had a negative and significant effect on technical efficiency."*

This was attributed to the long distance that the facilities were located compared to the patients' location. Most of the facilities were located in distances of more than five kilometres to the patients making the services inaccessible to the patients on a need basis. In addition, the facilities in rural areas lacked adequate staff to cater for HIV/AIDS patients. The ratio of patients-staff was also very high constraining the doctors and nurses taking care of HIV/AIDS patients. This study opined that there was very low structural or HIV/AIDS care quality in Kenya and Swaziland.

### 6.2.2 Improvements in HIV/AIDS process quality care in Kenya

Smith et al (2016) undertook a study that investigated the role of nurses' competency in the HIV/AIDS care quality and treatment in Kenya. The aim of this study was to assess the role that nurses played in determining the role of nurses in settings without doctors and clinical officers in HIV/AIDS care and treatment. The survey was undertaken in Eastern Kenya to enhance the nurse competency in administering treatment to HIV/AIDS patients. The study identified that most of the nurses were not adequately trained to cater for patients with HIV/AIDs as shown below:

"*Among surveyed nurses, more than two-thirds reported having been trained in HIV care and treatment, but fewer felt competent and even fewer were practicing representing a cascade of gaps in nurse capacity building*."

In addition, this study revealed shortage of qualified doctors and clinical officers who can assess and make recommendation for patients with HIV/AIDS. The study found gaps in treatment recommendations, evaluation and care of people with HIV/AIDS that were treated by nurses in the study. The study demonstrated that the quality of care and treatment in most of the health facilities in Kenya was poor and most of the facilities were nurse dependent and did not have many qualified doctors and clinical officers leaving HIV/AIDS patients under the care of nurses who were not adequately trained to take care of HIV/AIDS patients. The study also found that there were shortfall in HIV treatment with some of the services such as antiretroviral drugs and prophylaxis treatment lacking in some of the health facilities that were examined demonstrating low process care quality care for HIV/AIDS patients. This study revealed low process quality of treating patients living with HIV/AIDS and recommended training for nurses involved in the care of HIV/AIDS patients.

Finocchario-Kessler et al (2015) examined the role of early infant diagnosis and the HIV Information Tracking System (HITS) in improving the quality of care of HIV/AIDs patients. The study used most of patient observation to make findings regarding the effectiveness of infant diagnoses and quality care. The study identifies that in instances where there was early infant diagnosis and HIV information tracking the quality of care of higher as there were minimal maternal and infant deaths due to the virus. The study identified that the capacity of the health facility to diagnose and monitor the patient especially in the unborn infants increased the survival chances of the infants as the infants. This is because the infants who were diagnosed early were exposed to treatments at early stages and hence the chances of having low CD4 count were low. The research further found out that HIV tracking enabled the patients to have a follow up of various types of treatment such as antiretroviral therapy and prophylaxis treatment, which minimised the patients' exposure to opportunistic infections.

"*The HIT System was designed to reduce barriers to use and maximize reach at the facility level. For example, it requires neither wire-based internet access nor a continuous*

*supply of electricity, making it ideal for use in health facilities in remote areas of Kenya and other low resource countries. Use of cellular mobile broadband permits internet access through USB devices that allow for uploading of data at any time and can be inexpensively resupplied with airtime, much as one would top up mobile phone minutes*."

Therefore early diagnoses of the patients was considered to be advantageous as it improved the quality of treatment and was considered as a demonstration of having high process quality care as diagnoses and tracking of patients was one of the core aspects of process care quality in health facilities. In addition, this study found that the use of HITS (HIV/AIDS Information Tracking System) had positive implications on patients' health as it enabled easy compilation of patients' health records, treatments and responses of the patients to various treatments procedures. This highly improved the quality of services provided by health facilities as facilities that had the system had better health facilities compared to facilities that did not have such systems.

Oluoch et al (2015) study posits that one of the indicators of good process quality care is the adherence to the antiretroviral drugs. Patients who adhered to the antiretroviral drugs had better outcomes compared to patients who did not adhere to the antiretroviral therapy. This study used primary data from the electronic health records from 17 clinics in rural Kenya. The study indicated the baseline CD4 count from the initial CD4 test and followed up the subsequent CD4 test counts. The study examined the frequency of ART use and the patients' adherence to the anti-retroviral therapy. The study used the electronic medical records as the intervention tools to determine the impact that it had on the CD4 count and viral load. The study found that the use of the electronic health records was effective in monitoring patients CD4 count and in recommending the most appropriate course of action such as change in nutrition as other alternative medication in instances where the ART therapy was not available.

"*Adjusted odds of performing a CD4 test in clinics using an EMR gained a higher confidence interval. The median time from enrolment into HIV care to first CD4 test was about 2 months for paper as compared to 1 month for EMR. The median time from baseline to first CD4 follow-up was 7 months for paper and about 6 months for EMR. The use of the EMR system was associated with better compliance to HIV guidelines for*

*pre-ART care. EMRs have a potential positive impact on quality of care for HIV patients in resource-constrained settings*."

This implied that adherence to the antiretroviral drugs using the electronic health records made the anti-retroviral drugs to be very effective. Therefore using electronic health records was a care quality aspect that had a significant role to play in the provision of care quality to HIV/AIDS patients in Kenya.

### 6.2.3 Improvements in HIV/AIDS outcomes quality care in Kenya

Lowther et al (2015) study sought to identify whether the nurse led palliative care had any positive outcomes on HIV/AID patients based on the participant's self-assessment. The study had identified that not all treatment especially the ART therapy had positive outcomes on the patients. This is because the HIV/AID patients and myriads of other problems some of which were social and psychological such as stigma and low self-esteem. Therefore an interaction was required to make the outcomes of patients as well as being holistic. The study used the nurse led palliative care to assess whether these types of intervention had any positive outcomes on the patients. The study noted that patients had receive nurse led palliative care had higher positive self-reported outcomes compared to patients who only had a medical care programs such as ART as indicated in the quotation below:

"*Person-centered assessment and care delivered by staff who has received additional training had positive effects on self-reported mental health related quality of life and psychosocial wellbeing of HIV AIDS patients in Kenya*."

Therefore patients who undergo nursing care had positive outcome compared to patients who did not revolve the care. Some of the outcomes included improved health outcomes such as high CD4 count, reduced occurrence of opportunity infections as well as high self-acceptance and high self-esteem, positive outlooks towards life revealed in willingness to discuss their HIV status with others. On the contrary, patients who did not have nurse led palliative care had lower positive outcomes and did not have high esteem, had poor CD4 count and had negative life outlook indicating poor care quality.

# 7 DISCUSSION

### 7.1.1 Discussion on HIV/AIDS structural care quality improvements in Finland and in Kenya

Listoola (2013) noted that Finland had good hospital facilities. The availability of these facilities was considered to have positive outcomes as it made Finland to have zero new infections. A study by Listoola (2013) noted that patients expressed satisfaction with the structural care quality, which they perceive through availability of public health facility in close proximity to them. Another study byBeard, Feeley and Rosen (2009) indicated that patients perceived high quality in healthcare facilities that was perceived through availability of doctors and nurses as well as through availability of accommodations and provision of specialised care. Although Papp et al (2014) indicated that there was dissatisfaction among Finland patients due to long waiting time. This dissatisfaction however cannot be termed as having low quality care. This is because in other countries such as the developing countries as Kenya, the patients may have to wait for hours to be attended to by a nurse or a clinical officer. Unlike in Finland, where the patients are attended by specialised doctors, in Kenya patients are usually attended by nurses and clinical officers due to task shifting in medical human resource challenged countries such as Kenya. In addition, the waiting time is being reduced by the use of telemedicine in Finland where patients now can access quality care and consultation services of their doctors using their smart phone applications and websites. This is unlike in the developing countries where telemedicine has not yet come into place. Turan et al (2008) concurred that despite the shortcomings that may be encountered in Finland, HIV/AIDS care quality of treatment was still high. HIV is regarded as other chronic illness such as diabetes, cancer, tuberculosis and the attention that is provided to patients with similar conditions is provided to those with HIV. This minimises stigma and encourages self-acceptance among patients with HIV/AIDS in Finland.

### 7.1.2 Discussion on HIV/AIDS process care quality improvements in Kenya and Finland

The study by Kroneman, Maarse, and Zee, (2014) revealed that there was gap in process care quality in Finland. This is because waiting time was the core determinant of the care quality focused attention to the fact that access to HIV/AIDS services was also not direct. Although the numbers of patients in Finland are fewer compared to other countries, the level of accessibility of specialised treatments was not direct. The patients had first to go for basic services such as diagnosis before accessing specialised treatments such as antiretroviral therapy, prophylaxis treatments and CD4 count tests. Cleven et al (2016) concurred that the patients in Finland had to be treated based on recommendation of a clinical officer or a nurse. Nevertheless Finland still had good process care quality as patient could access free tests, diagnoses, and ARVs compared to patients in other countries such as Kenya.

The study by Smith et al (2016) revealed that process quality care was very minimal in Kenya especially in rural areas where it was not doctors who were treating HIV/AIDS patient but nurses. The study also found that there were shortage of drugs and prophylaxis treatment in the health facilities, which compromised the quality of care. This finding concurred with Dang, Westbrook and Black (2013) who had noted that the quality of care was very low in developing countries such as Kenya where the health facilities did not have the requisite facilities for HIV treatment. Vo et al (2012) noted that it has taken donor intervention to improve the quality of services in health facilities in Kenya as there is shortage of healthcare of workers as well as shortage of equipment's required in screening and assessing the HIV patients.

Despite that gap, there was the HITS system which was an improvement to the electronic health records and was tailored for HIV/AIDS patients. The use of such as systems in Kenya significantly improved the health status of patients who frequented facilities that had such systems. They made the diagnoses procedures fast as well as the monitoring and evaluating the effects of various treatment regimens on HIV/AIDS patients. According to Leathermanet al (2010) there was no standards treatment for various HIV patients, each patient had to be treated based on their symptoms and diagnosis. Factors such as CD4 count, sexual behaviours and use of ARV treatments determined the most

relevant and appropriate treatment regimen for the HIV/AIDS patients. Oluoch et al (2015) supported the fact that there was huge process care quality improvemnt due to use of electronic health records. The study indicated that the electronic health records had positive implications on the quality of care provided to people with HIV. This is because the electronic medical records were easily accessible compared to the manual records and could be used by the patients in various clinics. Also the records accessibility enabled the medical practitioners to provide care based on the patients' recent CD4 count. Other than providing data on CD4 count, the electronic health records enabled easy monitoring of patients performance which was very necessary to the improvement of patients treatment based on collection of data such as patients Viral Load, patients late or early HIV/AIDS diagnoses, patients prophylaxis treatment and frequency of patients visit to the medical faculties. Miller et al (2014) agreed that the patients whose records were easily available in electronic health records better adhered to the anti-retroviral therapy compared to patients whose records were not available in electronic health records. Zwahlen, Harris, May, Hogg (2009) further noted that it was even possible to treat patients in even without anti-retroviral therapy when their records and CD4 count were accessible than when it was not it was possible for the doctors and clinical officers to make recommendation on alternative treatment based on the patients CD4 count. This implied that the record keeping was important aspects of providing quality care to patients.

Therefore the main issue for Finland's process care quality was that there was long waiting time. However, diagnoses, drugs and treatment were very much available to patients in Finland. Those in Kenya also had access to treatment such as prophylaxis, tests and ARV therapy. In addition technology was being used to keep records and to track the health performance of HIV/AIDS patients. Nevertheless quality of care was low due to unavailability of doctors leaving patients under the care of nurses, which affected process care quality negatively.

### 7.1.3 Discussion on HIV/AIDS outcomes care quality improvements in Kenya and Finland

Johnston et al (2015) agreed with the study of Nobre at al. (2015) that social networking played a significant role in ensuring that patients had positive outcomes. Ahonkhai et al (2012) noted that one aspect that made treating HIV difficult was the psychological aspect of the disease, which made the patient feel overwhelmed and hopeless. However with supportive social groups and social networks where the patients could meet discuss their challenges and new ways of handling the disease it was easy for patients to manage the disease. Also the social networks helped the individual to express themselves and to handle the disease positively who made the country to have very positive outcomes such as low HIV related deaths and zero mother-to-child infections. .

Manary, Boulding and Staelin (2013) supported the study of Lowther et al (2015) that one of the major outcomes of HIV/AIDS treatment was having high level of CD4 count, patients who had contact surveillance of nurses were noted to have higher CD4 count compared to patients who did not receive any form of palliative care. The patients with palliative care had lower mortality rates as well as lower mother to child transmissions, which are some of the major outcomes that were expected of a HIV/AIDS outcome care quality.

However, the studies that were identified discussed outcomes care quality mainly focused on social networks and palliative care outcomes rather than focus on tangible data on the HIV/AIDS outcomes such as average viral loads of patients in the two countries, average CD4 counts of patients in the two countries, average viral infections and average commitment to deliver the desired services.

# 8 CONCLUSION AND RECOMMENDATIONS

## 8.1 Summary of the findings

The findings of the study were based on the three research questions of ascertaining whether there were structural process and outcomes care quality for patients with HIV/AIDS in Finland and in Kenya. Concerning the structural quality improvements in

Kenya and in Finland, the study identified that Finland had the best care quality that was exemplified in the number of facilities in a municipality, the ration of doctors to patients, and availability of drugs and technology in hospital. However, there were restrictions that made access of quality care difficult. Some of the restrictions included having high waiting time, gate keeping of doctors and specialists so that they could only be accessed through referrals, which made patients dissatisfied. This was unlike in Kenya where the research found that healthcare workers were not well remunerated which significantly affected their performance. Also the hospitals were located far from the patients, which made accessibility of the services difficult. The doctor to patient ratio was not satisfactory as doctors had to serve a lot of patients and in many instances it was nurses and clinical officers who were handling patients as there were no doctors. Therefore it can be rightly summarised that HIV/AIDS structural care quality improvements were high in Finland and low in Kenya. The findings of the study were found to be in concurrence with the extant study of Dang, Westbrook and Black (2013) who had noted that the structural care quality was high in developed countries such as Finland and low in developing and poor countries in sub Saharan Africa such as Kenya.

On the HIV/AIDS process care quality improvements in Kenya and in Finland, the study established that in Finland there were high process quality improvements. The study noted that there were free diagnoses, tests and ARV treatments in Finland, which made the patients perceive quality of care in the hospitals where they were treated. The study noted that the accessibility of the free diagnoses of HIV/AIDS, the availability of antiretroviral treatment as well as availability of skilled doctors and specialists made the patients perceive the healthcare in Finland as having high care quality. On the contrary in Kenya, there were challenges in the diagnoses of patients as well as in the recommendation of treatments since in most instances especially in rural areas there was scarcity of specialists and it was nurses who were diagnosing and treating patients. Nevertheless there were equality process care improvements with some of the hospitals having HIV/AIDS Information Tracking System (HITS) that made a significant difference in the quality of care outcomes. Healthcare facilities with this system had better maternal HIV/AIDS outcomes such as low mother to child transmission compared to facilities that did not have. In addition the study found that facilities that had improved their health records by using electronic health records technology, which assisted in keeping

tabs of the HIV patients Viral Load and CD4 count. It was identified that hospitals where the patients were monitored using the heath records had better outcomes than patients who were not monitored. The finding concurred with the previous study of Cleven et al (2016) who noted that technology have assisted the improvement of care quality in facilities situated in developing countries such as Kenya.

On the extent of HIV/AIDS outcome care quality improvements in Kenya and in Finland an OECD study indicated that Finland had one of the lowest HIV/AIDS infection rate in the globe. It was identified that there was zero mother to child infections in Finland. In addition there were low mortality rate of patients with HIV /AIDS infections. There was also minima stigma, which was attributed to patients having support networks and support groups where they shared their challenges leading to positive outcomes such as self-acceptance and high self-esteem. The fact that Finland has sex education among the adolescents also contributed to positive outcomes such as low new infections among heterosexuals in Finland.

Likewise in Kenya there were positive outcomes such as increased CD4 count among patients who were in nurse led palliative care. In addition it was identified that the quality care had positive outcomes such as reduced mortality rates and reduced mother to child infections. Therefore the study identified that in both countries there were improvements in the HIV/AIDS quality outcomes.

## 8.2 Recommendation for HIV/AIDS for Kenya and Finland

The following were some of the recommendations based on the findings of the study. The findings were based on the results of literature review on the two countries. The first recommendation is based on the HIV/AIDS structural quality care where the study noted that Finland had high structural care quality while Kenya had poor structural care quality. In Finland, the study recommended improvement in the waiting time by introducing telemedicine in all hospitals where patients can book appointments with doctors online instead of first going to the primary healthcare facility to book appointments. In Kenya, the structural quality care can be improved by increasing the remuneration of doctors, specialists and nurses so that there can be large number of doctors working for the public hospitals in the country. In addition, the government should increase the

number of health facilities per kilometre square or ensure that there is primary health facility per square kilometre and that there are enough medical personnel in all level five hospitals which offer specialised treatment to people with HIV/AIDS. This would ensure that there is large number of patients catered for by the health facility.

The second recommendation relates to HIV/AIDS process care quality improvement in Finland and in Kenya. It was noted that Finland had advanced process care quality which was attributed to the fact that the care quality in Finland was high. This included quick and free tests, free counselling free anti-retroviral therapy, prophylaxis, viral load testing as well as accessibility of specialist doctors. In Kenya, there were free tests and free ARV. However, accessibility of doctors was difficult. In fact most of the diagnoses and tests were done by nurses and clinical officers. Therefore to improve the quality of care it was necessary for the government and institutions to provide more doctors in Kenya who were specialising in treating HIV/AIDS patients. Since the study found that the use of technology such as HITS and electronic health records had positive outcomes, the study recommended use of HITS technology, electric health records and telemedicine in medical facilities in Kenya to improve quality of process care quality.

The third recommendation relates to outcomes care quality. The study noted that Finland had some of the best outcome care quality as it had zero mother-to-child transmission and had low mortality rate among HIV/AIDS patients as well as zero new infection in the last three years. This has been attributed to the HIV/AIDS support networks that render support and advocacy for people living with HIV/AIDS as well as sex education among adolescents and young adults which reduced the risk of having new infections. Therefore this research recommended healthcare practitioners in Kenya to adopt similar practices as in Finland by assisting HIV/AIDS patients to have support network for people with HIV/AIDS. This would reduce stigma increase satisfaction and positivity among the participants and see improvement in patients' health such as having low viral load and high CD4 count. The study further recommended sex education to be introduced or strengthened among the adolescents to minimise new infections and create awareness about HIV/AIDS.

## 8.3 Limitations of the study

Despite this study managing to achieve the research objectives and answering the formulated research questions by identifying the answers for each research questions, the study had its share of limitations, the first limitation was that this study was a secondary study and availability of secondary data was limited. Secondly, the data that was available easily for Finland was related to the quality of life of patients rather than the quality of care of patients. Also due to the success of Finland in curbing HIV/AIDS there is limited recent research concerning HIV/AIDS in Finland. Much of the existing and recent studies on HIV/AIDS and care quality are related to sub Saharan countries such as South Africa, Kenya, Uganda and Tanzania, Ghana but not on the developing countries such as Finland which made it difficult to have concrete information regarding care quality in Finland. Also accessibility of the full text journals was a challenge owing to the fact that some of the hospitals with quality information was not available through the Arcada database making it difficult to acquire most recent data on HIV/AIDS care quality. Also there was availability of articles with key words but whose content was different as they discussed quality of life rather than quality of care among HIV/AIDS patients. Others discussed quality of care but they were not concerned with the HIV/AIDS patients. The other challenge was availability of research articles about quality of care but they discussed other countries other than Kenya and Finland, which were the countries of interest for this research. There was also limitation of using content analysis as reading and coding information from the articles was time consuming. Lastly the author found disadvantages of the Donabedian's model which include the difficulty in establishing the relationship between structure, process, and outcome. Furthermore, there may be difficulty determining whether some factors are strictly part of structure and/or process or outcomes, as overlap between them may have existed.

## 8.4 Areas for future study

This study recommended that the future study to undertake the same study bit using primary care methods as this would ensure that information is received directly from HIV/AIDS patients on how they consider the quality of care in their respective countries. Also future study should focus on how the use of technology such as telemedicine and electronic health records affects the quality of care among HIV/AIDS patients.

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