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FACTORS CONTRIBUTING TO ATTRITION FROM A MEDICATION DISPENSING PROGRAMME IN THE NORTH WEST PROVINCE AMONGST PEOPLE LIVING WITH HIV

Submitted in fulfilment of the requirements for the degree of Master of Nursing Science

by

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DECLARATION

Student Number: 15087078

I, **Olebogeng Mathabo Masemola**, declare that **Factors contributing to attrition from a medication dispensing programme in the Northwest province amongst people living with HIV** is my own work and that all sources that have been used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted for any other degree at any other institution.

____________________ ____________________

Olebogeng Mathabo Masemola **Date**

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ABSTRACT

Introduction: There is a huge number of people who require access to treatment for HIV and other chronic conditions. Such demand leads to overburdened health care providers and congested health facilities. This poses numerous challenges in the quality of care provided. South Africa has offered a programme known as Centralised Chronic Medicine Dispensing and Distribution (CCMDD) that works hand in hand with the Health Programmes Trust on behalf of the National Department of Health. This programme gives access to stable HIV clients to receive treatment outside of the clinic at pick up points with shorter queues in an area of convenience. The lack of awareness around the attrition rate issue and the contributing factors to the programme is worrisome. However, the programme remains misunderstood and unfamiliar to patients and health care providers.

AIM: The aim of this study is to explore and describe the factors that contribute to the attrition rate amongst people living with Human Immunodeficiency Virus from the Chronic Central Medicine Dispensing and Distribution programme in the Bojanala district, North west Province.

Methodology: The study adopted qualitative, explorative and descriptive design. Purposive sampling method was used to select participants that request to leave or those who have left the CCMDD programme, until data saturation was reached. The researcher collected data using one-one interviews using in-depth interview guide. inductive content analysis data method was used to analyze the data from the transcribed interviews with the participants.

Findings: The following themes emerged from the study patient related factors, health care provider related factors and resource related factors. Based on the data from the one-to-one interviews with the participants, understanding around the reduction of the attrition rate in the programme and recommendations can be suggested for amendments for the programme to made.

Conclusion: The study concluded that participants were able to see the value of the programme however, were compelled by the circumstance caused by three factors and the six sub -themed factors fact that emerged. Further research can be done on an investigation of whether technology would work better than human resources to help retain patients on the CCMDD programme.

Key words: Antiretroviral therapy, Attrition, Central chronic medication dispensing, Factors, Human Immune deficiency Virus [HIV].

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LIST OF ABREVIATIONS

Abbreviation	Meaning
AIDS	Acquired immunodeficiency syndrome
ART	Antiretroviral therapy
CCMDD	Centralised chronic medication dispensing distribution
DSD	Differentiated service delivery
FTC	Emtricitabine
HIV	Human immune deficiency Virus
ICDM	Integrated chronic disease management
IDI	Infectious disease institute
LTFU	Loss to follow up
NdoH	National Department of Health
NHI	National health insurance
NIMART	Nursing initiation and management of antiretroviral therapy
PREP	Pre exposure prophylaxis
PLWH	People living with human immunodeficiency
PHC	Primary health care
PRP	Pharmacy only refill programme
PUP	Pick up point
STI	Sexually transmitted infections
SYNCH	Synchronised Communication in health

TB	Tuberculosis
TDF	Tenofovir disoproxil Fumarate
UNSAID	Joint United Nations programme on Human immunodeficiency virus and acquired immunodeficiency syndrome
WHO	World Health Organisation

CHAPTER 1

OVERVIEW OF THE STUDY

1.1 INTRODUCTION

South Africa has a heavy burden of HIV/AIDS, tuberculosis (TB) and non-communicable diseases (NCDs), currently there is over 7 million people living with HIV (PLHIV), and supports the largest antiretroviral therapy (ART) programme in the world (Liu, Christi, Munsamy, Robert, Pillay, Shenoi, Desai & Linnader 2021:549). The heavy burden of disease placed enormous strain on public healthcare facilities, which compromised the resources available to deal with high volumes of chronic diseases that contribute to medicine shortages and poor service delivery (Zeeman, 2016:3; Smith & Nicol, 2020:326). In addition, providing antiretroviral therapy (ART) for millions of people living with HIV (PLHIV) requires efficient, patient-centered differentiated ART delivery.

In 2014, the Department of Health (DoH) launched the Central Chronic Medicines Dispensing and Distribution (CCMDD) programme to increase and promote easy access to medication for chronic diseases such as Human immunodeficiency virus (HIV,) Tuberculosis (TB) hypertension, asthma, diabetes mellitus and depression. Such access is achieved by collection of medication by patients at community-based pick-up points of their nearest convenience (Liu, Christi, Munsamy, Robert et al, 2021:550; Dorward, Msimango, Gibbs, Shozi, et al, 2020:2; Leslie, West, Twine, Masilela, Steward, Kahn & Lippman, 2020:203).

The programme has been integrated into the National Health Insurance (NHI) to address the demand associated with expanded access to ART. Patients who are stable on their chronic treatment and are not pregnant are offered an opportunity to be enrolled. Patients who consent are issued with a six-monthly prescription by the health care provider for collection at their selected pick-up points. Pick-up points include commercial outlets such as Clicks, Dis-Chem, Medirite, Pick n Pay pharmacies and community-based sites such as churches (Gcwabe, 2021:1). This strategy reduces patients’ waiting time at the health care facilities and ensures continuation of treatment.

1.2 BACKGROUND

Since 2010 the effectiveness of care for patients with chronic illnesses has been improved by innovations in care management processes through guidelines, disease management techniques and patient education to improve self-management. However, a large number of patients are still not benefiting from these advances as they are unaware of its existence (Fauci, Robert, Redfield, Michael, Weahkee, Sigounas & Gitoir 2019:844). In Africa, 15 million people living with HIV are on treatment and of these, 11 million live in sub-Saharan Africa (Vogt, Kalenga, Lukela, Salumu, et al 2017:326). In Kinshasa, Democratic Republic of Congo the authors (Vogt, Kalenga, Lukela, Salumu, Diallo, Nico et al 2017:326) found that facility-based ART for stable HIV-positive patients congested health services in resource-limited countries.

As the world's highest HIV-infected country, South Africa had the greatest need of routine access to HIV medication (Liu, Christie, Munsamy, Robert et al 2021:549). South Africa had an overburdened public health system with patients' experiencing poor quality of care because of high volumes accessing minimal resources. This led to the rollout of the central chronic medicines dispensing and distribution (CCMDD) programme in eight of the nine provinces in the country, translating to a national coverage of 88% with the exclusion of the Western Cape. By October 2019, 3 436 health facilities were registered with CCMDD across 46 health districts. The CCMDD programme supports the achievement of the 90-90-90 targets developed by the joint united nations programme on HIV/AIDS(UNAIDS) in 2014 (Health Systems Trust, 2019:1).

The aim of the 90-90-90 targets was to diagnose 90% of all HIV-positive people, provide ART for 90% of those diagnosed, and achieve viral suppression for 90% of those treated by 2020 (UNAIDS, 2014). The CCMDD programme's benefits fall across the second and third targets, namely the provision of uninterrupted HIV treatment, and support towards viral suppression (Health Systems Trust, 2019:1). By 2020, over 1 million patients were registered on the programme and a retention rate of 81% had been achieved (Health Systems Trust 2020:1). The implementation of the CCMDD faces barriers, such as insufficient and unskilled staff to enroll patients on the CCMDD Synch (synchronized communication in health) system.

Some rural areas, specifically in the Rustenburg, where the study was conducted, most health care workers lack sufficient knowledge or technical support and infrastructure to enroll patients, and others do not have enough regions eligible to be registered as a central supplier (to become a pick-up point) Bogart (2022:2). This indicates the need to overcome the barriers in order to achieve a retention rate of 100%. The programme was created in aid of HIV care therefore attrition in care or the treatment use could alleviate the success in ART or the existence of the programme especially in resource limiting settings as supported in (Mayasi, Situakibanza, Mbula, Longokolo, Maes, Bepouka,2022:9). Despite the implementation of measures such as freely highly active antiretroviral treatment, decentralization, and programme role shifting, the role of attrition continues to surpass the influx of new patients. This suggests that there are still unidentified factors contributing to retaining patients. This observation was noted by (Dejen, Jara, Yeshanew, Fentaw, Feleke, Girmaw &, Wagaye, 2021:445). In comparison to other conditions such as hypertension and diabetes, existing programs are usually educational in nature, requiring patient participation for effective health outcomes. The diabetic factors related to attrition are often limited to the context of social vulnerability (Flaus-Furmaniuk, Fianu, Lenclume, Chirpaz, Balcou-Debussche, Debussche, Marimoutou ,2022:314). Globally, the attrition rate for diabetes programs stands at 26%, typically reported in clinical practices. Unlike HIV programs, diabetes lacks dedicated resources (Garrib, Njim, Adeyemi, Moyo, Halloran, Luo, Wang, Okebe, Bates, Santos, Ramaiya, Jaffar,2023:249),2023:249). Furthermore, hypertension programs experience attrition rates ranging from 29.8% to 61.5% within a year of enrollment, often due to gender or age limitations (Hernandez, Ismail, Heang, Van Pelt, Witham, Davies,2021:397). This motivated researchers to conduct a study on patients receiving antiretroviral therapy (ART), including those who remained in the program, those who left, or those who requested removal. This study aimed to observe the retention rates of patients enrolled in the program and describe the factors affecting attrition, as well as the reasons behind it. Accordingly, the researchers wished to explore and describe the factors contributing to the attrition rate among people living with HIV in the CCMDD program in the Bojanala district, Northwest Province.

1.3 PROBLEM STATEMENT

South Africa grapples with a significant burden of non-communicable diseases alongside HIV as highlighted by (Samodien, Abrahams, Muller, Louw and Chellan.2021:1). This placed immense strain on the healthcare facilities/centers and providers, impacting the quality of healthcare and services. The Centralized Chronic Medication Dispensing and Distribution (CCMDD) programme gives eligible chronic stable patients the opportunity to collect their medication from convenient pick-up points which enables facilities to focus on unstable chronic patients as well as the acute and mother and child patients. Access to the CCMDD programme allows for quick and convenient ART and chronic medication distribution in the community (Maharaj 2018;1 Zeeman 2016:3;

Health Systems Trust, 2019:2). The programme lauded for its efficiency, particularly benefits ART taking patients in comparison to other chronic conditions. To qualify, HIV patients must maintain viral suppression evidenced by two consecutive undetectable viral load results. This shifts from standard clinic-based ART provision addresses long waiting times, poor confidentiality, and restricted opening hours, which have deterred patient engagement. Under the CCMDD programme provides access to chronic medication at preferred pick-up points. Patients collect pre-packaged prescribed medication at two-monthly intervals for six months at selected areas or pharmacies (Dorward, Msimango, Gibbs, Shozi et al 2020:2). This streamlined approach not only enhances accessibility but also ensures a more patient -centric delivery of essential medication within the community.

A significant number of HIV-positive patients in the Bojanala District in the Northwest Province are no longer active on the CCMDD programme. In the selected healthcare center in Rustenburg, the researcher noted that only 2130 out of 4000 patients enrolled in the programme were still active. (Rustenburg Statistics, 2020-2022). The researcher considered it important to identify the reasons for the decline in number of compliant patients on the programme by examining patients on ART who come for review or consultation; ones who had left the programme, and/or ones who asked to be removed. This would enable the researcher to observe the retention rate of patients enrolled in the programme and describe the factors that affect the attrition rate and the reasons therefor. The researcher experienced the number of patients being disenrolled from the programme be higher than the number of patients decanted (to the programme). The reasons varied, however raised great concern to the researcher, throughout the study the researcher made sure not to influence the participants answers/findings Accordingly, the researcher wished to explore and describe the factors that contribute to the attrition rate amongst people living with HIV from the CCMDD programme in the Bojanala district, North west Province.

1.4 PURPOSE OF THE STUDY

The purpose of the study was to explore and describe the factors contributing to attrition rates amongst people living with HIV from the CCMDD programme in the Bojanala district, North West Province.

1.5 RESEARCH QUESTION

To achieve the purpose, the study wished to answer the following question:

What are the factors contributing to the attrition rate amongst people living with HIV from the CCMDD programme in the selected health care centre in the Bojanala district of North West Province?

Research objectives:

- To explore the factors that increase the attrition rate on the CCMDD programme.
- To support and raise awareness for the programme.
- To improve the efficiency and effectiveness of the programme.

1.6 PARADIGM

A paradigm is a way of looking at natural phenomena that encompasses a set of philosophical assumptions and guides a researcher's approach to inquiry (Polit & Beck 2021:7). Polit and Beck (2021:11) paradigms are crucial as they are lenses that help to sharpen the researcher's focus on a phenomenon (Pervin& Mokhtar 2022:420).

According to Pervin and Mokhtar (2022:420), a paradigm "explains the phenomenon that the researcher intends to study; the questions to be asked; how to ask them, and the process to be followed in interpreting the answers. Research is underpinned by a paradigm or the researcher's philosophical worldview and it is important to be aware of the underlying philosophical assumptions." Assumptions are "principles that are accepted as true based on logic or reason, without proof" (Polit & Beck 2021:8).

In this study, the researcher used interpretivism as a paradigm because the study took place in the participants' natural setting. Interpretivists strive to understand individuals and their interpretations of the world around them. The interpretive paradigm is known as the humanistic, constructivist or naturalistic paradigm and focuses mainly on the meaning individuals or communities assign to their experience, it assists the researcher to understand the strength and weakness of the approach used (Polit & Beck 2017:723; Tenny, Brannan& Brannan,2022:2,). According to Polit and Beck (2017:723), interpretivism examines natural phenomena. The phenomenon in this study was the increased number of patients asking to leave the programme or needing to be removed from the CCMDD programme. Therefore, the researcher made use of the subjective experiences of individuals on the CCMDD programme to understand and find out the contributing factors regarding their use of the CCMDD programme. Interpretivism is underpinned by ontological, epistemological, and methodological assumptions.

1.6.1 Ontological

Ontology is the study of being or reality. Mukhles, Albabneh (2020:86) describe ontology as the way individuals perceive life. In addition, multiple realities exist and the content and form depend on how individuals interpret them. Ontological assumptions refer to the nature of reality and its existence. Reality is socially constructed and a product of subjective experience.

The researcher explored and observed various factors influencing how the CCMDD impacted the participants in order to uncover their needs, reflecting the ontological assumptions that are guiding the investigation.

1.6.2 Epistemological

Epistemology is concerned with the nature of knowledge, its possibility, scope and general basis. Epistemology refers to the way individuals understand reality from what they know and what is observed through interaction with the environment and then embedded in methodology (Mukhles, Albabneh,2020:78). Knowledge is created and sustained by social processes. In qualitative research, the interaction between researchers and participants generates knowledge and insight into the phenomenon under study (Tenny, Brannan and Brannan,2022:1). The researcher observed the significant potential impact the CCMDD programme but was unable to identify the cause of the decrease in the number of enrolled patients. This prompted the researcher to critically apply relevant methods and align their approach to enhance credibility of the findings, ultimately aiming to answer the research question.

1.6.3 Methodological

Methodology is a strategy or plan of action that links methods to outcomes and governs researchers' choice and use of methods and the process of the research ((Mukhles, Albabneh,2020:77; Creswell & Poth 2018:24). Methodological assumptions refer to how the researcher will gain knowledge from the participants (Berryman 2019:276). The researcher used one on one interviews as the chosen method.

1.7 RESEARCH DESIGN

Polit and Beck (2021:51) describe a research design as the overall plan for addressing a research question, including specifications for enhancing the integrity of the study. The research design is a blueprint for conducting a study and indicates the basic strategies a researcher will use to answer the research questions (Brink, van der Walt & van Rensburg 2018:101). In this study, the researcher selected a qualitative, explorative, and descriptive research design to answer the research question.

In this study the researcher will explore and describe the factors contributing to the attrition from the CCMDD programme.

1.8 RESEARCH METHODOLOGY

Polit and Beck (2017:510) describe research methodology as the "steps, procedures and strategies taken to investigate the problem being studied and to analyse the collected data". Research methods are "the techniques researchers use to structure a study and to gather and analyse information relevant to the research question" (Polit & Beck 2017:517). The research methodology includes the population; sample and sampling; data collection and analysis, and validity and reliability.

1.8.1 Population

A population is the entire/ set aggregate of people or objects in which a researcher is interested (Lobiondo-Wood& Haber 2021:280). In this study, the population were all the people living with HIV in the Bojanala district in Rustenburg, Northwest province registered on the CCMDD programme and taking ART.

1.8.2 Sampling and sample

Sampling is the process of selecting the sample from a population in order to obtain information regarding a phenomenon in a way that represents the population of interest (Bhardwaj 2019:158). Polit and Beck (2021:497) add that sampling is "a process of selecting a portion of the population to represent the entire population so that inferences can be made". In this study, the researcher used non-probability sampling specifically purposive to select participants who were knowledgeable and not randomly chosen, it was effective as short time was given for them to be obtainable and met a set a certain criterion about the phenomenon being studied

(Bhardwaj,2019:161; Brink, van der Walt & van Rensburg 2018:120). In purposive sampling, each individual has an equal probability of being selected from the population It can also begin with volunteers and then selecting participants according to specificity that benefits the study (Creswell & Puth 2018; Polit and Beck 2021:499).

1.8.2.1 Sample size

12 participants volunteered to participate in the study.

1.8.2.2 Inclusion criteria

- ✓ participants that have been removed recently from the CCMDD programme.
- ✓ participants should be volunteers from the designated facility.
- ✓ Participants that have requested deactivation during the period 2020-2021.
- ✓ The participants need to be above the age of 18.
- ✓ Participants needed to understand English in order to understand what is required from the study

1.8.2.3 Exclusion criteria

- ✓ participants who are not on ART.
- ✓ Participants who do not want to participate.
- ✓ Participants under 18 years.

1.8.3 Data collection

Data collection is the process of collecting information (data) related to the research question in a systematic way to address a research problem, while not eliminating sources data that might be revealed as the study progresses (Polit & Beck 2021:510). Qualitative researchers collect their data in a real-world naturalistic setting to achieve “emphatic neutrality” (Polit & Beck 2021:511). In this study, data was collected by means of in-depth interviews to explore respondents’ experiences and perspectives is usually safer when exploring highly sensitive topics (Wallace Foundation, 2020:2). These participants were patients using the central chronic medicine dispensing distribution programme These interviews were conducted in the designated health centre in Rustenburg in the Northwest (see more on chapter 3).

1.8.4 Data analysis

Data analysis is the systematic organisation and synthesis of research data (Polit & Beck 2021:534). In qualitative studies, data analysis is normally done concurrently with data collection (Brink, van der Walt & van Rensburg 2018:180; Gray, Grove & Sutherland 2017:281). In this study, the researcher used inductive content analysis to interpret, categorise, and provide meaning using transcribed texts (Vears & Gillam,2023:111; Polit &Beck 2021:556).

1.9 TRUSTWORTHINESS

Trustworthiness is “the degree of confidence that qualitative researchers have in their data, using the strategies of credibility, dependability, confirmability, transferability and authenticity” (Polit & Beck 2021:569). In this study, the researcher applied the strategies of credibility, dependability, transferability, and confirmability to ensure trustworthiness.

1.9.1 Credibility

This deals with the researcher’s confidence to have established the truth value of information given by the participants in relation to the context in which the research relates. It is gathered from the discovery of the participant’s lived experiences and perceptions and establishing how they are related to one another (Norman & King,2020:26; Polit and Beck 2021:569). In this study the researcher did interviews which took a maximum of 2 months to have complete insight of the topic of the study. The researcher made use of the prolonged engagement to create a safe space and rapport with the participants in order to enhance the data collected Polit and Beck 2021:572. The recordings and field notes were made available for analysis and verification, and consensus discussions were done by the researcher and the supervisors to be able to create themes, categories and ensure data remains credible.

1.9.2 Dependability

Dependability is known as the consistency whereby that through the findings similar meaning and interpretation would be found if the saturation was reached. (Nyirenda, Kumar, Sarker, Simwinga et al.,2020:2). Dependability enhances credibility and answers the question of whether the findings would be repeated if a similar participant in the same context was used as cited in Polit and Beck,2021:569, The researcher’s concern was to ensure that the way they’ve conducted, reported and designed the study was clear and carefully constructed. Throughout the study the researcher tried to clearly make it understandable why people living with HIV were the main subject in the selection of participants, therefore comparing the trail interview with the last interview conducted.

1.9.3 Confirmability

Confirmability involves autonomy from bias pending the research process and findings description. This refers to the extent the findings are a function solely of the participants and conditions of the researcher making sure it is not bias, and that it motives perspectives. Polit & Beck 2021:570 Therefore, getting close to objective reality as qualitative research can get (Norman & King,2020:28). The researcher’s concern was to ensure that the findings are grounded in the data accumulated. The researcher made sure not to influence the information with personal experiences. Compiling the audio recordings and listening with the supervisors to audit and make sure the same conclusion was reached. Objectivity helped the enhancement of confirmability.

1.9.4 Transferability

Transferability refers to the extent in which results can be applied to a different context. It is the capacity to generalise from the discoveries to a higher extent of the populace however not aiming. for replicability (Norman, & King,2020:27; Polit and Beck,2021:570. In this study, transferability and authenticity was attempted by ensuring that the methodology used and the data collected are all well described in thick and dense descriptive details. The findings were supported by direct quotes as obtained from the audio recordings.

1.9.5 Authenticity

Authenticity concerns itself with the extent to which the researcher equally and authentically displays a range of realities as stated in Polit & Beck,2021:570. It appears in a report where it conveys the emotions and tone of the participant’s experience, Peer scrutiny/Debriefing plays a part (Norman& King,2020:26).In this study authenticity is proven and/or shown by bracketing (the researcher removing any judgement or everyday perceptions or beliefs from the study) Weatherford and Maitra,(2019:9) herby during the interviews and data analysis the researcher did not contaminate data with personal ideas ,The researcher listened attentively and tried not to impose own interpretation of the data. The ability of the researcher to give information in a way that allows the study to be realistic and well descripted makes it easy to duplicate which enhances authenticity.

1.10 SIGNIFICANCE OF THE STUDY

A research study should be significant to the nursing profession and contribute to the body of knowledge (Brink, van der Walt & van Rensburg 2018:61). The findings of the study should benefit the Department of Health, patient care, health care facilities and nursing practice.

- ✓ *Department of Health*

  The findings should assist in the formulation of improved CCMDD programme strategies to address the identified factors contributing to attrition from the CCMDD programme. The development of policies and guidelines to promote and facilitate patient retention on the programme.
- ✓ *Patient care*

  The findings should contribute to patients feeling more supported as healthcare providers are aware of the factors that contributed to attrition rate from the CCMDD programme. Thereby improving retention and adherence to treatment; assist health care providers to facilitate and foster patients' adherence to the programme, and contribute to creating interventions to decrease the attrition rate for the programme
- ✓ *Nursing practice*

  The findings should enhance awareness 'of staff towards the factors participant raised during the research. Strategies can be planned and implemented to address these factors to ensure patient stay on the CCMDD programme and improve the quality of nursing care and support rendered to patients living with HIV.

1.11 DEFINITIONS OF KEY TERMS

In this study, the following key terms were used as defined below.

1.11.1 Antiretroviral therapy (ART)

The World Health Organization (2016:1-3) refers to antiretroviral therapy (ART) as medical treatment regimen for people infected with human immunodeficiency virus (HIV). The standard treatment consists of a combination of drugs specifically designed to suppress the replication of the virus. ART decreases patients' total burden of HIV maintains function of the immune system and slows down the progression of HIV/AIDS.

In this study, antiretroviral therapy referred to first regimen or second regimen of ART drugs/medicines that the participants collect at external or internal locations for six months.

1.11.2 Attrition

Attrition is defined as a reduction or decrease in numbers, size or strength. The rate of reduction could be the number of individuals leaving a company or a programme instead of choosing to stay for a longer period (Bharathi & Paramashivaih 2015:746).

In this study, attrition referred to the number of patients that had left or asked to leave the central chronic medicines dispensing (CCMDD) programme.

1.11.3 Chronic disease

Mosby's Medical and Nursing Dictionary (1986:239) defines a chronic disease or disorder as "developing slowly and persisting for a long period, often for the remainder of the lifetime of the individual". Chronic diseases require ongoing medical attention or limit activities of daily living. Chronic non-communicable diseases (NCDs) are the result of a combination of genetic, physiological, environmental and behavioural factors. Common NCDs include arthritis, asthma, cancer, diabetes, thyroid disease and depression (WHO, 2013). Chronic communicable diseases include HIV and TB (WHO, 2016). In this study, chronic disease referred to HIV, and its management by ART.

1.11.4 Central Chronic Medicine Dispensing and Distribution (CCMDD) programme

The acronym CCMDD is the short term for the National Department of Health's central chronic medicine dispensing and distribution programme, which distributes and dispenses medicine from a central point for patients with chronic conditions who are stable on treatment (Health Systems Trust 2019:2). In this study, CCMDD referred to the programme and its use by the participants living with HIV/AIDS in the selected area.

1.11.5 People living with human immunodeficiency virus (HIV)

People living with HIV or HIV-positive people are people infected with the human immunodeficiency virus (HIV), a retrovirus which if untreated may progress to acquired immunodeficiency syndrome (AIDS) (UNAIDS, 2018). In this study, people living with HIV referred to the patients registered on the CCMMD programme who collected their treatment; patients who asked to leave the programme, and patients who chose to leave the programme.

1.11.6 Retention

Collins English Dictionary (1991:1321) defines retention as “n. 1 the act of retaining or state of being retained”. Retention is one of the key reportable indicators in assessing the success of ART programmes (WHO, 2020). In this study, retention referred to retaining or keeping patients on the CCMDD programme in order to control HIV and promote their health by faithfully taking ART medication.

1.12 ETHICAL CONSIDERATIONS

Ethics deals with matters of right and wrong. When humans are used as study participants, care must be taken to ensure that their wellbeing and rights are protected (Polit & Beck 2021:146). Accordingly, the researcher obtained permission to conduct the study, obtained informed consent from the participants, and observed the ethical principles of beneficence, respect for human dignity, and justice (Brink, van der Walt & van Rensburg 2018:29).

1.12.1 Permission

The researcher obtained written ethical approval and permission to conduct the study from the Faculty of Health Sciences, Research Ethics Committee of the University Pretoria (see Annexure A.1). Permission was also obtained from the Department of Health and the sub-district of Bojanala (see Annexure A.2).

1.12.2 Informed consent

The researcher informed the participants of the purpose and significance of the study, that participation was voluntary and that they were free to withdraw from the study at any time should they so wish. The participants were allowed to ask any questions they might have regarding the study and participation. The participants then signed informed consent (see Annexure B.2).

1.12.3 Respect for human dignity (persons)

The principle of respect for human dignity refers to participants' autonomy and right to self-determination, which means that participants have the right to decide whether to participate or not in the study (Brink, van der Walt & van Rensburg 2018:29; Polit & Beck 2021:135). The researcher treated all the participants as individuals and with respect and informed them that there would be no penalty should they decide not to participate.

1.12.4 Justice

The principle of justice refers to the right to privacy and the right to fair treatment (Polit & Beck 2021:135). The researcher assured the participants of privacy, confidentiality and anonymity, and treated all the participants with respect and fairly (Botma, Greeff, Mulaudzi & Wright 2010:19). The researcher informed the participants that no names would be given in the research report and their information would be treated with the utmost confidentiality. In addition, all the data would be kept in a password protected file safely under lock and key, and accessible only to the researcher. The researcher provided her contact details so that participants could contact her, if necessary. The participants signed a second informed consent form after the interviews for their responses to be published.

1.12.5 Beneficence

The right to protection from discomfort and harm is based on the ethical principle of beneficence. The principle of beneficence states that one should do good and, above all, do no harm (Gray, Grove & Sutherland 2017:176; Polit & Beck 2021:133). Accordingly, the researcher ensured that the participants were not exposed to any physical, emotional, social or other harm. The researcher respected the participants' decisions, adhered to cultural aspects, and took care of their well-being (Gray, Grove & Sutherland 2017:176) Provision was made for debriefing sessions after interviews by the health centre's resident psychologist, if necessary.

1.13 LAYOUT OF THE STUDY

The study consists of five chapters. Table 1.1 lists and describes the chapters.

Table 1.1 Layout of the chapters

Chapter	Title	Description
1	Orientation to the study	Outlines the problem, purpose, research design and methodology of the study, and defines key terms.
2	Literature review	Discusses the literature review conducted for the study.
3	Research design and methodology	Describes the research design and methodology.
4	Data analysis and interpretation, and results	Discusses the results and discussion and interpretation, and findings. [*Article format*].
5	Findings, limitations and recommendations	Briefly summarises the findings and limitations of the study and makes recommendations for practice and further research.

1.14 CONCLUSION

This chapter described the overview of the study comprising of problem, purpose and significance, research design and methodology of the study and defined key terms. Chapter 2 discusses the literature review undertaken for the study.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

Chapter 1 provided an overview of the study. This chapter discusses the literature review conducted for the study.

A literature review is an organised, written presentation of what has been published on a topic and involves researching, reading and understanding literature relevant to a study (Burns, Grove & Gray 2017:120). A literature review involves researching, reading and understanding the literature relevant to the study (Brink, van der Walt & van Rensburg 2018:55). The purpose of a literature review is to convey what is currently known regarding the topic of interest and to assist researchers to comprehend and extend their knowledge of the phenomenon under study (Polit & Beck 2021:83).

The literature review covered the global magnitude of Human immune deficiency virus (HIV) HIV prevention strategies, care and treatment available; HIV patients' retention and attrition on the Central Chronic Medicine Dispensing and Distribution (CCMDD) programme; gender differences in HIV treatment, progress and outcomes, and programmes for Antiretroviral treatment (ART) as well as medicines collection options.

2.2 GLOBAL HIV MAGNITUDE

According to the results stipulated in UNAIDS (2023). In 2022, 39 million people globally were living with HIV; 1.3 million people became newly infected; 630,000 people died from AIDS-related illnesses, and 29.8 million people were accessing ART (UNAIDS, 2023). Of the people living with HIV (PLHIV), 37.5 million were adults (15 years and older); 1.5 million were children (0-14 years old); 53% of all PLHIV were women and girls, and globally 86 of PLHIV knew their HIV status. Approximately 9.2 million people did not know that they were living with HIV (UNAIDS, 2023).

67% of people living in Sub-Saharan Africa are living with HIV/AIDS (UNAIDS,2023) and even after decades of fighting for access to HIV medication that is available in well developed countries, people living with HIV in developing countries are denied the right to treatment by health systems that prioritize profit over people.

According to recent statistics, India has about 2.1 million people living with HIV/AIDS and it is seen that 7% of the new infections are in children as they mostly present late or are diagnosed late at the ART centre (Archarya, Palkar, Palvehizsayed and Singetia, 2021:1). This makes it the third largest HIV epidemic in the world (Bhagavathula, Clark, Sharma, Chiabia, Vidaygar, Chatu 2021:148).

Central and Western Africa is a home to 5 million people living with HIV. Kenya has the fourth largest HIV epidemic in the world, affecting the whole population. Kenya has an estimated amount of between 1.6 million to 2.1 million HIV infections (Waruru, Wamicwe, Mwangi, Achia, Zielinski-Gutierrez, Ng'ang'a Tylleskar, 2021:1 as supported by Ugwire, 2021:1), the HIV prevalence in Kenya has significantly increased from 4.8% to 5.9%. The Democratic Republic of Congo latest demographic and health survey state there is an estimate of 520 000 people living with HIV and 68 000 of them are children and with the current HIV response. (UNAIDS,2021). South Africa has an increased amount of people living with HIV since the year 2021. The estimated amount is roughly 8.45 million (Stats SA, 2021:15). This then makes South Africa the country with largest number of people enrolled on the ART programme in the entire world, causing great concern with the government's goal to eradicate HIV/AIDS (Stats SA, 2021:16).

North west has a total population of 3748438 there are four districts' municipalities namely Dr Kenneth Kaunda, Ngaka Modiri Molema, Dr Ruth Mompati and Bojanala which is the most populus district (Department of Health 2020:3). Bojanala has the highest prevalence due to mining and other economic activities; these districts consist of five sub- districts namely Madibeng, Moses Kotane, Kgetleng River, Moretele and Rustenburg, the district has a population of 1631572 (Department of Health 2020:545). Both the international and interprovincial migration trends have influenced the Northwest province's infected population size which currently has an estimated number of 524 593 people living with HIV/AIDS (Stats SA, 2021:25). In the end it is seen that the magnitude of HIV can only decrease if there are no new infections amongst newborns and adolescents.

2.3 HIV PREVENTION AND CARE

HIV remains a major global public health issue. There is no cure for HIV infection, but with access to effective HIV prevention, diagnosis, treatment and care, including for opportunistic infections, it has become a manageable chronic health condition, and is fully preventable (WHO, 2021). HIV is spread from the body fluids of an infected person, including blood, breast milk, semen and vaginal fluids (WHO, 2021). Behaviours and conditions that put people at greater risk of contracting HIV include having unprotected anal or vaginal sex, having another sexually-transmitted infection (STI), such as syphilis, and sharing contaminated needles, syringes and other injecting equipment and drug solutions when injecting drugs. (ART) does not cure HIV but allows a person's immune system to get stronger (WHO, 2021) and prevents chances of either enhancing or causing comorbidities (Enslin and Mallya,2022:2).

It is evident that adolescents are more vulnerable to getting HIV then facing challenges such as puberty coupled with sexual maturation and most do not know about the existence of pre-exposure prophylaxis (prEP) interventions and non-prEP interventions, Goldstein, Arachary, Adona, Haberer et al.,2023:S95, Non prEP interventions include increasing HIV prevention knowledge and decreasing risky sexual behaviours such as use of condoms, circumcision Goldstein, Arachary, Adona et al 2023:S108.PrEP related intervention include effective oral fixed dosed combination that consists of tenofovir disoproxil fumarate (TDF) and emtricitabine (FTC) in a single pill ,which also carries its own AIDS related stigma especially in the youth that makes initiation and adhering is the only thing that affects its effectiveness(Durado, Magno, Greco, Zucchi, Ferraz ,Westin& Grangeiro,2023:2). It is evident that the youth's ignorance and lack of information plays significant role on how HIV is prevented, viewed or impacted.

2.4 HIV PATIENTS' ATTRITION AND RETENTION

As the people living with HIV (PLWH)population keep growing, it is vital to have a continuous look out for effective strategies and to address the needs to prevent any attrition from any care, Cassidy, Cornell, Runeyi, Dutyulwa, Kilani et al.,2022:1, further more retention to care then is a critical component for treatment, Shah, Etheredge, Nkuta, Waterfield et al.,2022:2 which together creates a holistic approach to PLWH.

2.4.1 Attrition

Attrition in HIV refers to individuals who either never returned for follow up appointments, defaulted (dropped out, transferred or relocated to another area) as cited in Kahacho, Wamwea, Malenja, Aomo,2023:11, it also refers to a reduction or decrease in numbers, size or strength. The rate of reduction could be the number of individuals leaving a company or a programme instead of choosing to stay for a longer period (Bharathi & Paramashivaih 2015:746, attrition from ART care remains a major public health concern and is a key indicator in assessing the success of HIV programmes (Hassan, Mwaringa & Berkley 2015:1).There was a prediction in the study done by Shigayeva, Gcwensa, Ndlovu ,Ntumase, Sabela, Ohler, Trivino-Duran ,Kamara, Hlophe, Isaakidis, Van Cutsem,2022:1 that the barriers that caused the attrition was the male gender ,the youth and people that were on ART for a shorter period before being enrolled . Shigayeva, Gcwensa, Ndlovu and Ntumase.,2022:12 even CCMDD itself with the rigid rules, and inadequate infrastructure.

In 2019, Pascom, Meireles and Benzaken (2019; S69) explored factors associated with attrition in the three steps of the HIV continuum of care related to the 90-90-90 targets – access to diagnosis, treatment initiation, and virologic suppression – in adults in Brazil. The study analysed data from the Brazilian Ministry of Health registration of ART dispensation and all CD4+ and viral load counts performed in the country’s public health system (Pascom, Meireles & Benzaken 2019:S69).

The three attrition indicators were late presentation to care, not being on ART within the last 100 days of the year (missed appointments), and not being virologically suppressed. Lower educational level and black/brown/indigenous race/colour were associated with worse outcomes in the three indicators. Environmental indicators, namely region, size, and social vulnerability index of the municipality of residence, played an important role. Younger age was strongly associated with not being on ART and not showing virological suppression. Pascom, Meireles and Benzaken (2019:S78) emphasized there was an urgent need to consider the health inequities in the country when developing HIV-related public policies in order to decrease attrition and promote retention.

As access to ART in Africa has increased dramatically, concerns have been raised regarding patient attrition, an important measure of programme quality. The study examined data from patients initiating ART in 638 facilities in nine African countries from 2005 to 2010, a period characterised by massive treatment expansion. Examined trends in 6- and 12-month attrition over calendar time and as ART services matured and identified factors such as behavioural biologic associated with attrition.

Across all nine African countries, 6- and 12-month cohort attrition was 21% and 29%, respectively, with no decrease over calendar time or as ART services matured. In addition, attrition remained stable or decreased across both measures in nearly all countries. Initiating ART in facilities with more documented transfers and fewer women on ART, and in cohorts with poor CD4 count documentation and lower median CD4 count on ART initiation was associated with increased 6-month attrition. Increased 12-month attrition was observed in semi-urban facilities and those with more documented transfers, and in cohorts with poor CD4 count documentation, whereas higher patient load was associated with decreased attrition. The study found stable or decreasing trends in attrition for ART patients in most countries, but further reductions in attrition are needed to maximise individual and population benefits of ART (Elul, Saito, Chung, Hoos & El-Sadr 2017:1433).

In 2020, Moges, Olubukola, Okunlola and Berhane (2020:439) wished to determine HIV patients' clinical retention and attrition and to identify factors associated with retention and attrition in Ethiopia. The main determinants of attrition were being unmarried; non-disclosed HIV status; poor drug adherence; poor functional status; being underweight, and advanced clinical stage. Facilitators of HIV patient retention in care were absence of opportunistic infections, normal hemoglobin status, and non-substance use. Moges, Olubukola, Okunlola and Berhane (2020:442) found a low level of retention to care among HIV patients in Ethiopia and concluded that socio-economic, clinical, nutritional and behavioural intervention was necessary to achieve adequate patient retention in clinical care.

Although ART is expanding and advancing in Ethiopia, a high rate of attrition of patients from HIV care is a major driver of poor performance of HIV/AIDS programmes, which leads to drug resistance, morbidity and mortality (Dejen, Jara, Yeshanew, Fentaw, Feleke, Girmaw & Wagaye 2021:445). Dejen, Jara, Yeshanew, Fentaw, Feleke, Girmaw and Wagaye (2021:446) assessed the incidence of attrition and its predictors among adults receiving first-line ART in Woldia town public health facilities, Northeast Ethiopia and found that young age, bedridden functional status, low viral load, disclosure status, and poor adherence were the main predictors of attrition. Viral load result of less than 1,000 copies/mL had a preventive effect on attrition (Dejen, Jara, Yeshanew, Fentaw, Feleke, Girmaw & Wagaye 2021:453).

2.4.2 Retention / Adherence

Collins English Dictionary (1991:1321) defines retention as "the act of retaining or state of being retained". Retention is one of the key reportable indicators in assessing the success of ART programmes (WHO, 2020). Long-term success of HIV ART requires near-perfect adherence maintained throughout a patient's lifetime (Inzaule, Hamers, Kityo, de Wit & Roura, 2016:1). However, perceptions towards ART and patterns of adherence may change over time. Inzaule, Hamers, Kityo, de Wit and Roura (2016:1) assessed challenges to long-term adherence in adolescents and adults in three regional treatment centres in Uganda. Factors that affected adolescents' adherence were unstructured treatment holidays, delays in disclosure of HIV status by caretakers, stigma (mainly in boarding schools), and diminishing or lack of clinical support. In particular, there was minimal support for early and gradual disclosure for caretakers to the infected children, diminishing clinical support for young adults during transition to adult-based care and declining peer-to-peer support group activities. The main theme in adults was challenges with treatment access among temporary economic migrants. Both adolescents and adults stated challenges with disclosure in intimate relationships Tibebu, Rade, Kebede and Kassie, 2023:2 treatment-related factors including side effects, supply of single tablets in place of fixed-dose combined drugs Wei, Zhou, Li, Wang, Wu, Ma & Guan (2023:2), supply of drug brands with unfavourable taste and missed opportunities for counselling due to shortage of staff. The study concluded that adherence counselling and support should be adapted differently for adolescents and adults and to the emerging life course challenges in long-term treated patients. Programmes should also address constraints experienced by temporary economic migrants to ensure continuity of treatment within the host country (Inzaule, Hamers, Kityo, de Wit & Roura, 2016:12).

2.5 GENDER DIFFERENCES IN DISCLOSURE AND PREVALENCE OF HIV

Various individual, health and psychological factors affect and shape disclosure of HIV status.

Mumbai, India, Singh, Sharma and Sharma (2021;380) examined the process of disclosure, how gender affects disclosure, and how it differs among PLHIV. Of the participants, 30% had not disclosed their status; females were significantly more likely to disclose their status to their spouse or regular partner, and 52% of the females were tested after they lost their husbands to AIDS or living with HIV. Of the females, 94% reported that self-perceived stigma and 83% stated fear of being discriminated against prevented them from disclosing their status.

In Tehran, Iran, Sadjadipour, Rezaei, Irandoost, Ghaumzadeh, Nadushan, Gholami, Salimi and Shushtari (2022:2) examined gender inequality in HIV infection and its determinants to identify and explain reasons for the gap in HIV prevalence between females and males. The study analysed data from high-risk patients admitted to a voluntary counselling and testing facility in Tehran from 2004 to 2018. The main factors explaining the differences in prevalence between males and females were job exposure; drug abuse; history of imprisonment; injection drug; heterosexual unsafe sex and having an HIV-positive spouse. The study concluded that policymakers need to plan and conduct gender-based preventive and screening programmes. In addition, policies aimed at promoting HIV preventive behaviours among males might reduce the gap in HIV infection between females and males in Iran (Sadjadipour, Rezaei, Irandoost, Ghaumzadeh, Nadushan, Gholami, Salimi & Shushtari 2022:7).

A study in Dar es Salaam, Tanzania, investigated gender differences in HIV progression and treatment outcomes during first line ART in a hospital setting to assess clinical, social demographic, virological and immunological factors (Mosha, 2020:2). The majority of the patients (70%) were female. At baseline, the women had significant lower educational level; lower monthly income as supported by Lubega, Nakakwa, Narciso, and Newman., et al 2021: 3; Hamilton, Wells, Higgs,2022:916; lower ARV knowledge, less advanced HIV disease, higher CD4 cell count and higher BMI. After one year of treatment, a higher proportion of women survived; 69% of women and 45% of men had undetectable plasma viral load. After one year, both men and women had similar clinical and immunological conditions. It was not clear why women lost their immunological advantage over men despite a better virological treatment response (Mosha, 2020;1).

Women are disproportionately affected by HIV/AIDS in sub-Saharan Africa. In 2016, Sia, Onaja, Hazizadeh, Heymann, Brewer and Nandi (2016:1136) investigated sociodemographic and behavioural characteristics underlying gender inequalities in HIV/AIDS in 21 sub-Saharan countries. The study examined differences in HIV/AIDS prevalence between women and men due to sociodemographic factors, sexual behaviours, and awareness of HIV/AIDS. The results indicated a low difference in HIV/AIDS prevalence between women and men in Liberia (1%) and Swaziland (11.5%), but 84% higher prevalence among women in Uganda and 92% in Ghana due to distributions of HIV/AIDS risk factors, as supported (Jarolimova, Platt, Curtis and Phillpotts al 2022:707). In most of the countries, however, the gender inequalities were chiefly due to differences in the responses to risk factors; the differential effects of age, marital status, and occupation for women and men were significant contributors. In Cameroon, Guinea, Malawi and

Swaziland the gender inequality was due to a combination of the composition and response effects (Sia, Onaja, Hazizadeh, Heymann, Brewer & Nandi 2016:1139).

2.6 WOMENS RISKS FOR HIV CAUSING GENDER INEQUALITY

Violence against women, particularly intimate partner violence and sexual violence, is a major public and clinical health problem and a violation of human rights (WHO 2021; Barbier, Charlot and Lefevre 2022:2). It is rooted in and perpetuates gender inequalities. Globally, 1 in 3 women experience physical and/or sexual violence in their lifetime, mostly by an intimate partner. The United Nations (UN) defines violence against women as “any act of gender-based violence that results in, or is likely to result in, physical, sexual, or mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life”. Hossain, Mahajan, Sekhri (2022:58), Intimate partner violence refers to behaviour by an intimate partner or ex-partner that causes physical, sexual or psychological harm, including physical aggression, sexual coercion, psychological abuse and controlling behaviours (WHO, 2021).

Gender inequalities, inequalities faced by key populations, and inequalities between children and adults threaten the global AIDS response (UNAIDS 2022:1). The world will not be able to defeat AIDS while reinforcing patriarchy. In high HIV burden areas, women subjected to intimate partner violence and infidelity have a 50% higher chance of acquiring HIV, (Hamilton, Wells and Higgs, 2022:910). Across 33 countries from 2015 to 2021, only 41% of married women aged 15 to 24 could make their own decisions on sexual health. A feminist route map is the only effective way to ending AIDS, achieving the sustainable development goals and ensuring health, rights and shared prosperity (UNAIDS 2022:1). The effects of gender inequalities on women’s HIV risks are especially pronounced in sub-Saharan Africa, where women accounted for 63% of new HIV infections in 2021. Adolescent girls and young women (aged 15-24) are three times more likely to acquire HIV than their male counterparts. The driving force is power. Traditional practices that create unequal power dynamics between men and women are ingrained in African society which normally benefits the men Msuya 2020:45 and women are afraid or unable to negotiate or control safe sex, leaving them especially vulnerable to the impact of HIV/AIDS. Women face barriers to accessing health care services available when they need to obtain permission from their spouses. Enabling girls to stay in school until they complete secondary education reduces their vulnerability to HIV by up to 50%.

Leaders need to ensure all girls are in school, are protected from violence, which is often normalised, including through underage marriages, and have economic pathways that guarantee them a hopeful future. By interrupting the power dynamics, policies can reduce girls' vulnerability (UNAIDS 2022:3).

In 2021, 80% of women were accessing treatment, but only 70% of men were on treatment. Increasing gender-transformative programming in many parts of the world is key to halting HIV/AIDS. Advancing gender equality will benefit everyone (UNAIDS 2022).

2.7 PROGRAMMES FOR ART MEDICINES COLLECTION GLOBALLY

Differentiated service delivery (DSD) models were initially developed to combat suboptimal long-term retention in HIV care and better measure and adapt limited health systems resources to patient needs, primarily in low- and middle-income countries. The models are designed to streamline care along the HIV care cascade and range from individual to group-based care and facility to community-based health delivery systems (Roy, Moore, Sikazwe & Holmes 2019:324). Recent trials and evaluations of national scale-up provide evidence for effectiveness and performance at scale. Relative implementability of DSD models may differ based on patient preference, logistical complexity of model adoption and maintenance, human resources and pharmacy supply chain needs, and comparative cost-effectiveness. Challenges during scale-up emphasize the need for accurate differentiation of patients, sustainable inclusion of a new cadre of health care worker (the community health care worker) and substantial strengthening of existing pharmacy supply chains. To maximise the public health impact of DSD, systems need to be patient-centred and adaptive, as well as employ robust quality improvement processes (Roy, Moore, Sikazwe, I & Holmes 2019:331)

Facility-based ART provision for stable HIV patients congests health services in resource-limited countries. The scale-up of ART increased the number of HIV-infected patients on treatment, especially in sub-Saharan Africa (Vogt, Kalenga, Lukela, Salumu, Diallo, Nico et al 2017:326). In 2002, Médecins Sans Fronteres (MSF) started an ART supply programme in Kabinda Hospital, a major referral hospital in the south-western part of Kinshasa, an area in the Democratic Republic of Congo, in collaboration with the Ministry of Health. By 2010, over 6,000 patients were receiving ART at the hospital. This centralised provision of care led to overcrowding and long waiting times. Consequently, in 2010, MSF started a decentralizing project to provide ART for clinically stable

HIV patients through community-based medication refill centres ("poste de distribution communautaire" [PODI]) in Kinshasa. The main objective of the PODI programme was to offer quick and demedicalised access to ART by separating medical care from drug supply. No medical care is offered, but referral to Kabinda Hospital is organised if needed (Vogt, Kalenga, Lukela, Salumu, Diallo et al 2010:327).

The ART programme supported by Médecins Sans Frontières (MSF) in the rural Malawian district of Chiradzulu was one of the first in sub-Saharan Africa to scale up ART delivery in 2002 (Maman, Chillima, Masiku, Ayouba, Masson, Szumilin, Peeters, Ford, Heinzelmann, Riche & Etard 2016:1). This was done in order to ensure the availability and accessibility of the programme to patients living with HIV thereby improving their life expectancy.

In 2013, Maman, Chillima, Masiku, Ayouba et al (2016:2) conducted a cross-sectional household-based survey between February and May, 2013 to evaluate the cascade of care, including population viral load in the district. A total of 7,267 individuals aged 15-59 from 4,125 randomly selected households participated. All who tested positive had their CD4 count and viral load measured. Overall HIV prevalence and incidence were 17.0%. Of the participants, 76.7% had been previously diagnosed; 71.2% were under care; 65.8% were receiving ART, and 61.8% were HIV positive with a viral load of less than 1000 copies/mL. The findings indicated that a high level of population viral suppression and low incidence can be achieved in high HIV prevalence and resource-limited settings (Maman, Chillima, Masiku, Ayouba et al 2016:9).

HIV/AIDS clinics in Uganda and other low-income countries face increasing numbers of patients and staff shortages. In 2006, the pharmacy-only refill programme (PRP) was started at the Infectious Diseases Institute (IDI) a large HIV/AIDS clinic in Kampala, Uganda, (Babigumira, Castelnuovo, Stergachis, Kiragga, Shaefer, Lamorde, Kambugu, Muwanga & Garrison 2011:1). The PRP was started to reduce staff shortages and optimise patient care by substituting pharmacy visits for standard of care (SOC) involving monthly physician (clinic) visits for accessing ART medicines. In 2011, Babigumira, Castelnuovo, Stergachis, Kiragga et al examined the favourable immune response (FIR) between patients on PRP and SOC to assess the cost-effectiveness of the programme. The study found that the PRP was more cost-effective than SOC and concluded that similar programmes might help large HIV/AIDS clinics in Uganda and other low-income countries to cope with increasing numbers of patients seeking care (Babigumira, Castelnuovo, Stergachis, Kiragga et al 2011:5).

South Africa is home to 7.7 million people living with HIV and supports the largest antiretroviral therapy (ART) programme worldwide (Liu, Christie, Munsamy, Roberts, Pillay, Shenoi, Desai & Linnader 2021:549). The quadruple burden of disease in South Africa, including the HIV/AIDS epidemic, placed enormous strains on public healthcare (PHC) facilities (Smith & Nicol 2020:e032530). These strains specifically compromised the resources available to deal with high volumes of chronic diseases that contribute to medicine shortages and poor service delivery. In an attempt to address these challenges, the CCMDD programme was implemented to provide public sector patients with alternative access to vital ART and other chronic medication. Despite global investment in HIV service delivery and the parallel challenge of non-communicable diseases (NCDs), there are few integrated programmes that address both HIV and NCDs through differentiated service delivery. In 2014, the Department of Health launched the CCMDD programme to provide patients who have chronic diseases, including HIV, with alternative access to medications via community-based pick-up points (Liu, Christie, Munsamy, Roberts et al 2021:549).

The CCMDD distributes and dispenses medicine from a central point for patients with HIV/AIDS and other chronic conditions who are stable on their medication. Such chronic conditions include arthritis, asthma, diabetes mellitus and hypertension. The purpose of the CCMDD was to increase accessibility of medicine by providing medicine parcels to registered patients from outlets that are convenient for them (Health Systems Trust [HST] 2019:1).

South Africa has an overburdened public health system. Patients experience poor quality of care as a result of high volumes accessing minimal resources. The CCMDD programme adopts a task-shifting approach – taking the responsibility of a high volume of patients out of the hands of the public health facility staff and placing it in the hands of the external service provider (Pharmacy Direct), which dispenses and distributes medicines (HST 2019:1; Gcwabe 2021:1). Giving eligible stable chronic patients the opportunity to collect their medication from a convenient pick-up point enables the facility to focus on unstable chronic patients as well as acute mother and child patients. Reducing the burden on healthcare workers in this way improves the quality of care at the health facility (HST 2019:1).

A pick-up point is a place approved by the Department of Health to provide the service of handing out patient medicine parcels. Registered pick-up points include Clicks Pharmacies, Dis-Chem Pharmacies, Medirite Pharmacies, Pick ’n Pay Pharmacies, independently owned pharmacies, doctors' surgeries, other business sites, as well as community-based sites, such as churches (HST, 2019).

In 2019, the Health Systems Trust with Technovera, a South African company founded by Neo Hutiri, launched the Pelebox project (Ramphal 2021:1). The Pelebox Smart Locker was invented to improve access to medicine for patients with chronic diseases in under-serviced communities. The Pelebox allows a facility to dissolve its Spaced Fast-Lane Appointment (SFLA) collection point – a facility-resourced internal pick-up point where CCMDD patients queue for their medicine parcels. The purpose of the Pelebox is to establish a cost-effective, convenient, quick and efficient alternative medicine parcel collection system. If a facility has fewer than 1,500 patients, all CCMDD medicine parcels held at the facility may be collected from the Peleboxes installed on its premises. So, the Pelebox thereby relieves the facility staff of managing the SFLA and helps to decongest the clinic. By making patients' access to medicine more convenient, rapid and efficient, usage of the Pelebox also helps to increase their adherence to medicine, and thus supports South Africa's achievement of the second and third of the UNAIDS 90-90-90 targets (Ramphal, 2021:1). To date, Peleboxes have been established at several clinics in KwaZulu-Natal and Gauteng province.

In 2021, Liu, Christie, Munsamy, Roberts, Pillay, Shenoi, Desai and Linnader (2021:549) explored and described the expansion of the CCMDD. By October 2019, 3,436 health facilities were registered with CCMDD across 46 health districts (88% of South Africa's districts) and 2,037 external pick-up points had been contracted by the Department of Health. Over two million patients were actively serviced through CCMDD, including 76% collecting ART (64% ART only, 12% ART and NCD/comorbidities) and 24% collecting medications for chronic diseases only. The study concluded that the CCMDD programme expansion indicates the potential for a differentiated service delivery strategy in resource-limited settings irrespective of the patients' chronic disease condition (Liu, Christie, Munsamy, Roberts et al 2021:554).

In 2022, Bogart, Shazi, MacCarthy, Mendoza-Graf, Wara, Zionts, Dube, Govere and Bassett (2022:2600) evaluated the implementation of the CCMDD. The participants regarded the programme favourably and said it decreased stigma concerns. Patient-level barriers included inadequate education about CCMDD and inability to get refills on designated dates. Organisational-level barriers included challenges with communication and transportation, errors in medication packaging and tracking, rigid CCMDD rules, and inadequate infrastructure (Bogart, Shazi, MacCarthy, Mendoza-Graf et al 2022:2610). The study recommended providing patient education and improved communication regarding refills; providing dedicated space and staff and ongoing training (at the organisational/Clinic level) and allowing for prescription renewal at pick-up points (Bogart, Shazi, MacCarthy, Mendoza-Graf et al 2022:2612).

Providing ART for millions of people living with HIV requires efficient, patient-centred models of differentiated ART delivery. In their assessment of the CCMDD, Dorward, Msimango, Gibbs, Shozi, Tonkin-Crine, Hayward, Butler, Ngobese, Drain and Garrett (2020: e05412) found the material challenges of standard clinic-based ART provision included long waiting times, poor confidentiality and restricted opening hours, which discouraged patient engagement. In contrast, CCMDD allowed quicker and more convenient ART collection in the community. This required new competencies around accessing care and helped change the meanings associated with HIV by normalising treatment collection. CCMDD was perceived by patients as a reward for taking ART well and helped reduce disruption to other life practices such as employment. At private pharmacies, some patients worried about inadvertently revealing their HIV status. The study concluded that CCMDD overcame material barriers to attending clinics, changed the meanings associated with collecting ART, and was less disruptive to their social lives. Expansion of community-based ART delivery programmes may help facilitate engagement in HIV care (Dorward, Msimango, Gibbs, Shozi, Tonkin-Crine et al 2020: e035412).

In 2020, Lebina, Kawonga, Oni, Kim and Alaba (2020:2) estimated the cost of implementing the integrated chronic disease management (ICDM) model in primary healthcare (PHC) clinics in South Africa. Current ICDM model activities cost accounted for 84% of the annual mean cost while additional costs for higher fidelity were 16%. For the additional cost, 49% was for facility reorganisation, 31% for adherence clubs, and 20% for training nursing staff. The study found that minimal additional cost is required to implement the ICDM model with higher fidelity.

2.8 CONCLUSION

This chapter discussed the literature review conducted for the study. Chapter 3 describes the research design and methods of the study.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

Chapter 2 discussed the literature review conducted for the study. This chapter discusses the research design and methodology, including the population, sampling and sample, data collection and analysis. The purpose of the study was to explore and describe the factors contributing to attrition rates amongst people living with HIV from the CCMDD programme in the Bojanala district, Northwest Province.

3.2 RESEARCH DESIGN

Polit and Beck (2021:51) describe a research design as the plan for addressing a research question, including specifications for enhancing the integrity of the study. The research design is a blueprint for conducting a study and indicates the basic strategies a researcher will use to answer the research questions (Brink, van der Walt & van Rensburg 2018:101). In this study, the researcher selected a qualitative, explorative and descriptive research design. This design enabled the researcher to gain an understanding of the factors that contribute to attrition rates amongst people living with HIV from the CCMDD programme in the Bojanala district, North West Province.

3.2.1 Qualitative research design

Qualitative research examines the qualities, characteristics or properties of the phenomenon under study factors contributing to attrition from CCMDD programme in the northwest province amongst people living with HIV. It is an approach that allows you to identify issues from the perspective of ones and the interpretations they give to one’s behaviour (Billups 2021:8). Qualitative studies accurately portray and answer the how and why of how the participants experience the phenomenon (Grove, Burns & Gray 2021:66). Qualitative designs are flexible, examine relationships between variables, and determine outcomes of interventions (Polit & Beck 2021:10; Brink, van der Walt & van Rensburg 2018:104). The researcher wished to examine the factors that contribute to the attrition rate amongst people living with HIV from the CCMDD programme in the Bojanala district, Northwest Province.

3.2.2 Exploratory design

Exploratory research investigates the full nature of the phenomenon, the manner in which it is manifested, and other factors related to it is usually conducted to address a problem identified Polit & Beck 2021:619 The researcher considered an exploratory approach appropriate to explore and understand the participants' perceptions and experiences.

Exploratory studies are conducted in order to gain insight into the chosen phenomenon and how it is understood and experienced (Polit& Beck 2021:619); In this study, the researcher explored the factors contributing to attrition from a medication dispensing programme in the northwest province amongst people living with HIV in the Bojanala district, Northwest Province. This was done by selected participants to do an individual interview, of which participants shared the factors that contributed to them leaving the CCMDD programme.

3.2.3 Descriptive design

A descriptive design enables researchers to describe variables in order to answer research questions with no attempt at establishing a cause-effect relationship (Polit & Beck: 2021:486).

Descriptive research is usually conducted in the natural environment of those being studied (Aggarwal & Ranganathan 2019:34). The researcher tried to find the in -depth understanding of factors that contribute to high attrition amongst people living with HIV from the CCMDD programme in the Bojanala district, North West Province which was the phenomenon under investigation and the focal point as well. The holistic approach was needed to be used in order to gain insight of the background of the factors and as well to understand the factors voiced out by the participants. The researcher therefore ensured that the factors were clearly understood and described, elucidating each one comprehensively.

3.3 RESEARCH METHODOLOGY

Polit and Beck (2017:510) describe research methodology as the “steps, procedures and strategies taken to investigate the problem being studied and to analyse the collected data”. Research methods are “the techniques researchers use to structure a study and to gather and analyse information relevant to the research question” (Polit & Beck 2017:517). The research methodology includes the population; sample and sampling; data collection and analysis.

3.3.1 Context

The study was conducted in a primary Health Centre (PHC) in Rustenburg. Most patients who are currently in the program are requesting deactivation. This was proven by the data capturing that is consistently given for statistics. This selected primary health center is situated in the Bojanala District in the Northwest province. This selected district consists of approximately 35 public health centers and six health centers which serves 35% of the district community. This study was conducted in one of the health centers, which is situated in a semi -rural area. The population is approximate of 28361.The clinic itself is within the radius of five kilometers and the centre consists of 29 community health nurses, six assistant nurses, three staff nurses and two operational managers. Out of the 29 community health nurses, seven specializes in NIMART and 15 are PHC nurses.

Some of the Professional nurses were not taught nor trained to use enroll patients for the CCMDD, those that were, were shown the technical part only. This centre has out-patients and does not admit any patients. Each consultation room has a computer connected to Wi-Fi and the system application (SYNCH) automatically uploaded for the CCMMD program which approximately has more than 4000 patients that are stable on chronic treatment on the program. 2130 out of 4000 which is almost 53% The professional nurses are responsible for educating the patient about the program and giving them a choice to be enrolled. Immediately after making sure that the patient understands the patient is enrolled, the patient is given a card and dates for collection. The designated health centre gives services mostly to mine workers. Majority of the individuals are people collecting ART medication in comparison to any other chronic conditions.

3.3.2 Population

A population is the entire aggregate of people or objects in which a researcher is interested or implied in the research question (Lobiondo-Wood, Haber 2021:280). In this study, the population was all the people living with HIV in the Bojanala district, North West Province registered on the CCMDD programme on Synch system (CCMDD online system) and taking ART at a selected health centre in Rustenburg. The study concentrated on people who had asked to leave or were removed from the CCMDD programme.

To be included in the study, the participants had to understand English, be older than 18 years of age, and have asked to leave, have left or been removed from the programme between 2020 and the date of the study. Exclusion of those who were still on the programme as it could've impacted the external validity of the findings.

3.3.3 Sampling and sample

Sampling is the process of selecting the sample from a population to obtain information regarding a phenomenon in a way that represents the population of interest Bhardwaj 2019:158; Polit and Beck 2021:497 add that sampling is "a process of selecting a portion of the population to represent the entire population so that inferences can be made". In this study, the researcher used non-probability sampling to select participants who were knowledgeable about the phenomenon the factors that contributed to the CCMDD programme and are living with HIV Brink, van der Walt & van Rensburg (2018:126). In non-probability sampling, everyone has an equal probability of being selected from the population and each participant was selected purposively (Bhardwaj 2019:158).

The researcher selected participants that had asked to be removed from the CCMDD programme or had left the programme because they had insight into the factors that contributed to the attrition rate. Participants were also recruited based on their experience with the CCMDD programme. The researcher consulted Synch (CCMDD online system) to see whether the participants were taking ART. All participant information was collected and stored in a secure, access-controlled location to prevent data being harvested or used by third parties as supported in the Popia Act. (Western Cape government 2020:1).

The researcher obtained permission from the selected health care centre manager and met colleagues (professional nurses) working in the outpatient department to explain the study and

request their assistance in identifying participants who were removed from the CCMDD programme. The researcher informed the professional nurses of the purpose of the study and gave them a list to help identify participants when they came to collect treatment.
The nurses gave prospective participants an information leaflet with the researcher's contact details so that they could contact the researcher if they wished to participate in the study**.** The researcher obtained the professional nurses' assistance because they met the participants frequently and could identify suitable candidates.

The researcher interviewed 12 participants who volunteered to participate then data saturation was reached. When more than 3 participants repeated the same information in different ways in which showed that with the information given, it showed that the study can potentially be replicated in a different context.

3.3.3.1 Sample size

12 participants volunteered to participate in the study

3.3.3.2 Inclusion criteria

- ✓ participants that have been removed recently from the CCMDD programme.
- ✓ participants should be volunteers from the designated facility.

- ✓ Participants that have requested deactivation during the period 2020-2021.
- ✓ The participants need to be above the age of 18.
- ✓ Participants needed to understand English in order to understand what is required from the study.

3.3.3.3 Exclusion criteria

- ✓ participants who are not on ART
- ✓ Participants who do not want to participate
- ✓ Participants under 18 years.

3.3.4 Data collection

Data collection is the process of collecting information (data) related to the research question in a systematic way to address a research problem (Polit & Beck 2021:510). Qualitative researchers collect their data in a real-world naturalistic setting (Polit & Beck 2021:510). In this study, data was collected by means of semi-structured interviews, using an interview guide (see Annexure B.3). Using in-depth interviews to explore participants experiences and perspectives is usually safer when exploring sensitive topics as it's purposeful (Polit and Beck 2021:520). Each interview took approximately 30-45 minutes.

3.3.4.1 Recruitment of the participants

Recruitment of participants is critical in every research study, recruitment in a qualitative study according to Bruneau, Moralego, Donavan and Parsons (2021:426) mean involving participants of the target group to be able to use the chosen sample to give you different perspectives or rather reach data saturation. After obtaining ethical clearance from the University of Pretoria Research Committee and the Northwest Province and permission from the designated health care center manager, the researcher met up with the colleagues (Professional nurses) working in the outpatient department to explain the research study and request assistance. Each professional nurse was informed about the study and given a list to help identify the participants who asked to be removed from the CCMDD programme when they come for collection of treatment and hand out the leaflet and the volunteers contact the researcher as the chosen recruitment strategy. Each individual was selected based on the inclusion criteria The reason for needing assistance from other professional nurses is that the team meets these participants frequently and the researcher might miss the needed participants.

3.3.4.2 Preparation phase

The researcher prepared a set of questions for a trial interview that could yield answers to the researcher question. The researcher created an invitation leaflet for participants interested to volunteer and participate in the study. The researcher arranged to meet the participants at the convenient time for them, this allowed them to be in a good space and give them time to read the consent form. This assisted in making them understand what was needed for the study. The researcher prepared the device to ensure there will be proper recordings with the permission from the participants to be transcribed. A secluded room was booked in advance to ensure privacy and comfortability. All participants were given time to read information leaflets forms so that everyone was on the same page and understood what was required out of them.

3.3.4.3 Pilot study

The researcher conducted a pilot interview to test the interview guide to determine that it elicited the required information and the time required for the interview (Brink, van der Walt & van Rensburg 2018:45). The researcher also wanted to ensure the questions are clear to the participants. (See annexure B.3).

The researcher conducted an interview with one participant who had recently requested to leave the CCMDD programme. Given the difficulty in finding willingly participants at the given time who were open to talking, only one participant could be recruited for the pilot study. The pilot interview encouraged probing skills and questions (Majid, Othman, Mohamad, Lim & Yusof 2017:1073-1074). The outcomes of the pilot interview were not included in the findings, the researcher found that the initial questions asked were limiting and didn't allow participant to divulge any deep information, through the pilot interview the researcher was able to adjust the process learnt in conducting the interviews.

3.3.4.4 Individual interview phase

The interviews were conducted in the selected health centre and lasted approximately 30-45 minutes. The researcher used an interview guide (see Annexure B.3) containing one question: *What are the reasons you wished to be or were removed from the CCMDD programme?* The researcher used probing questions when necessary.

Before the interviews, the researcher explained the purpose of the study and allowed the participants to ask questions. Then the participants signed an informed consent form (see Annexure B.2). The researcher took field notes during the interviews and audio-recorded the interviews with the participants' permission. The interviews were conducted in a private room in the health centre, free from interruption and disturbance, which ensured privacy and confidentiality. The interviews were scheduled for the days when the participants attended appointments or collected medicine so as not to interrupt service delivery at the clinic. In addition, the researcher observed the precautions and safety measures prescribed by the Department of Health to curb the spread of Covid-19.

In-depth interviews enable researchers to acquire a deeper understanding of the participants' lived experience of a phenomenon (King, Horrocks & Brooks 2019:114).

The researcher encouraged in-depth exploration and discussion of the factors contributing to the attrition from using the CCMDD medication programme by using the following skills:

- **Silence.** Silence is a channel for sending and recovering messages, silence allows participants to reflect on what is being discussed. Silence often motivates people to talk, share thoughts and feelings (Uys & Middleton 2017:181). The researcher used silence to reflect on what was being said in the interviews, while ensuring the silence was not uncomfortable.
- **Active listening.** Active listening, using nods and eye contact, ensured that the researcher gave her undivided attention to what the participants said during the interviews (Uys & Middleton 2017:177).
- **Clarification.** At times during the interviews, the participants shared a lot of information and the researcher asked for clarification. This enabled the researcher to grasp what the participants were saying more clearly and check that they were on par. This also stimulated the participants' thinking (Uys & Middleton 2017:180).
- **Focusing.** The researcher kept the participants' focus on what was asked and keep to the topic and question (Uys & Middleton 2017:180).
- **Paraphrasing.** The researcher paraphrased and restated what participants said in the interview (Uys & Middleton 2017:179). This gave the researcher an opportunity to test her understanding of what the participants were trying to communicate about their experience of using the CCMMD programme.
- **Exploring.** The researcher encouraged the participants to elaborate and explain the experiences and factors that contributed to the attrition rate (Uys &Middleton 2017:186).
- **Summarising.** At the end of the interviews, the researcher summarised what the participants had said to ensure that she had understood and conveyed what they meant.

Data was collected until saturation was reached and no new information emerged (Botma, Greeff, Mulaudzi & Wright 2010:207: Brink, van der Walt & van Rensburg 2018:160).

3.4. Post interview phase

3.4.1 Field notes and verbatim audio recordings

Field notes represent the observer's effort to record information and to synthesize and understand the information (Polit & Beck 2021:525). The researcher kept field notes during the interviews to help her reflect on the data and remember what the participants said. Field notes are used to enrich audio-taped interviews and assist with verbatim transcription of the data. The field notes reflected the researcher's observations and thoughts during the interviews. The researcher typed the field notes and integrated them to the transcription of each interview.

The recordings were done using the new technology which was a smart phone and was transcribed on the computer. the transcribed interviews allowed the researcher to read and re read and experience the emotions thereof. This helped a lot with the data analysis.

The recordings are safely stored in secure folder and fortunately no client's names and details were shared.

3.5 Data analysis

Data analysis is the process of synthesising data to give order, structure and meaning to the data collected. Brink, van der Walt and van Rensburg (2018:124) state that data analysis entails categorizing, manipulating, summarizing and describing and ordering data in meaningful terms. In this study, data was analysed by means of inductive content analysis to interpret, categorise, identify themes and meaning usually using text-based data, in this instance written transcripts after verbal interactions (Vears & Gillam, 2023:111 Polit & Beck 2021:534). The researcher analysed the data using Polit & Beck 2021:534; Vears & Gillam 2023:111 inductive content analysis steps.

3.5.1 Prepare the data (read and familiarise)

The researcher transcribed the audio-taped interviews into words. The researcher immersed herself in the data, reflected and made marks in order to understand what was happening. This assisted to help the researcher think holistically about the possible themes (Vears & Gillam,2021:117).

3.5.2 Define the unit of analysis (identify the big picture meaning units)

The researcher defined the basic unit of text to be classified by using individual themes as units of analysis. The researcher used single words or phrases to express ideas relevant to the researcher's questions. The researcher kept referring to the research question (Vears & Gillam,2023:117).

3.5.3 Develop categories and a coding scheme (developing fine grained codes)

Categories and a coding scheme can be taken from three sources: the data, previous related studies and theories. In this study, the researcher used inductive content analysis and developed categories from the data to be able to compare and make categories apparent. The data was augmented with interpretative memos. Using the bigger picture to break open the data, therefore the researcher fine-grained the themes to specific wordings (Vears & Gillam,2023:121)

3.5.4 Test your coding scheme on a sample text (refining the sub-categories)

The researcher developed and validated the coding scheme to test the clarity and coding consistency of the category definition. If the level is low coding should be revised. The researcher and supervisor acting as an independent coder discussed the categories until they achieved sufficient coding consistency (Vears & Gillam,2023:122).

3.5.5 Code all the text

When sufficient coding consistency was achieved, the researcher applied coding rules to the entire text. Any new themes that emerged during coding were added to the coding manual. (Vears & Gillam,2023:122).

3.5.6 Assess your coding consistency

After coding the entire data set, the researchers rechecked the consistency of coding. This was done to avoid mistakes and achieve greater consistency (Vears & Gillam,2023:122).

3.5.7 Draw conclusions from the coded data

The researcher made sense of the themes or categories identified by presenting inferences and reconstructions of meanings derived from the data; identifying relationships between categories, uncovering patterns and testing categories against the full range of data. This is a critical step which relies on the researcher's reasoning abilities.
In this study, the study supervisor and co-supervisor were the co-coders. The co-coder and the researcher reached consensus on the themes identified, which ensured and enhanced trustworthiness (Vears & Gillam,2023:122).

3.5.8 Report your method and findings (synthesis and interpretation)

The researcher reported and monitored the analytical procedures and processes, including the methods to ensure the study findings were fundamentally representative (representing personal and theoretical understanding of the phenomenon under study (Vears & Gillam,2023:122).

3.6 CONCLUSION

This chapter described the research design and methodology of the study. Chapter 4 discusses the data analysis and interpretation.

CHAPTER 4

ARTICLE

The results from this research will be presented in an article format. The article was prepared in accordance with the author guidelines for **Gender and Behavior** (see Annexure C).

4.1 ARTICLE INFORMATION

FACTORS CONTRIBUTING TO ATTRITION FROM A MEDICATION DISPENSING PROGRAMME IN THE NORTH WEST PROVINCE AMONGST PEOPLE LIVING WITH HIV

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ARTICLE

FACTORS CONTRIBUTING TO ATTRITION FROM A MEDICATION DISPENSING PROGRAMME IN THE NORTH WEST PROVINCE AMONGST PEOPLE LIVING WITH HIV

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ABSTRACT

The Centralised Chronic Medicine Dispensing and Distribution (CCMDD) programme, introduced in South Africa in 2014, works hand in hand with the Health Systems Trust (HST) on behalf of the National Department of Health. The aim of the programme is to provide access to stable HIV-infected clients to receive treatment outside of the clinic at pick up points with shorter queues in a convenient area. We intended to explore and describe the factors that contributed to the attrition rate amongst people living with Human Immunodeficiency Virus (HIV) from the CCMDD programme in the Bojanala District, North West Province.

A qualitative, explorative and descriptive approach guided the study. Twelve people living with HIV were purposively sampled and individual interviews conducted until data saturation were reached. Data analysis was done using content analysis. Three main themes emerged from the data, namely patient-related factors, healthcare provider-related factors and resource-related factors six sub-themes. Results. Factors contributing to attrition included financial implications associated with the programme, patient nurse interaction, stigmatization, knowledge of Antiretroviral therapy (ARV), Availability of medication and collection period according to the CCMDD.

Keywords: Antiretroviral (ARV) therapy, attrition, chronic illness/disease, central chronic medicine dispensing distribution, people living with human immune deficiency virus (HIV)

Introduction and background

Globally, by the end of 2022, an estimated 39 million people were living with HIV (PLHIV) with 61% of those residing in Eastern and Southern Africa (UNAIDS, 2023). Global strategies in response to HIV achieved a reduction in the number of new infections from 2.9 million to 1.3 million.

South Africa has a heavy burden of HIV/AIDS, tuberculosis (TB) and non-communicable diseases (NCDs), is home to over 7 million PLHIV, and supports the largest ART programme in the world (Liu, Christi, Munsamy, Robert, Pillay, Shenoi, Desai & Linnader 2021:549). The heavy burden of disease placed enormous strain on public healthcare facilities, which compromised the resources available to deal with high volumes of chronic diseases that contribute to medicine shortages and poor service delivery (Zeeman, 2016;3 Smith & Nicol, 2020:326). In addition, providing ART for millions of PLHIV requires efficient, patient-centred differentiated ART delivery. In 2014, the Department of Health launched the Central Chronic Medicines Dispensing and Distribution (CCMDD) programme to increase and promote easy access to medication for chronic diseases such as HIV, TB, hypertension, asthma, diabetes mellitus and depression. Such access is achieved by collection of medication by patients at community-based pick-up points of their nearest convenience (Liu, Christi, Munsamy, Robert et al, 2021:550; Dorward, Msimango, Gibbs, Shozi, Tonkin-Crine, Hayward et al, 2020:2 Leslie, West, Twine, Masilela, Steward, Kahn & Lippman, 2020:203).

The CCMDD programme requires HIV patients to be virally suppressed and have two consecutive undetectable viral load results available. Attrition from ART care and loss to follow-up remain a major public concern worldwide and legitimate threat to long term ARV (Makurumidze, Mutasa-Apollo, Decroo, Choto et al 2020:2; Hassan, Mwaringa, Ndirangu, Sanders, de Wit & Berkley, 2015:1). The success of ART programmes depends on increasing retention and decreasing attrition (WHO, 2021; UNAIDS, 2021). Accordingly, this study wished to explore and describe the factors contributing to attrition rates amongst people living with HIV from the CCMDD programme in the Bojanala District, North West Province.

Factors

A retrospective nationwide study of retention and predictors of attrition among patients who started ART in Zimbabwe's national antiretroviral therapy programme between 2012 and 2015 found that overall retention increased and lost to follow up accounted for most attrition. Overall retention dropped from 92.4% at 6 months to 74.4% at 36 months. The main predictors of attrition were being an adolescent or young adult, children, having WHO Stage IV, and impaired functional status (Makurumidze, Mutasa-Apollo, Decroo, Choto, Takarinda et al, 2020:2). A study in Kenya found an attrition rate of 18.4% at 6 months and 23.2% at 12 months, and 30% of participants reported dead or LTFU over two years. The main predictors of attrition were gender (mainly males), younger age, and baseline CD4 T cell count (Hassan, Mwaringa, Ndirangu et al, 2015:1). International HIV programmes have different health system structures and conditions and factors differ from country to country.

In South Africa, various factors contribute to the attrition rate from the CCMDD programme, including difficulty in accessing pick-up points in remote or underserved areas; female patients are more likely to collect their packages than male patients, and patients with comorbidities are more likely to collect treatment than those without any comorbidities (Health Systems Trust, 2019:2; Hlongwana & Gray, 2022:3). North West Province is the fourth smallest province in South Africa with an estimated 3.5 million people and a high unemployment rate. The study was conducted in Rustenburg, which is largely rural with some remote areas, and a backlog in both infrastructure and delivery (Murwira & Bekker, 2017:130). Low patient literacy is also a contributing factor (Allen-Meares, Lowry, Estrella & Mansuri, 2020:62).

The study wished to explore and describe the factors contributing to attrition rates amongst people living with HIV from the CCMDD programme in the Bojanala district, North West Province.

Research design and methodology

A qualitative, explorative, and descriptive design (Polit & Beck, 2021:619). was utilized to explore and describe factors contributing to attrition from the CCMDD programme amongst people living with HIV in Bojanala District, Northwest Province, South Africa the researcher wished to explore and describe the challenges resulting in attrition at one selected health care centre in Rustenburg, Northwest Province.

Population and Sampling

The researcher purposively selected participants living with HIV who had asked to be removed from or had left the CCMDD programme. from 2020 to date, and thus had insight into the factors that contributed to the attrition rate. The participants were personally invited to participate and informed of the purpose of the study and ensured that participation was voluntary. The participants were older than 18 years of age, could understand English in order to read the information and understand the study, and signed informed consent forms before the interviews. A total of 12 participants were selected. Of the 12 participants interviewed, all participants were between 20 and 30 years old, with low income, and the highest education level was matriculation (Grade 12). All participants reside in North west, some were Christians, and some believed in traditional religion.3 were married and 9 were single. The majority were unemployed.

Data collection

Data collection is the process of collecting information (data) related to the research question in a systematic way to address a research problem (Polit & Beck 2021:510). Qualitative researchers collect their data in a real-world naturalistic setting (Polit & Beck 2021:511). Data was collected by means of face-to-face semi-structured interviews in September 2022, using a semi-structured interview guide Interviews were scheduled according to the participants' availability in relation to their next appointment date. The interviews were conducted in a consultation room at the selected healthcare centre and lasted approximately 30 minutes each. The first author, who is employed at the selected centre, was the interviewer. The interviewer obtained the participants' consent to audio record the interviews.

Data analysis

Data analysis is the process of synthesising data to give order, structure and meaning to the data collected. Data analysis entails categorizing, manipulating, summarizing, and describing and ordering data in meaningful terms (Brink, van der Walt and van Rensburg 2018:165). In this study, data was analysed by means of inductive content analysis to interpret, categorise, identify themes and create meaning of the data. (Vears &Gilliam 2023:111; Polit & Beck 2021:556).

The researcher transcribed the audio interview recordings into written text. Themes were identified and subcategories evolved based on the data analysis pertaining to contributing factors for attrition from the CCMDD programme. The researcher then discussed and reported in order to create recommendations.

Results

Three main themes and six sub-themes emerged from the data analysis, namely patient-related factors, healthcare- related factors, and resource-related factors (see Table 4.1).

Table 4.1 Summary of themes and categories

Themes	Categories
Patient-related factors	*Financial implications associated with the programme. *Patient-nurse interaction
Healthcare provider-related factors	*Stigmatization* Knowledge of antiretroviral therapy (ART)
Resource-related factors	*Availability of medication *Collection period according to the CCMDD

Theme 1: Patient-related factors

We explored the factors that contributed to the attrition rate of PLHIV from the CCMDD programme at the selected primary health care centre. The participants verbalised two main factors contributing to attrition from the CCMDD programme namely: financial factors as well as patient-nurse interactions. Participants expressed concerns regarding financial constraints as they attend the public clinic for consultation and have to travel to the pick-up point to access their medication. Based on the fact that they cannot afford the private nurse consultation fee at the pick-up point. Participants verbalised a need to consult with the nurse practitioner for medical issues as well as support to stay compliant. The participants indicated financial and patient-nurse challenges that contributed to attrition from the CCMDD programme.

- **Financial implications associated with the programme**

The participants had additional transportation costs with collecting the medication. This played a role in not adhering to their appointment dates and medication collection. This, in turn, contributed to their decision to ask to be removed from the CCMDD programme. According to participants,

> . *"…when I have to go to Clicks, I need to pay. When I go to the clinic, I must pay…it is too much….and then if they don't have my medication, I have to pay to go back to collect medication...". (P 11)*
>
> *"…And then if they don't have my medication, I have to go back to the clinic. I'm using my own money to go town. I have to pay to go back to the clinic. I also have to pay to go back to my own house again. I'm using too much money for that..." (Participant 8)*
>
> *"…I'm using too much money from here to the clinic and from my house to the pickup for medication and back home...I pay four times…. I'm not working…" (P 8)*

It is crucial for programmes to be aware of participants financial difficulties as, financial implications become a barrier and burden.

- **Patient-nurse interaction**

The participants stated that to continue adhering to their medication, they needed to interact with the nurses for support and consultation about health-related issues. This indicated that some of the participants had a co-dependent relationship and required access to a medical practitioner. The interaction with the nurses played a role in retaining patients on the CCMDD programme. According to participants,

> "…*it is very sad that one can't have a decent well rather informative interaction with the nurse, it is like they are there to give you medication only…" (P1)*
>
> *"…I've been constantly assisted by the same Sr, no explanations or information, I just get my medication and date and leave … "(P4)*
>
> '*Okay don't get me wrong, I understand the programme, I appreciate it also, it is just that the service she gives me shows she doesn't know her job, there is always mistakes with the collection date and never answers any of the questions I ask" P2*

The interaction between patients and nurses is crucial in healthcare as it significantly impacts patient satisfaction and the overall quality of care

Theme 2: Healthcare provider-related factors

The participants felt dissatisfied with how the process of receiving medication made them look and feel, and hinted that stigmatization still existed regarding the nurses and the multidisciplinary teams involved at both the clinic and the pick-up points. Lack of knowledge of how the ARVS work or the HIV condition also played a role in the CCMDD programme.

- **Stigmatization**

Stigma often comes from lack of understanding or fear, inaccurate or misleading media representations, in this era we are faced with public stigma, self-stigma and institutional stigma (Subu, Wati,Netrida and Priscilla.,et al 2021:2. Patients who experience a sense of stigmatization will automatically choose an option that makes them more comfortable or is safer for their well-being. In this case, that would be attending normally at the clinic as it gives them a sense of less judgement therefore it is not as uncomfortable as in a new environment. Some participants felt that there was a lack of confidentiality whenever they collected their treatment at pick-up points (PuPs). It made them feel segregated and as if people knew what they were collecting, unlike in a clinic setup where it was normal to collect treatment and no one knew which medication they were collecting. One participant stated that needing to send someone when you cannot go required you to disclose your status, which made them feel uncomfortable. Some participants felt that the way health care providers treated them reminded them of the fact that they were living with a certain disease, even as time passed there still appeared to be a persistent need to stigmatize people living with HIV/AIDS.

According to participants,

> *"…the queue is not that long, but sometimes it's better. At Medirite, I feel as if people know what you came to collect. I'm not sure, but it feels like you are grouped or identified as being sick with HIV…" (P4)*

> *"…There was a time I went to get my prescription renewal and one sister said, there is nothing fancy about our illness, we must actually carry-on taking medication at the clinic then come to the clinic unnecessarily…" (P5)*

> *"…think, like, I might not be around Rustenburg then. I might have to send somebody, but I can't send somebody because they will need my ID. Some people cannot be trusted with someone else's ID. Remember, the ID is so important and people can do fraud with that, also this means I need to disclose my status …" (P 8)*

Stigmatization can significantly impact patients by creating feelings that hinder them from making sound decisions for their health choices.

- **Lack of health empowerment and of antiretroviral therapy (ART) effectiveness knowledge**

The participants experienced a lack of uniformity in receiving care from the health care providers. Some participants indicated that they received holistic care while others stated that they were merely assisted to be enrolled on the programme. Some felt that young nurses or health care providers were needed to be the front for this programme. Some participants felt that older nurses had been in the industry for a long time and had perhaps become impatient with how they treated people living with HIV. In addition, some participants felt unsure and did not understand the programme. According to participants,

> *"…maybe you guys could when you're giving us those tickets, those cards and everything, you could explain everything to us so that we know when we come into the clinic. Why? When are we taking our bloods? Like all these things, you must at least explain to us so that we know what to expect…" (P 11)*

> *"…I am sometimes told that I don't qualify, then randomly after a few months after taking bloods I qualify again. I think they said something about viral load, but I'm not even one*

> *hundred percent sure I understand what that has to do with anything, because I take my medication every day…" (P 6)*
>
> *"…ever since I started the programme, I have some questions to ask. Does that mean that one is not supposed to be sexually active? When does sex affect viral load? Does it make it high? Because sometimes I'm unsure. These are the things I want to talk about with young nurses…" (P12)*

Lack of knowledge can have major consequences on patients' health outcomes, it may lead to poor treatment management and poor health outcomes.

Theme 3: Resource-related factors

The participants indicated the availability of packages at the pick-up points and the collection period for packages.

- **Availability of medication**

The participants acknowledged and recognized that the packages from the programme did not come the same way as the supply for the facilities, and were disappointed that even when there is an external supplier with specialized packaging, the retrieval availability of the medication remained a problem. According to participants,

> *"…whenever I have to go to collect my treatment at Medirite, when I get there, they will be saying they don't have my medication…" (P 8)*
>
> *"…Oh, okay. So that dates says three months. But then the package has two inside.*
> *(P 4)*
>
> *"…I always have issues when collecting my medication, they will always say my name is not on the system, and I have to return to the clinic…" (P2)*

Limited availability may lead to exacerbation of health conditions, accessing and prioritizing accessibility helps address the needs of the population.

- **Collection period according to the CCMDD**

The participants indicated that the collection period caused inconvenience for the participants and attrition. The participants felt that the collection period given was inflexible, which was an inconvenience in several ways. Lack of communication played a major role in how to respond to the given grace period. The participants also indicated no knowledge about the return policy or how one should go about it if parcels had been returned. According to participants,

> *"… I'm a businessman, so I travel a lot - yes, the whole of South Africa. So now, sometimes when I'm supposed to go and collect my medication on a specified date, then I am not around. Then when I come back and try to go and collect my medication, they tell me that my parcel is not available. They sent it back…" (P10)*

> *"…despite the queue, I feel like my needs will be attended to and easily accessible and I can negotiate better dates for my collection so that I don't default treatment. I am currently collecting at Medirite, I have a travelling job, normally 7 days are given, then medication is sent back to the clinic or wherever … and I can't just send anyone as my status has still not been shared (P 3)*

Efficient and well considered time frame for the collection period is crucial to enhance overall experience and outcomes.

DISCUSSION

Patient-related factors

The participants attended a public service centre due to lack of finances therefore advising patients to return home or to the centre without their medication is a burden. Since the CCMDD programme obtains medication from external sources or is packaged in advance, participants should not experience non-availability of their medicines (Bogart et al, 2022:2601). The COVID-19 pandemic had a huge impact on patients' financial and economic circumstances, health-seeking behaviour and spending (Onubogo & Ugochukwu, 2021:10; Transportation is a substantial barrier when participants found no medication at the pick-up point and had to go back to the centre for rectification and the medication itself. Inconvenience caused by the programme could lead to other health factors or negative outcomes (Cochran, McDonald, Prunki et al, 2022:2). When medication packages were not consistent as pick-up point deliveries were dependent on the system enrolment or logistics, participants often experienced package shortages or no treatment, it resulted in a return to the centre to correct the errors, as well as financial and other stress.

Patient- nurse interaction

Patient access to care sets a baseline for all encounters within the healthcare industry. If a patient cannot access the clinician, it is impossible to receive medical care, build a relationship or achieve overall patient wellness (Heath, 2022:1). Social support fosters a person's ability to cope and adjust to the disease (Modisakeng, Matlala, Godman & Meyer, 2020:2). Being HIV- positive has an impact on various health outcomes like quality of life and mental stability. The nurse-patient relationship needs essential attributes like empathy, presence, contact, authenticity, trust and reciprocity and respect for ethical values (Allande-Cusso, Garcia & Porcel-Galves, 2021:462). Some participants stated that to continue adhering to their medication, they needed interaction with a nurse or doctor or clinic visit rather than collecting at an external point. Collecting at an external point deprived them of accessing clinicians when they got ill. Some patients also displayed co-dependency tendencies as they still needed to be reminded of the importance of collecting blood work, their appointments, and to be reassured whether their viral load was suppressing or not. Some participants felt frustrated or not comfortable when managing their own health.

Lack of self-empowerment and of antiretroviral therapy (ART) effectiveness knowledge

To be part of the programme required being virologically suppressed. Some participants indicated a lack of ARV knowledge, which could be due to various factors, including poor communication between the health care providers and the patients, low educational level, fear of stigma, and forgetfulness (Mwaniki, Inyama & Jebet, 2021:71). This indicated an association between the level of understanding and adherence. Each person living with HIV is unique, their adherence and knowledge is dependent on different factors, Such as Doubts of efficacy, cultural and religious beliefs and severe side effects (Mwumba, Nalungo, Thamar and Niza., et al 2022:11). Some participants did not understand the importance of viral load and what it is. Others indicated that there was no clear communication with the providers about the programme and how a person living with HIV could be eligible and stay on the programme for long. Even though the programme was “sold” to them, they were not given a space to consent to being part of the programme. This could mean that as soon as patients met the criteria for eligibility they were immediately enrolled in the programme. Some participants stated that packages were insufficient, which indicated that they lacked knowledge of fixed doses or single doses, which emphasised a need for constant assurance from health care providers. (Van Nguyen, Nguyen, Thach and Lam,2021:7; Shrestha, Chataut, KC, and Acharya, et al 2023:3). Some participants did not know that comorbidities can exist within the HIV disease or understand how they should conduct themselves when on treatment. Several participants did not understand the need for blood to be taken on their cohort dates or when they were being called for results as some did not even know what lower than detectable limit meant. Instead of regarding the CCMDD programme as a reward for their health, the participants saw the programme as detrimental to their wellbeing due to financial and the health care provider factors.

Stigmatization

HIV is known to be a manageable disease, yet the reality has not kept pace with the medical developments and the social impact remains profound (Flint, Gümsche & Burns, 2023:35). Some patients need time to accept their identity as people living with HIV (PLWH). One participant felt as if people knew what she came to collect at the pick-up point and were identifying her as being sick with HIV thus stigmatizing her.

Stigma can be defined as a discrediting attribute which serves to devalue the person who has the virus (Fauk, Ward, Hawke & Mwanri, 2021:2). One needs to be aware that disclosure of HIV infection plays a major role in adherence. Disclosure means informing others about your HIV status voluntarily or involuntarily. Disclosure can be a complex process which involves deciding to inform someone, acting on it and meditating on it while being open to receiving social support. In this study, psychological factors, such as fear of discrimination, rejection, and feelings of shame and guilt, played an important role in contributing to the attrition rate from the CCMDD programme (Kim, Shim & Ji, 2021:118). Participants stated that needing to ask someone to collect a package for them due to the treatment collection period could be perceived as involuntarily disclosure. Some believed that whenever they were singled out or walked out of the chosen pickup point with a package it was already seen as a diagnosis. Major drivers of stigma could be ignorance of the virus, fear of contracting it, individual or social cultural values, norms and perspectives, and religious views.

Availability of treatment

As the world's highest HIV-infected country, South Africa had the greatest need of routine access to HIV medication (Liu, Christie, Munsamy, Robert et al 2021:549). The CCMDD is a programme that provides universal access to antiretrovirals and other chronic medicines in South Africa (Zeeman, 2016:3; Health Systems Trust, 2019:1).

Medicines are vital elements in health care and access to medicine is a fundamental human right. Medicine shortages pose serious challenges to the health system (Modisakeng, Matlala, Godman & Meyer, 2020:1). The participants stated that due to travelling work and unexpected emergencies, they were not always able to collect their treatment within the seven day grace period (Health Systems Trust, 2019). In such cases, the medicines were sent back and the patient removed or marked as "not collected" on the system. This was an inconvenience to the participants and became a barrier when they were unable to collect their refills on designated dates.

Organizational factors

Organizational barriers included challenges with communication, transportation, errors in treatment packaging, tracking and inadequate infrastructure. Due to the COVID-19 pandemic, some provinces introduced extended prescriptions for patients on chronic medication (Bogart et al, 2022:2606; Cochran, 2022:2). HIV/AIDS patients were encouraged to switch from the old tenofovir disoproxil fumarate efavirenz to the new fixed combination dose (tenofovir, lamivudine and dolutegravir treatment) as the stock levels were always in good supply compared to the stock level of efavirenz-based combination (NDoh,2021)).

Health care access refers to the ease with which individuals can acquire the needed health care. It is defined by the opportunity to use appropriate service in proportion to the health needs (Nunez, Sreeganga & Ramaprasad, 2021:1). However, it is also limited by barriers, such as financial, organizational, social, and cultural issues. The participants stated the need to present their identification card to receive their medication packages as one example. The Health Systems Trust (2019) stipulates that it is a patient's role and responsibility to present a South African identification document (ID), an asylum seeker permit or foreign passport to the clinic staff to be eligible for registration. Once registered on the programme, the patient must carry his or her identification document and collection card for verification at the allocated pick-up point. However, some participants felt that always having their ID with them was sometimes inconvenient. In addition, although nominating someone else to collect the medication for them is a choice, the participants expressed anxiety regarding giving someone their identification card. Medicine pick-up points were introduced to allow patients to collect medication during lunch breaks or nearer to work to avoid or reduce absenteeism (Bogart, 2022;2603). The participants that some pharmacies and designated pick-up points did not have special queues for collection, which did not facilitate collection, which also demotivated participation in the programme or collection.

Collection period

A collection period is the grace time given to collect their package at the personally selected pickup point (Health Systems Trust, 2019:2). Some participants avoided getting their treatment after missing their collection dates out of fear of being scolded for missed refills rather than being told about the collection period or rules. Some participants stated that they were not given the collection date by the professional nurses after being enrolled or did not get the notification/SMS as promised, therefore they were not aware of when they should go for their collection. Some participants went to pick-up points and were told that their treatment collection date had passed, or their treatment package had not arrived.

A study across 10 clinics found that patient-level barriers included inadequate education about CCMDD and inability to get refills on designated dates while organizational-level barriers included challenges with communication and transportation, rigid CCMDD rules and inadequate infrastructure (Bogart, Shazi, MacCarthy et al, 2022:2603). The study recommended providing patient education and improved communication about refills; providing dedicated space and staff and ongoing organizational/clinic training, as well as feedback to clinics by the CCMDD (Bogart et al, 2022:2608). Muthelo, Nemagumoni, Mothiba, Phukubye and Mabila 2020:480) found that healthcare providers experienced challenges with late delivery of medication; lack of parcel tracking; patients' receiving collection notification messages late; lack of pick-up points in rural areas, and lack of patients' data availability in the clinic facilities. In this study, some participants indicated problems with collection dates and their work, which led to defaulting treatment.

Strengths and limitations of the study

The strength of the study was that the participants’ shared experiences were authentic and enabled the researcher to find solutions to the research problem. The findings should have a positive impact on similar settings. The limitations were that the study was restricted to one health care centre in one district in the province and a few participants because of their unpredictable working times and fear of victimization for leaving the programme.

Conclusion

Describing and exploring the factors contributing to the attrition rate was paramount to establish improvements needed to make the CCMDD programme effective. The study highlighted patient-, health care- and resource-related factors that impacted attrition and retention in the programme. A standardized procedure and policy that would guide the health care providers and the programme itself as well as regular training and further research on the impact of the CCMDD on the increase of virological failure is recommended.

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Ethical approval

Ethical approval for the study was obtained from the University of Pretoria Research Ethics Committee (Ethic reference No: 306/2022)

Declaration of competing interest

The authors declare that there is no conflicting interest.

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CHAPTER 5

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

Chapter 4 discussed the data analysis and findings in article format. This chapter describes the conclusions and limitations of the study; identifies and suggests strategies to decrease the attrition rate from the CCMDD programme; makes recommendations for further research, and presents the researcher's personal reflection on the research journey.

5.2 PURPOSE OF THE STUDY

The purpose of the study was to explore and describe the factors contributing to attrition amongst adults living with HIV from the Chronic Central Medicine Dispensing and Distribution (CCMDD) programme in the North West Province.

In order to achieve the purpose, the study wished to answer the following question:

What are the factors contributing to the attrition rate amongst people living with HIV from the CCMDD programme in the selected health care centre in the Bojanala District of North West Province?

5.3 OVERVIEW OF THE STUDY

The researcher conducted interviews with 12 participants who asked to be removed from the CCMDD programme. The data was collaboratively analysed by the researcher and the supervisors.

Three main themes emerged:

- ✓ Patient-related factors
- ✓ Healthcare-related factors
- ✓ Resource-related factors

These factors appeared to play an active role in the attrition rate of patients from the CCMDD programme. The themes were broken down into categories. The themes and their sub-themes are discussed next.

5.3.1 Theme 1: Patient-related factors

The first theme that emerged was patient-related factors. These factors contributed to patients discontinuing from the CCMDD programme. The categories identified were financial implications of the programme and patient-nurse interaction.

5.3.1.1 Financial implications associated with the programme

Most of the participants lived far from the center, hence opted for pick-up points that were closer to where they worked. Some of the participants that lived near their pick-up points used their lunch breaks to avoid taking time off or unpaid leave to collect their medication, while other participants had to use taxis to collect their medication. However, when they went to the pick-up point most of the time the medication was not ready, despite the fact they had received an SMS for collection, this caused patient to request to be removed from the programme.

Because participants were unable to collect their medication from the pick-up points, they had to take leave or unpaid leave to go back to the centre to collect their medication. This was a financial strain for most of the participants as they had to travel far to the clinics and the transport was expensive. Some participant indicated that they could not take time off at work as they could risk losing their jobs, and did not go and collect the medications. It was painful for the researcher to realise some patients would sacrifice their health in order to keep their jobs. This challenge led to patients requesting to be removed from the CCMDD programme as it did not hold any advantages for them, but caused financial strain.

5.3.1.2 Patient-nurse interaction

Some participants indicated a need to consult on the days they collected medication at a health centre. When the participants went to the pick-up points, e.g. Clicks, to collect their medications and had a medical issue they could not consult the professional nurse at the pharmacy clinic without medical insurance or had to pay a consultation fee as a private patient. The participants stated a need to see a healthcare provider for consultation and support at least every three months when they collected their medication as this assisted them to stay compliant with the ARVs. This forced them to go back to the clinic for consultation and support from the healthcare provider. For this reason, they felt they wanted to leave the CCMDD programme as they had to go to two different locations for treatment, support and consultation.

5.3.2 Theme 2: Healthcare provider-related factors

The second theme that emerged was healthcare provider-related factors. Two categories were identified in this theme, namely stigmatization and knowledge of ART. These factors contributed to patients discontinuing the CCMDD programme.

5.3.2.1 Stigmatization

Although the stigma on HIV has decreased or is not seen as a societal problem, many people living with the virus has a different experience. The participants stated how insensitive some pharmacists and cashiers were at the pick-up points and openly made remarks about HIV patients or HIV treatment whilst the participants were in the queue to be assisted. Participants also indicated there were no cubicles so everyone could hear what was said to the participant pertaining to the treatment. Some participants felt utterly victimized as they could see the way other patients in the pharmacy or queue looked at them. They felt that attending at a clinic would make it feel bearable and supportive as most people were there for the same condition. The study highlighted the need of people living with HIV as a vulnerable population to be cared for by non-judgmental healthcare providers with a positive attitude.

5.3.2.2 Lack of self-empowerment and of ARV effectiveness

The participants indicated clearly that they felt the pharmacists at the different pick-up points did not have sufficient knowledge of HIV. Participants felt that the pharmacists just wanted them to collect their medication and go. They also did not provide much-needed health education and support to the patients living with HIV. Some participants expressed the need to be closely monitored in order to adhere to their treatment. This monitoring and support were not provided by the pharmacists and, in turn, had a negative impact on the patients' viral load. This was a major factor contributing to the attrition rate from the programme.

5.3.3 Theme 3: Resource-related factors

The third theme that emerged from the data was resource-related factors that contributed to patient attrition from the CCMDD programme. Two categories were identified in this theme, namely availability of treatment and collection period of the CCMDD. These factors contributed to patients discontinuing the CCMDD programme.

5.3.3.1 Availability of treatment

The participants indicated that the availability of the ARVs on collection dates was a major challenge and concern. The participant indicated receiving SMS notifications to go and collect their medications, but on arrival they were informed that the medications were not available and they should return later. This led to some patients running out of medications and others having to return to the clinics to collect medication. Most participants felt frustrated by this situation and for that reason wanted to be removed from the CCMDD programme.

5.3.3.2 Collection period according to the CCMDD

The participant indicated the lack of information about the CCMDD programme was a major reason for requesting to be removed from the programme. When they enrolled the illusion was created of a system functioning 100% and that would save them time and money for travelling. This did not realise for the participants. Some participants lived very far from the pick-up point and did not always have money or an opportunity for transport. When they did, and then arrived at the pick-up point, they were informed that the medication had been sent back as they did not come and collect it within the specified time. Some participants also highlighted a lack of consistency with the communication between the patients and the system. Sometimes they did not receive an SMS or notification of their date of collection and the arrival of the medication.

5.4 STRATEGIES TO DECREASE ATTRITION FROM THE CCMDD PROGRAMME

The researcher identified strategies to lessen attrition from the CCMDD programme, including showing empathy, improving technical support and improving or boosting communication.

5.4.1 Empathy

The district, facility management and health care providers should

- ✓ Treat the patients with dignity and respect when they come to collect their ARVs.
- ✓ Raise awareness' of the importance of being empathetic and non-judgemental towards patients on the programme.
- ✓ Develop standard procedures that ensure that health care providers are evaluated by patients on their experiences of the CCMDD programme.
- ✓ Continuously counsel and remind the patients what is needed or how the CCMDD programme works in a respectful and compassionate manner.

5.4.2 Technical support

Facilities should incorporate in-service training on the system.

- ✓ Create more efficient ways to collect treatment; separate normal medication pick-up from CCMDD pick-up.
- ✓ Ensure that pick-up points are always functional and staff well trained and friendly towards patients.
- ✓ Improve the notification system so that it is effective and sends messages when the medication is indeed ready for collection.

5.4.3 Communication

Health care providers (HCPs) should

- ✓ Encourage and practise open communication with the patients during their collection.
- ✓ Encourage staff not to talk loudly and ask patients about the HIV treatment in front of other patients in the queue.

Multidisciplinary teams should

- ✓ Reach consensus on how they treat and provide service to the patients.
- ✓ Emphasize and raise awareness regarding kindness and positive attitudes to ensure patients feel safe and cared for.
- ✓ Constantly evaluate the system and give feedback to the Department of Health/District.

5.5 LIMITATIONS OF THE STUDY

The study focused on the factors that contributed to the attrition rate, which gave participants a chance to express what they experienced while being on the CCMDD programme and what persuaded them to leave or request to leave the programme. The study cannot be generalized to all the participants even though most of the participants had similar experiences. Some were reluctant to open up at first, whilst some did not even want to spend more than 10 minutes of their time. The researcher struggled to find participants willing to participate because of their unpredictable working times and fear of victimization for leaving the programme. The researcher conducted one-on-one interviews because the topic was very sensitive and to reassure and support the participants. Some participants were nervous and afraid of being victimized if they were to open up, so the researcher had to convince them and create a trusting relationship.

5.6 RECOMMENDATIONS

Based on the findings and their implications, the researcher makes the following recommendations for practice, education and management, and further research.

5.6.1 Practice

- ✓ Health care providers (HCPs) and health care facilities (HCFs) should Attend annual training on the CCMDD programme.
- ✓ Regard patient-centredness and efficiency as the foundation of dealing with people living with HIV and on ART.
- ✓ Ensure that patients are a priority in order to have an effective 90-90-90 strategy.
- ✓ Ensure thorough check ups and mini counselling when patients come for their prescription renewal.
- ✓ Create better access or systems to ensure a faster and effective way patients can get their medication.
- ✓ Currently there are no policies or guidelines to help improve or facilitate the way the CCMDD programme is handled in facilities.
- ✓ Develop a standard procedure to guide health care providers.
- ✓ Health care users should be given a full session on how the programme works and what is needed.
- ✓ Encourage and facilitate continuous professional development to enable HCPs to support and communicate effectively with patients.

5.6.2 Further Education

- ✓ Healthcare provider education should include the following:
- ✓ All undergraduate curricula should include basic NimArt mentorship (basic HIV and AIDS mentoring).
- ✓ HCPs should be trained in how to support and comfort patients and show compassion to vulnerable populations.
- ✓ Ongoing in-service training should be provided on ART to ensure healthcare providers stay updated on the latest developments and changes in management strategies.

5.6.3 Further research

Further research should be conducted on the following topics:

- ✓ The impact of the CCMDD programme on the increase of virological failure
- ✓ An exploration of development programmes for people living with HIV on ART

- ✓ An investigation of whether technology would work better than human resources to help retain patients on the CCMDD programme
- ✓ Nurses' perceptions of barriers and facilitators of implementing the CCMDD programme

5.7 PERSONAL REFLECTION

At the beginning of the study, I was unsure whether the topic for my Master's research would yield results as I had to keep changing it until it was approved. During the study I cried and suffered from lack of sleep while having to show up for work. I discovered growth and the confidence and willingness to stand up and advocate for my patients. Perseverance was the key lesson. During data collection I had many emotions, the main ones being frustration and anger that left me feeling like there was more I could do. It was very difficult to find the patients to do the interviews as most feared being victimised while others wanted no association with the programme. The change of supervisors during the study had a huge impact on my studies especially being part-time and long distance. However, the new supervisors and their guidance helped me reach my goal even though it felt like a never-ending battle. My three Fs - family, friends and faith - pulled me through. Reading articles and other research enriched my knowledge and made me fall in love with the idea of contributing to the pool of knowledge and my profession. It was a challenge and a struggle to put my thoughts on paper, but after I was able to immerse myself in others' work, I had the urge to learn. At the end of the study, I feel that given an opportunity I would like to improve and further my research capabilities.

5.8 CONCLUSION

This study gave patients utilising the CCMDD programme a voice to share the factors contributing to them leaving or asking to leave the CCMDD programme. These factors will assist healthcare providers to develop strategies to address the factors that emerged from the study. The CCMDD programme has many benefits and the aim is to ensure as many as possible patients with chronic conditions join and stay on the programme to ensure compliance and convenience for patient. Recommendations for improvements to the CCMDD programme will be made to the relevant stakeholders and policymakers to ensure cost-effective and quality care of patients with chronic conditions in South Africa.

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ANNEXURE A1

ETHICS APPROVAL UP

Olebogeng Mathabo Masemola

ANNEXURE A1 ETHICS APPROVAL UP

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Health Sciences

Institution: The Research Ethics Committee, Faculty Health Sciences, University of Pretoria complies with ICH-GCP guidelines and has US Federal wide Assurance.

- FWA 00002567, Approved dd 18 March 2022 and Expires 18 March 2027.
- IORG #: IORG0001762 OMB No. 0990-0278 Approved for use through August 31, 2023.

Faculty of Health Sciences **Research Ethics Committee**

20 June 2023

Approval Certificate Annual Renewal

Dear OM Masemola,

Ethics Reference No.: 306/2022 – Line 2

Title: Factors contributing to attrition from a medication dispensing programme in the North West province amongst people living with HIV

The **Annual Renewal** as supported by documents received between 2023-05-22 and 2023-06-14 for your research, was approved by the Faculty of Health Sciences Research Ethics Committee on 2023-06-14 as resolved by its quorate meeting.

Please note the following about your ethics approval:

- Renewal of ethics approval is valid for 1-year, subsequent annual renewal will become due on 2024-06-20.
- Please remember to use your protocol number (306/2022) on any documents or correspondence with the Research Ethics Committee regarding your research.
- Please note that the Research Ethics Committee may ask further questions, seek additional information, require further modification, monitor the conduct of your research, or suspend or withdraw ethics approval.

Annexure

Ethics approval is subject to the following:

- The ethics approval is conditional on the research being conducted as stipulated by the details of all documents submitted to the Committee. In the event that a further need arises to change who the investigators are, the methods or any other aspect, such changes must be submitted as an Amendment for approval by the Committee.

We wish you the best with your research.

Yours sincerely

On behalf of the FHS REC, Professor C Kotzé

MBChB, DMH, MMed(Psych), FCPsych, Phd
Acting Chairperson: *Faculty of Health Sciences Research Ethics Committee*

The Faculty of Health Sciences Research Ethics Committee complies with the SA National Act 61 of 2003 as it pertains to health research and the United States Code of Federal Regulations Title 45 and 46. This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes, Second Edition 2015 (Department of Health)

Research Ethics Committee
Room 4-60, Level 4, Tswelopele Building
University of Pretoria, Private Bag x323
Gezina 0031, South Africa
Tel +27 (0)12 356 3084
Email: deepeka.behari@up.ac.za
www.up.ac.za

Fakulteit Gesondheidswetenskappe
Lefapha la Disaense tša Maphelo

ANNEXURE A2

ETHICS APPROVAL

DOH NORTH WEST PROVINCE

* * *

health
Department:
Health
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

2030 NDP

1st Floor, Health Office Park
Private Bag X 2068
MMABATHO
2735

RESEARCH, MONITORING & EVALUATION

Tel: +27 (18) 391 4501
Email: MbuleloT@nwpg.gov.za
www.nwhealth.gov.za

HEAD OF DEPARTMENT
2022 -08- 12
NORTH WEST DEPARTMENT OF HEALTH
PRIVATE BAG X 2068, MMABATHO, 2735

Name of Researcher: **Ms O.M. Masemola**
University of Pretoria

Physical Address:
(Work/ Institution) ______________________

Subject: **Research Approval Letter – Factors contributing to attrition from a medication dispensing programme in the North West Province amongst people living with HIV.**

This letter serves to inform the Researcher that permission to undertake the above-mentioned study has been granted by the North West Department of Health. The Researcher must arrange in advance a courtesy meeting with the District Chief Director and the Chairperson of the District Health Research Committee (DHRC) (as per their details below), to introduce their research team/members on the proposed research to be undertaken. The researcher can thereafter proceed to the identified institution/s and/or facility and produce this letter to the Management as proof that the research was approved by the NWDoH.

This letter of permission should be signed and a copy returned to the department. By signing, the Researcher agrees, binds him/herself and undertakes to furnish the Department with an electronic copy of the final research report. Alternatively, the Researcher can also provide the Department with an electronic summary highlighting recommendations that will assist the Department in its planning to improve some of its services where possible. Through this, the Researcher will not only contribute to the academic body of knowledge but also contributes towards the bettering of health care services and thus the overall health of citizens in the North West Province.

Below are the contact details.

Office of the Chief Director: **Bojanala District**	**Chairperson of the DHRC**
Dr K. Segwai	Prof. J. Tumbo
Contact person: Goitsemang Khumalo	**Contact person:** Obakeng Masango
014 592 8906 KhumaloG@nwpg.gov.za	014 592 8906

Kindest regards,

Dr. FRM Reichel
Director: RM&E

Date: 12/8/2022

O. Ndl.
Researcher

Date: 2022/08/12

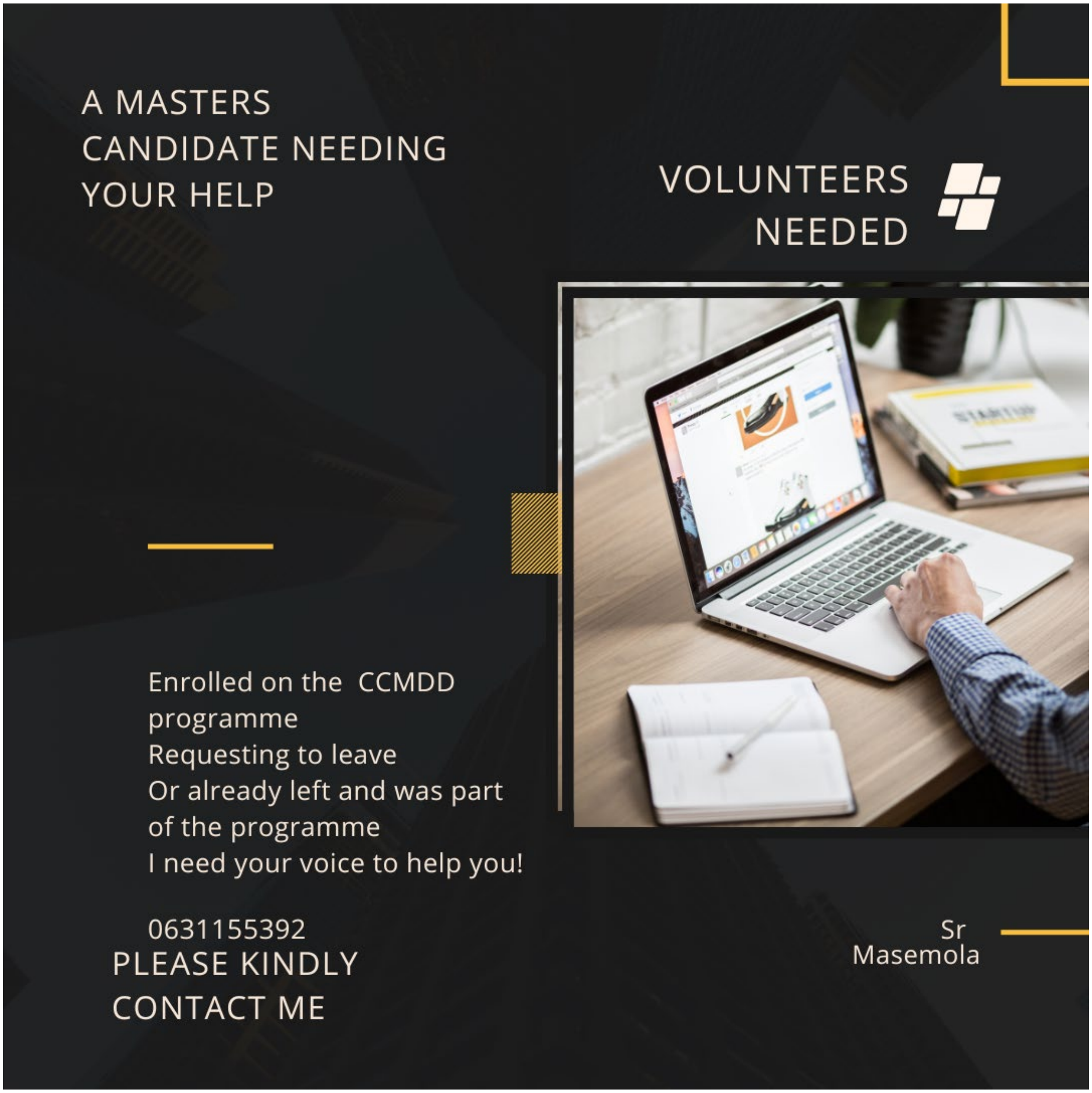
ANNEXURE B1

INVITATION TO PARTICIPATE

IN THE STUDY

Olebogeng Mathabo Masemola

ANNEXURE B1: INVITATION TO PARTICIPATE IN THE STUDY



A MASTERS
CANDIDATE NEEDING
YOUR HELP

VOLUNTEERS
NEEDED

Enrolled on the CCMDD
programme
Requesting to leave
Or already left and was part
of the programme
I need your voice to help you!

0631155392
PLEASE KINDLY
CONTACT ME

Sr
Masemola

ANNEXURE B2

PARTICIPATION INFORMATION LEAFLET AND CONSENT FORM

Olebogeng Mathabo Masemola

ANNEXURE B2: PARTICIPATION INFORMATION LEAFLET AND CONSENT FORM

Annexure B

PARTICIPANT'S INFORMATION & INFORMED

CONSENT DOCUMENT

STUDY TITLE: factors contributing to attrition from a medication dispensing programme in the north west province amongstpeople living with hiv

PRINCIPAL INVESTIGATORS: O.M MASEMOLA

SUPERVISOR: Dr M. MUSIE

CO-SUPERVISOR: IM Coetzee-Prinsloo

INSTITUTION: UNIVERSITY OF PRETORIA

DAY TIME AND AFTER-HOURS TELEPHONE NUMBER(S):

Daytime number/s: 0631155392

Afterhours number: 0631155392

Annexure

DATE AND TIME OF FIRST INFORMED CONSENT DISCUSSION:

Date	**Month**	**Year**

:
Time

Dear Prospective Participant

Dear Mr. / Mrs…………………………………………………………………………………

1. INTRODUCTION

You are invited to volunteer for a research study. I am doing research for a Master's degree purpose at the University of Pretoria. This information in this document is to help you to decide if you would like to participate. Before you agree to take part in this study you should fully understand what is involved. If you have any questions, which are not fully explained in this document, do not hesitate to ask the researcher. You should not agree to take part unless you are completely happy about all the procedures involved.

2. THE NATURE AND PURPOSE OF THIS STUDY

The aim or purpose of this study is to explore and describe the factors that contribute attrition in the programme. Attrition is the rate of reduction size or number, the rate of reduction could be the number of individuals leaving a company or a programme instead of choosing to stay for a longer period e.g., high attrition rate would mean individuals choose to leave in a short period of time whereas low attrition rate is individuals staying for a longer period on the programme. In this study the attrition rate observed/explored is the number of people that have left/requested to leave the central chronic dispensing programme (CCMDD) amongst people living with HIV from the CCMDD program in the Bojanala district, North West Province.

3. EXPLANATION OF PROCEDURES AND WHAT WILL BE EXPECTED FROM PARTICIPANTS

You will be required to be part of an in-depth one on one interview with the researcher. The interviews will be held at the chosen health center. The researcher will ensure privacy by putting up a DO-NOT-DISTURB sign on the door during interview sessions and comfort will be ensured by providing water for the participants. Each participant will be given an opportunity to express themselves about their experiences and the researcher will make the atmosphere less formal so the participant can talk freely and openly.

Participants will be explained to that they were selected based on the inclusion criteria:

- ✓ Participants that have been removed from the programme from 2020 to date
- ✓ Participants that have requested deactivation during 2020 to date
- ✓ The participants need to be above the age of 18
- ✓ Participants that can understand English

Permission from each participant will be granted before recording the interview. A recorder will be used to record conversation throughout. The information will be used on the study and not for any other purpose.

4. POSSIBLE RISKS AND DISCOMFORTS INVOLVED

The study will not have any experiments. The study will not provide any form of remuneration. No tests will be performed on the participants. Only interviews will be conducted to allow lived experiences to be shared and because people living with HIV/AIDS are a vulnerable group sensitive topic may arise. Researcher will take note and stop where discomfort or emotions rise. Debriefing after sessions can be offered of which our resident psychologist will be made aware of and appointments will be made in time.

5. POSSIBLE BENEFITS OF THIS STUDY

The study will benefit you as a patient using the CCMDD program and experiencing the problems without being heard. This could be done by a development of a different standard operating procedure or guideline to be used. Possible refreshments will be given. You will not be paid to take part in the study. There are no costs involved for you to be part of the study.

6. YOUR RIGHTS AS A RESEARCH PARTICIPANT

Your participation in this trial is entirely voluntary and you can refuse to participate or stop at any time without stating any reason. Your withdrawal will not affect your access to other medical care.

7. ETHICS APPROVAL

This Protocol was submitted to the Faculty of Health Sciences Research Ethics Committee, University of Pretoria, telephone numbers 012 356 3084 / 012 356 3085 and written approval has been granted by that committee. The study has been structured in accordance with the Declaration of Helsinki (last update: October 2013), which deals with the recommendations guiding doctors in biomedical research involving human/subjects. A copy of the Declaration may be obtained from the investigator should you wish to review it.

8. INFORMATION

If I have any questions concerning this study, I should contact:

Researcher: O.M Masemola

Cell: 0631155392

Dr MR Musie

Prof IM Coetzee

Tel: 012 356 3162 or 012 356 3173

9. CONFIDENTIALITY

All information obtained during the course of this study will be regarded as confidential. Each participant that is taking part will be provided with an alphanumeric coded number e.g. A001. This will ensure confidentiality of information so collected. Only the researcher will be able to describe you as participant. Results will be published or presented in such a fashion that patients remain unidentifiable. The hard copies of all your records will be kept in a locked in my home.

10. CONSENT TO PARTICIPATE IN THIS STUDY

- I confirm that the person requesting my consent for my child to take part in this study has told me about the nature and process, any risks or discomforts, and the benefits of the study.
- I have also received, read and understood the above written information about the study.
- I have had adequate time to ask questions and I have no objections to participate in this study.
- I am aware that the information obtained in the study, including personal details, will be anonymously processed and presented in the reporting of results.
- I understand that I will not be penalised in any way should I wish to discontinue with the study and that withdrawal will not affect my further treatments.
- I am participating willingly.
- I have received a signed copy of this informed consent agreement.

Participant's name (Please print)	Date
Participant's signature	Date
Researcher's name (Please print)	Date
Researcher's signature	Date

Annexure

AFFIRMATION OF INFORMED CONSENT BY AN ILLITERATE PARTICIPANT (if suitable)

I, the undersigned, ……………………………………….., have read and have explained fully to the participant, named …………………………, the informed consent document, which describes the nature and purpose of the study in which I have asked the him/her to participate. The explanation I have given has mentioned both the possible risks and benefits of the study. The participant indicated that he/she understands that he/she will be free to withdraw from the study at any time for any reason and without jeopardizing the his/her standard care.

I hereby certify that the patient has agreed to participate in this study.

Participant's name (Please print)	Date
Participant's signature	Date
Investigator's Name (Please print)	Date
Investigator's Signature	Date
Name of the person who witnessed the informed consent (Please print)	Date
Signature of the Witness	Date

Olebogeng Mathabo Masemola

ANNEXURE B3

INTERVIEW GUIDE

Olebogeng Mathabo Masemola

ANEXURE B3: INTERVIEW GUIDE

INTERVIEW GUIDE

Main question

What are the reasons you would like to be removed from the CCMDD (centralised chronic medication programme)?

Probing questions

- Please tell me more about the challenges that you have experienced from partaking in the CCMDD programme……?
- What exactly do you mean by……?
- Do I understand you correctly if I say….?

ANNEXURE B4

EXAMPLE OF TRANSCRIBE

INTERVIEW

Olebogeng Mathabo Masemola

ANNEXURE B4: EXAMPLE OF TRANSCRIBED INTERVIEW

Interview

U1

Speaker1: Good day. I am Student Nurse Olebogeng Masemola. I'm currently doing my Masters at University of Pretoria and doing my research on factors contributing to the attrition of the ccmmd program. This simply means I'm trying to find reasons why there is a decrease in the number of people using this program, especially those taking ART. ma'am, I've identified you as a participant that has the needed criteria for my study and would love to interview you. Is that okay with you?

Speaker 2: Okay, it is

Speaker 1:

okay. ma'am, here are the papers here. This is the information leaflet. It just gives you like an information that I just summarized above about what my study is concerning of and I need you to just read it and consent. Can you do that for me?

Speaker 2:

Okay. Yes. Okay. there'll be no need to introduce yourself as I will be addressing you as participant one whenever I address you. This is just to ensure and reassure you of your privacy that even at the end of my study, your name will still be kept confidential. So, ma'am, do you consent to be recorded and interviewed?

Speaker 1:

Okay. Yes. I will be checking with Ma'am. Are you familiar with the program we are talking about? And if so, please let me know what medication you are specifically taking?

Speaker 2:

I am thinking of talking about this program I was put into collect treatment at the Medirite every two months.

Speaker 1: Exactly. Yes, that one.

Speaker 2: That is the program. Program called the CCMDD

Speaker 1: All right. And then what medication are you taking?

Speaker 2: I am taking ARVs

Speaker 1: Okay. That's for HIV, right

Speaker 2: Yes. Okay.

Speaker 1: Participant twelve, can you then tell me your age, where you live, whether you work or not? And what language do you speak?

Speaker 2: I am 25 years old. I live in Masosobane, here in Phokeng section, I am currently working in the mines and I speak Setswana.

Speaker 1: Okay. Participant twelve, I see you attend the clinic here, is there anything you'd like to share about the clinic?

Speaker 2: The clinic is the best so far. From my experience, they attend to us always put emergencies first. My problem is I wish they had added more young stuff to balance

Speaker 1: Okay. I hear you say you feel like more uses are needed, right?

Speaker 2: Yes.

Speaker 1: Could you explain why you feel like that?

Speaker 2: I feel like if there were more young nurses, we would be able to offload and talk about things. Sometimes it's hard to come to the clinic and talk about these things.

Speaker1: That's is interesting. So, about the program the program that we mentioned earlier. What is it that you can tell me about it?

Speaker 2: I am highly appreciative of the invention of this program. It has honestly made my life easier and convenient.

Speaker 1: Okay, when you say it has major life isn't convenient, do you mind telling me what do you mean by that?

Speaker 2: Besides the fact that my working hours are mess because I need to make extra shifts due to finances I now need to frequent, come to the unintentionally, miss my dates.

Speaker 1: Okay, I have seen that you miss most of your dates, so I'd like to know what do you mean intentionally and unintentionally?

Speaker 2: Unintentionally, is the fact that I don't receive the messages for collection due to no, I don't know what. And then I get here and get told I'm supposed to look at the card. They say, you must look at the card. What do they mean, you must look at the card? You see the appointment cards or the treatment passport. That's what we used to collect at pickup point. I understand it is fair, but I do not think I need to experience that in order to be told or advised. And that one can be tiring. Sometimes I forget my card at home. It's only convenient if a notification is sent.

Speaker1: Hear you. And when you say intentional, then what do you mean?

Speaker2: I can get the date. However, due to wake I can't go and therefore need to ask someone to collect for me and I cannot do that.

Speaker 1: And if I may ask, why is that you cannot send someone?

Speaker1: The TV can try making it seem like it is not a major thing or the radio but here in our section, here in Phokeng, there is no such thing as privacy. I will send someone to go collect, then they will go around with my package saying out loud that I'm positive or maybe open it. And I haven't accepted that, I am positive.

Speaker 1: Okay. If I hear you correctly, you are saying that you have not discussed or shared your status with anyone. Is that correct?

Speaker 2: Yes, it's correct. Because I am not ready.

Speaker 1: And somehow participant twelve. Has the program helped you in terms of that?

Speaker 2: A lot? The program has helped in terms of keeping my status to myself until I am ready or until I feel that I'm ready to speak out. It has encouraged me to take my pills in order to keep my viral load very low. Okay. And then I hate why are you specifically keeping the viral load low? 2s This is because I was told in order to stay on the program, I need to keep my viral load low. Otherwise, I will be automatically removed from the program.

Speaker 1: Okay, I see. And now that you personally requested to remove to be removed from the program, do you mind telling me why?

Speaker 2: My problem is that I do medical fitness at work once a year, and I have fallen dizzy twice in these last few months. Then I realized every time I'm being seen at work unique. I am told about my blood pressure extra being very high. I never experienced dead while taking medication regularly at the clinic

Speaker 1: Okay,

Speaker 2: this convenient six months of taking medication somewhere has gotten me to a place of having another condition. Sure. That I cannot really say I have it or I don't

Speaker 1: Okay, if I'm hearing you, you are saying that the reason you want to leave is that you feel like your BP is not controlled.

Speaker 1: Yes, that is exactly what I'm saying. Okay. I want to get regularly checked so that I know and I can see for myself that I have high blood pressure because I cannot accept something I don't understand, I'm not sure about before I can even accept taking medication as advice is at the mines.

Speaker 1: Okay, then I see you chose to take the treatment that you're taking. You see the medication, the package that you're taking at Medirite every two months, I see that you specifically chose to take a Medirite. How has that experience been for you?

Speaker2: Also, that one. That one is a problem.

Speaker 1: If you say it's a problem, how is it a problem?

Speaker 2: Whenever I go to mediate, they tend to be very unfriendly immediately.

Speaker 1: Okay? Sorry, when you say unfriendly, who is unfriendly?

Speaker 2: The Medirite staff will be very unfriendly. Okay Immediately when I arrive there maybe days late, instead of explaining their procedure, they look at you funny. And then sometimes they send me back to the clinic. And now I get frustrated because I have to go back to the clinic. But I chose an easier way which is more convenient for my work and the wake times, you understand?

Speaker 1: So, if I could ask you name participant twelve, what do you think can be done to improve the service or the program itself?

So personally, for me, I think it would be great if they improved their reminder system for their appointment. OK you see, if they are able to add a specific or hire young people. That would be nice to have young nurses, you see, I feel like sometimes people who've been in the industry for long, they tend to be impatient with HIV patients. Okay and services for collection, you see. Now I would be easily reminded would be on my phone, I wouldn't have to be late with that date. It would help a lot. Speaker 1: Okay. Participant twelve, is there anything that you have for me that you can tell me that we haven't spoken about, that maybe you feel like you could share about this program that you haven't said?

Speaker 2: Well, ever since I started the program, I have a bit of questions to ask. Okay. Does that mean that one is not supposed to be sexually active? How does it affect the viral load? Does it make it high? Because sometimes I'm unsure. These are the things I want to talk about with young nurses.

Speaker 1: Okay. Participant twelve that I can help you with. When you are on ARVS and you're on this program, they should inform you that when you're taking treatment, you are able to take or have been in a sexual relationship. Now you are encouraged to have sexual relations, but using protection, this helps with your very low to keep your very load low so you can carry on with life as normal just as long as you protect yourself and use a condom, then you can still be safe and be kept on this program. You understand that?

Speaker 2: Yes. And also, the program, it encourages us to tell our partners, what if I'm not ready to tell my partner about the situation I'm in?

Speaker 1; Okay. The program really does not encourage you to tell your partner. It just encourages you to have a support system because the more you are supported, the more you are able to want to stay in this program and keep your viral load. Because now you have a support system and then HIV does not appear to you as a condition, but just something that you are living with but have to take pills in order to survive vibe and live longer.

Speaker 2: I hear it is, very difficult, especially since I'm very young. I'm also still learning Sometimes I go on Google and Google this HIV situation.

Speaker 1: So, do you feel that since you're taking this program, you are not given the opportunity to sit down and ask the nurses those questions? Because there are not a lot of young nurses, it gets a bit difficult.

Speaker 2: I'm very shy and I can't talk about it with old people. I feel like they judge.

Speaker 1: All right. Besides that, is there anything else that you would like to say to me? Or you feel like you've expressed everything that could possibly make you to want to be removed from this program, or you're still going to consider to stay?

Speaker 1: Unfortunately, because I want to see if my high blood pressure is really high, I might consider coming back because the program helped a lot.

Speaker 1: So now we're just waiting to see if your BP can be controlled, then you can decide? Is that what you're saying? Yes. I want to know what really is behind the dizziness. Is it because of the heat? Or is it because I don't eat? Or I wanted to know because I personally feel like I can't handle another condition at the moment.

Speaker 1: Okay. And do you feel like you being able to come to the clinic instead of taking your medication? At Medirite will help you with that.

Speaker 2: I will. But you guys have to start bringing in young nurses, okay? Especially in this department. It's a very sensitive topic, because I remember when I found out

Speaker 1: Okay, when you say it has major life isn't convenient, do you mind telling me what do you mean by that….

Speaker 2: I was very scared. I was very scared, and I didn't know what to do. And I remember the nurse She also judged me in a way. She didn't allow me to process it. And I left crying that day. So, it would be nice if a younger person was there and talked to me about it, because it's not a nice thing to live with, especially if it's not a choice as well.

Speaker 1: When you say judged you, how did the nurses judge you?

Speaker 1: It's the looks and the comment., like You don't use protection. What were you expecting? You know? And that made me feel dirty.

Speaker 1: Okay, that's interesting. Participant twelve All right. Is there anything else you'd love to share with me?

Speaker 2: I just want to know one thing again. Will I be able to have kids? Because in that department, the program has not actually got in there yet. There was also still renewing the program. But I want to know am I able to have kids with HIV? Do people get buried sometimes? It's the questions that I have in my head because I feel like maybe because of this disease, I cannot have a normal life.

Speaker 1: Okay, ma'am, before I answer that, from what you are telling me now, what I'm hearing and please tell me if I'm not hearing you correctly, are you telling me that you feel like if in this program, they could encourage or include, like, a support group or support system instead of just you guys collecting treatment? It would make you happier?

Speaker 1: Yes. Okay. And you're saying that it would make more sense if you added young people to make that support system effective? Is that what you are saying to me?

Speaker 2: Yes, ma'am, I'm saying that. Please. Okay. That is very interesting. Participant twelve. All right.

Speaker 1: Is there anything else that you want to share with me?

Speaker 2: No. Thank you for giving me this opportunity to talk. I never thought this interview would allow me to open up. Thank you so much.

Speaker 1: All right. That is the one I'm highly appreciative of the time that you gave me today and for allowing me to record you and for you participating in my study. And I hope that the study will somehow get answers for you, and it will, at the end, better this program for you so that you can come back and not request to leave.

Speaker 2: Yes, I will consider coming back, because it was not that at all. All right. Thank you so much. Thank you so much. You must have a good day. You too, ma'am. Thank you.

ANNEXURE C

AUTHORS GUIDELINES FOR THE JOURNAL GENDER AND BEHAVIOUR

* * *

Olebogeng Mathabo Masemola

ANNEXURE C: AUTHORS GUIDELINES FOR THE JOURNAL: GENDER AND BEHAVIOUR

Author Guidelines

Content:

GENDER & BEHAVIOUR welcomes scholarly manuscripts from authors all over the world on a wide array of subjects concerning psychological and behavioural aspects of gender in general. All manuscripts MUST respect the dignity of HUMANITY. Articles published or submitted for publication elsewhere are not accepted. Authors are solely and fully responsible for the statements and views contained in their articles. Neither the Editorial board nor the Ife Center for Psychological Studies/Services accepts responsibility for author's views and statements

Book Review: Two copies of the book/manuscript to be reviewed are to be submitted to the Project Coordinator. Gender and Behaviour Ife Centre for Psychological Studies and Service. P.O. Box 1548 Ile-Ife. Osun State, Nigeria. Or through Emails: ifepsy@yahoo.com or wanawake2002@yahoo.com.

Manuscript Preparation: Prepare manuscripts according to the Publication manual of the American Psychological Association (4th Edition, 1994; APA 750 First Street, NE, Washington, 20002-4242). Follow "Guidelines to reduce Bias in Language (pp. 46-60)

Limit manuscripts to 25 pages of text, including references.

On page 1, type article title, author name(s), affiliation(s) address phone and fax numbers, e-mail address (es) running head (abbreviated title, no more than 45 characters and spaces) name and address of the person to whom requests for reprints should be address; on page 2, type an abstract of no more than 150 words; type author notes/acknowledgements at the end of the article (just before references section). All copies must be double – spaced: The author name(s) should appear only on the title sheet.

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DECLARATION OF THE EDITOR

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1 November 2023

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