HIV-RELATED STIGMA IN RURAL AREAS: A CASE OF CITRUS FARM WORKERS BASED IN ADDO COMMUNITY IN EASTERN CAPE

By

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In the

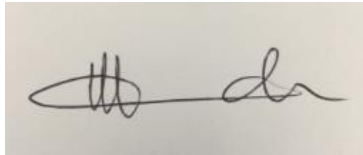## FACULTY OF BUSINESS AND ECONOMIC SCIENCES, DEPARTMENT OF ECONOMICS AND ECONOMIC HISTORY

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DECLARATION

I, TASARA MAZORODZE, (student Number: s216389895) hereby declare that the study entitled, *HIV-related stigma in rural areas: A case of citrus farm workers based in Addo community in Eastern Cape* is my own work and has not been submitted for examination at any academic institution. Other sources that have been used in support of this study have been acknowledged and referenced accordingly.

Signature:………………………………………

Date:…25 March 2019…………………….…

ABSTRACT

While South Africa has recently joined the rest of the world in the race to achieve an AIDS free generation by the year of 2030, little has been done to develop the scientific interventions that address HIV-related stigma, which is one of the major barriers to the fight against HIV. To the researcher's knowledge, this is the first study in the South African context that seeks to assess the forms of HIV- related stigma in a local context and in a rural area in particular, where HIV related stigma research and interventions remains scant.

This study acknowledges the dynamic, unique, multidimensional and sensitive nature of HIV-related stigma and, therefore, an explanatory mixed approach enabled the researcher to provide a comprehensive assessment of HIV-related stigma amongst the citrus farm workers who are based in Addo, Eastern Cape. Quantitative data was collected from 200 participants across five farms, whereas 50 employees across the 5 farms were also selected to take part in the focus group discussions.

An assessment of the reliability and validity of local HIV-related stigma scales (Kalichman *et al.,* 2005 personal stigma scale-English, isiXhosa and Afrikaans version and Visser *et al.* 2008 personal and attributed stigma scale-English version) and the UNAIDS (2012) HIV knowledge scale was conducted. The assessment showed that the reliability of these scales of measurement tend to vary according to context. In this study, the Kalichman *et al.,* (2005) personal stigma scale (English version) scored a weaker reliability score (alpha=0.58). Thus, as the scale is not reliable for the rural context, it was not considered. Furthermore, quantitative findings show that citrus farm workers are characterised by lack of/ little knowledge about HIV, which results in the stigmatisation of people who are HIV positive in the form of symbolic, instrumental, personal and attributed stigma, as well as a fear of HIV disclosure.

Findings also revealed that participants who display a high personal stigma score are likely to display a high attributed stigma score (r=0.47, p<0.00). This confirm the assumption of social identity theory that people tend to use stigma as a 'protective function' to protect their identity by labelling other people as ''deviant' or 'stigmatising'. This finding is particularly relevant in that it reveals that, while many people are aware that stigmatising people with HIV is not morally acceptable, they rather attribute

stigmatising attitudes to their communities. Thus future studies need to consider emphasising the assessment of attributed stigma in a rural context.

Quantitative findings also revealed that the effect of the following demographic variables, namely race (F=20.1, p=0.00), marital status (F=3.58, p=0.00), religion (F=7.17, p=0.03) and education (F=2.63, p=0.03) on HIV-related stigma was statistically significant. This provides proof that HIV-related interventions that were developed for the Addo community need to consider the above-mentioned demographics variables.

The qualitative findings provided an in-depth analysis of the key quantitative findings. A lack of knowledge about HIV among participants was further confirmed by the following themes that were common during focus group discussions: misconceptions about HIV transmission and prevention; false beliefs that healthy looking people cannot have HIV; HIV symptoms are clearly visible; and HIV can be transmitted through contact with people who are HIV positive. Possible causes of HIV-related stigma as revealed by the qualitative findings include; fear of death; the belief that HIV is a punishment for bad behaviour; and the fear of being isolated and rejected.

The qualitative approach revealed other forms of HIV-related stigma that were not common in the quantitative studynamely; healthcare, employment and verbal stigma. The focus group discussions revealed the major reasons why a large number of the farm works may be reluctant to disclose their status, namely fear of the unknown and attributed stigma. The study concluded by offering recommendations for the designing and tailoring of HIV-related interventions in the rural context and in the citrus sector in particular.

Key words: HIV & AIDS, HIV related stigma, HIV knowledge, Forms and expression of stigma, rural areas

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DEDICATION

This thesis is dedicated to the following people:

My mother, Easter Charumbira

My brothers (Christopher, Rungano, Munyaradzi and Richard)**.**

My sisters (Tendai, the late Maria and Elizabeth).

Lastly, my daughter, Likuwe, Esther Mazorodze who was born at the time when I was working on the final draft of my thesis.

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LIST OF ABBREVIATIONS

AIDC EC: Automotive Industry development Centre, Eastern Cape Province

AIDS: AIDS Definition Acquired immune deficiency syndrome

ANOVA: Analysis Of Variance

AHRQ: Agency for Healthcare Research and Quality

ART: Antiretroviral therapy

BCEA: Basic Conditions of Employment Act

GDP: Gross Domestic Product

HSRC: Human Sciences Research Council

HIV: Human immunodeficiency virus

H0:   Null hypothesis

H1:   Alternative hypothesis

ILO: International Labour Organisation

PLWA: People who are HIV positive & AIDS

NSP: National Strategic Plan

STATS SA: Statistics South Africa

SANAC: South African National AIDS Council

SIM: Structural Influence Model

UNAIDS: Joint United Nations Programme on HIV & AIDS

USAID: The United States Agency for International development.

UNESCO: United Nations Educational, Scientific and Cultural Organization

WHO: Word Health Organisation

α: Significance level

CHAPTER ONE

ORIENTATION

1.1   INTRODUCTION

"Stigma remains the single most important barrier to public action. It is a main reason why too many people are afraid to see a doctor to determine whether they have the disease, or to seek treatment if so. It helps make AIDS the silent killer, because people fear the social disgrace of speaking about it, or taking easily available precautions. Stigma is a chief reason why the AIDS epidemic continues to devastate societies around the world."

- U.N. Secretary-General, Ban KI-moon (2008)

Stigma is an old concept which has been linked to HIV and AIDS since 1980 when the pandemic was first detected in South Africa. The study at hand is being conducted at a time when South Africa recently adopted the new UNAIDS strategy, code named 90-90-90, which is aimed at achieving an AIDS-free generation by year 2030. Despite massive investments in the management of HIV, the war against HIV and AIDS in South Africa is far from being won (Dickinson, 2013), hence, the target to achieve the UNAIDS strategy appears to be a utopian dream.

There is strong evidence that suggests that, despite of the fact that rural population is one of the populations that has been hit the hardest by HIV and AIDS (Statistics South Africa, 2015), research on HIV- and AIDS-related stigma in South Africa and in rural areas in particular remains scant (Dickinson, 2013). The study at hand seeks to explore HIV-related stigma among citrus farm workers who are residing in rural areas of Addo in the Eastern Cape. According to Sinngu and Antwi (2014), high HIV incidence is a cause for concern in the citrus industry, one of the largest source of employment in the Eastern Cape.

Whilst, recently, there seems to be a great interest from various stakeholders to tackle HIV-related stigma locally, only a few studies have been conducted to provide a comprehensive assessment the forms and expressions of HIV-related stigma in rural

areas, even though rural areas remain the hardest hit by HIV (Linganiso & Gwegweni, 2016). A few studies that attempted to assess HIV-related stigma in the rural context, mainly focused on internalised stigma (Ogunmefun; Gilbert & Schatz, 2011 & Chidrawi, Greef, Temane & Doak, 2016). In addition to that, Baumgartner and Niemi (2013) argued that research on how HIV affects the identities of people living in rural areas, is still in its infancy stage. In that study, some participants living with HIV indicated that indeed HIV diagnosis had indeed changed their work-life given that:

- Reactions to HIV medications lowered their energy levels and, therefore, they were struggling to cope with work.
- Opportunistic diseases such as TB and diabetes also complicated their health, therefore they had to adjust to the new work-life.
- Some left their jobs to find less stressful jobs.
- Fear of stigmatisation made some participants leave their jobs.

Despite the fact that HIV related stigma frustrates efforts to fight HIV, research on HIV-related stigma amongst rural dwellers in South Africa remains scant (Rao *et al.*, 2012) and, hence, this study will contribute to the much needed literature on the nature of HIV related stigma in the rural context. In a survey conducted by the Human Sciences Research Council (HSRC) in 2014, showed that, while other types of stigma seem to be gradually decreasing, internalised stigma remains a challenge in South Africa. The study (which consisted of 10 473 participants across all the provinces of South Africa) showed that internalised stigma is more common among women, people who are 50 years and older, people with no formal education and people who are poor. Yet it remains unknown if these findings can be generalised to rural populations and in the citrus sector in particular

Using an approved HIV knowledge scale (UNAIDS, 2012) and HIV-related stigma scales (Kalichman *et al.*, 2005 HIV-related personal stigma scale and Visser *et al.*, (2008) HIV-related personal and attributed stigma scale), the study at hand seeks to establish the forms and expressions of HIV-related stigma in the rural context where HIV-related stigma is fuelled by various misconceptions about HIV (Linganiso & Gwegweni, 2016).

The study takes into account the unique and complex nature of HIV related stigma, hence, the mixed method-sequential, explanatory design was used to provide an extensive assessment HIV-related stigma in a rural context. Mixed methods are often used when the researcher believes the phenomena being studied is unique and complicated, hence one approach may not yield valid and reliable findings.

1.2   BACKGROUND OF THE STUDY

HIV-related stigma remains a complex and serious obstacle in the response against HIV and AIDS, especially in rural areas where HIV interventions are few (Mahendra; Gibbon & Bharat, 2007; Wolfe, Weiser & Bangsberg, 2006; Linganiso & Gwegweni, 2016). The complex nature of HIV-related stigma is exacerbated by the fact that it is context specific (Mazorodze, 2012; Gilbert, 2016). Therefore, interventions that are contextually appropriate and culturally competent are required.

While the effects of HIV related stigma are well known and documented, research on HIV-related stigma in rural areas remains scant (Mahendra; Gibbon & Bharat, 2007; Dickinson, 2013). In most cases, HIV in rural areas is linked to the following factors: circular labour migration, cultural practices (moral geography), poverty and nutritional status, education, religious conservatism and unemployment. (Linganiso & Gwegweni, 2016).

1.3   MOTIVATION FOR THE STUDY

Despite significant investments in the fight against HIV and AIDS in South Africa, a huge body of literature have documented growing concerns related to HIV-related stigma among rural dwellers (Parker & Aggleton, 2002; Kalichman & Simbayi, 2003; Hong *et al.*, 2008; Puoane, 2010 & UNICEF South Africa, 2012). Rural areas are often characterised by specific cultural and religious beliefs about HIV that exacerbates the stigmatisation of people with HIV (Sithole, 2001; Hong *et al.,* 2008 & Dickinson, 2013).

According to a situation analysis done at the farms by the Automotive Industry Development Centre (AIDC EC) in 2012, HIV-related stigma remains a serious issue in the Addo community. The area is dominated by farming, with commercial agriculture being a dominant driver of economic development in the area. The following are some

of the reasons why HIV remains an issue among farm workers: (1) Migrant workers leave their families behind and engage in sexual relationships in the valley. (2) Seasonal workers engage in transactional sex to improve their financial situation or to secure a job on a farm or in a pack house. (3) Locals engage with migrant workers during the high season. (4) Males take advantage of young women (either seasonal or permanent) without strong social networks to protect them (Automotive Industry Development Centre, 2013).

1.4   RESEARCH QUESTIONS

Research questions are an essential part of any research project as they determine the research design that are to be employed by the researcher. According to Creswell (2011), in a mixed method design, research questions carry more weight than the methodology itself. Described by Subedi (2016), as a 'difficult but important intellectual exercise', the formulation of research questions in a mixed research method, require the researcher to carefully integrate quantitative and qualitative questions.

The explanatory sequential mixed method design utilised in this study, allows the researcher to integrate the quantitative and qualitative research questions in order to have an in-depth and comprehensive analysis of HIV related stigma amongst the participants. In this study, the qualitative research questions will seek to further unpack the findings from the quantitative questions, by providing an in-depth qualitative analysis of HIV related stigma. The qualitative research questions will be further refined as per the quantitative study findings. The quantitative study will unpack the variables that have a strong predictive power regarding HIV related stigma and therefore the qualitative questions will further unpack the significance of these variables in relation to HIV related stigma.

1.4.1   Research question 1

Quantitative research question: Are the Visser et al., and Kalichman et al. HIV related stigma scales reliable assessment tools that can be used to measure HIV related stigma among farm workers at Addo, Eastern Cape?

1.4.2   Research question 2

Quantitative research question: Are the demographic variables, namely gender, age, race, marital status, education and religious beliefs determinants of HIV-related stigma among citrus farm workers in Eastern Cape Province?

Follow up qualitative research question: In your view, are demographic factors determinants of HIV related stigma in your community?

1.4.3   Research question 3

Quantitative research question: Is the level of HIV knowledge related to HIV related stigma attitudes held among citrus farm workers in Addo, Eastern Cape

Follow up qualitative question: What is your understanding of HIV?

1.4.4   Research question 4

Quantitative research question. What are the forms of HIV related stigma amongst citrus farm workers in Addo, Eastern Cape?

1.4.5   Research question 5

Quantitative research question: Does HIV related stigma discourage HIV disclosure among citrus farm workers in Addo, Eastern Cape?

Qualitative research question: In your view, why are people afraid to disclose their HIV status in your community?

1.5   RESEARCH OBJECTIVES

- To establish if the local HIV related stigma scales (Visser et al. and Kalichman et al. scales) are reliable assessment tools that can be used to assess HIV related stigma amongst citrus farm workers working in the Addo community in Eastern Cape.

- To establish if demographic variables, namely gender, age, race, marital status, education and religious beliefs are determinants of HIV-related stigma among farm workers in the citrus industry in the Eastern Cape.
- To assess the levels of knowledge about HIV amongst farm workers working at the citrus farms in the Addo community in Eastern Cape.
- To establish the forms of HIV related stigma amongst citrus farm workers in Addo, Eastern Cape.
- To establish if HIV related stigma discourages HIV disclosure among citrus farm workers in Addo, Eastern Cape.

1.6   HYPOTHESIS TESTING

As defined by Wikipedia, a hypothesis is a tentative statement or an educated guess that explains a phenomenon in scientific terms. Such tentative statements can be used to make predictions that are based on a theory or scientifically proven observations (Miller & Thron, 2015). While there are various forms of hypothesis, for the purpose of this study, a statistical hypothesis will be tested. When testing a statistical hypothesis, the researcher is interested in assessing two types of hypotheses, namely, the null hypothesis (is based on the premise that there is no relationship between variables or phenomena) and the alternative hypothesis (is the opposite of the null hypothesis which is based on the premise that there is relation between phenomena).

For a hypothesis to be tested, a test of significance (represented by a p-value) must be conducted to ascertain whether the null hypothesis (H0) can be accepted or rejected. Central to the rejection or acceptance of null hypothesis are two concepts namely the p-value - the threshold value of significance (normally 0.05 or less) which is used accept or reject the null hypothesis and type 1 error (a situation where the null hypothesis is falsely rejected) (Miller & Thron, 2015). In this study, the following statistical hypothesis will be considered.

1.6.1   Hypothesis 1

This hypothesis assesses if the identified demographic variables are determinants of HIV related stigma. The hypothesis is based on previous literature that shows that demographic variables are determinants of HIV related stigma (Maughan-Brown,

2006; Mazorodze, 2012; Coleman, & Tate, Gaddist, White, 2016). While the above studies were conducted in urban areas, the researcher is interested in finding out if the findings can be generalised to rural population. The hypothesis is therefore stated as follows:

H0. Demographic variables, namely gender, age, race, language, marital status, education and religious beliefs are **not** determinants of HIV-related stigma in rural areas.

H1. Demographic variables, namely gender, age, race, language, marital status, education and religious beliefs are determinants of HIV-related stigma in rural areas.

1.6.2   Hypothesis 2

The second hypothesis is based on the research-based evidence that shows that the majority of people are reluctant to disclose their HIV positive status due to fear of stigmatisation (Zunniga, 2010; Klopper, Stellenberg & van der Merwe, 2014). The hypothesis therefore, is stated as follows:

H0: HIV related stigma does not discourage HIV disclosure among citrus farm workers

H1: HIV related stigma discourages HIV disclosure among citrus farm workers.

1.7   THEORETICAL FRAMEWORK

A theoretical framework serves to contextualise a research study by providing the structure or foundation of the study (Lysaght, 2011). According to Gant and Osanloo, a dissertation that is not guided by a theoretical framework, is like a house that is constructed without a blueprint.

According to Lysaght (2011), when selecting a theoretical framework, the researcher must consider the relevance of the theory to the study. The theory is imperative in this study as it explains the existence of various forms of HIV-related stigma in rural areas, where misconceptions about HIV are common (Dickinson, 2013). According to Grant and Osanloo (2014), literature on how the diagnosis of HIV affects people's identities in rural areas is still scant and therefore further research is needed in this area. The study at hand will be guided by Tajfel and Turner's (1986) social identity theory.The theory will be explained in detail as follows;

1.7.1 The social identity theory

Given the complexity of HIV related stigma, a few theories have been proposed to explain how stigma affects HIV infected and affected people (Goffman 1963; Tajfel & Turner, 1986, Brown, 2000; Martin, Lang & Ollafsdottir 2008; Attell, 2013; Misir, 2015 & Baumgartner, 2013). In this study, the researcher is interested understanding the nature of HIV related stigma in work environment that is situated in a rural area of Addo, in the Eastern Cape. It will be interesting to understand in theoretical terms how the perceived effect of HIV related stigma affect people's identities in a workplace that is exposed to strong rural beliefs and misconceptions about HIV.

One such theory is the Social Identity theory proposed by Tajfel and Tuner (1986) which explains the importance of one's identity and how illness such as HIV can compromise one's social identity. Because they take time to heal, chronic diseases such as HIV can re-define or completely change a person's identity (Baumgartner, 2013) thereby making it difficult for the sick to adapt to the new life whereby the society have to understand and accept the new identity. Various identities that are affected by chronic illnesses according previous research include; work identity, sexuality identity, advocate identity, self-esteem and addict identity (Grant & Osanloo, 2014). These identities are explained below;

- *Work identity*- symptoms of HIV such as loss of weight and energy make it difficult for people infected with HIV to continue working normally in the workplace. In some previous studies, participants living with HIV indicated that they found it difficult to cope with the new identity in the workplace, hence they had to make difficult decisions such as looking for other employment that does

not involve manual labour. Previous studies also show that the work identity of people living with HIV is often compromised by the stigmatisation of people living with HIV (Geertjes, 2011).

- *Sexuality identity*- Changes in sexual life is one of the notable decisions that people diagnosed with HIV often make due to their new identity. In previous studies, some people living with HIV reported to have been; denied sex due to their status, divorced by their partners and forced to wear condoms (Peterson *et al.,* 2010).

- *Advocate identity*- Due to the changed identity, some people diagnosed with HIV choose to live their jobs and become advocates for HIV. previous research shows that some reported to have joined support groups to support people infected and affected by HIV (Grant & Osanloo, 2014)

- *Spirituality identity*- in previous studies, some people diagnosed with HIV reported that their spiritual identity changed when they were diagnosed with HIV. Some participants reported that their spirituality increased when they found out that they are HIV positive, hence they had to pray more often for healing from God (Grant & Osanloo, 2014).

- *Self-worth*- people who are diagnosed with HIV often report low self-esteem according to previous research (Dibb & Kamalesh (2012) thereby negatively affecting their identity.
Addict identity- Research shows that substance abuse often increases after one is diagnosed with HIV. Some diagnosed with HIV are reported to have become alcohol addicts as they tried to cope with the new identity (Peterson *et al.,* 2010)

Central to the social identity theory by Tajfel and Turner is how positive or negative social identity results in categorisation of people thereby resulting segregation of people based on identity. The theory explains how social identity determines group membership or a sense of belonging amongst people in society. The social categorisation of groups results in 'othering' whereby people with negative identities are viewed as the 'out group'.

1.7.2 Group membership constitute peoples' identities

Tajfel and Turner's social identity theory's starting premise is that being a member of a group constitutes a fundamental part of peoples' identities or self-concepts. In relation to HIV, uninfected persons are likely to protect their identity as members of the 'non-deviant' or the in-group and infected persons will be viewed as deviant, hence they must be avoided and rejected. Stigmatisation or othering, according to this theory is viewed as a '' identity protective function' which produce a feeling of comfort and safety among people who are HIV negative.

Being diagnosed with a chronic disease such as HIV, impacts negatively on one's self-esteem or self-identity (Geertjes, 2011). Geertjies argued that being HIV-positive in society becomes one self and social identity whereby people diagnosed with HIV belong to an 'out-group' known as 'people who are HIV positive'. According to Baumgartner and Niemi (2013), an HIV diagnosis has varied effects on social relationships. Several previous research studies have also confirmed the varied implications of HIV on social relationships whereby people who are HIV positive have been rejected, divorced, isolated and discriminated against on the basis on their status (Herek, 1999; Herek, 2000; Burack, 2013; HSRC, 2014).

The negative perceptions towards people who are HIV positive, arise from some misconceptions that are common in rural areas, whereby HIV and AIDS is viewed by many as a punishment from God and as a result of immoral behaviour (Dickinson, 2013). Even though, in the African context, the pandemic is a heterosexual one, the historical association of the disease with gay men coupled with widespread homophobia, causes individuals who are infected with the disease, to be viewed as out groups, thus resulting in the boundaries between the groups.

1.7.3 Group membership implications on self-esteem

The theory second premise is based on the fact that group membership affects one's self esteem, thus, ones HIV status will have an impact on that person's self-esteem. In a study conducted by Dibb and Kamalesh (2012), the majority of participants living with HIV reported that the 'HIV identity' had a negative impact on their self-esteem. In

that study, some of the participants indicated that they felt 'damaged' and 'dirty' after being diagnosed with HIV.

In trying to promote self-esteem, individuals start to categorise each other. Tajfel and Turner (1986) argued that positive self-esteem is achieved and maintained through intergroup comparisons along characteristics that favour the in-group. This results in perceptual biases and discriminatory strategies which function as attempts to differentiate between the in-group (HIV negative people) and the out-group (people diagnosed with HIV) in a manner favouring the in-group.

1.7.4   Significance of the Social Identity Theory

The social identity theory is significant in this study in that it provides an understating of how the perceived effect of HIV related stigma have on farm workers identities. the implication of having in groups (people who view themselves as HIV negative) and out groups (people who are viewed as deviants due to their HIV positive status) in the workplace is that team work may become dysfunctional as members of the in-group may not want to work with members of the in group due to fear of contracting HIV. This theory is in line with HIV related stigma scales used in this study which aim to assess how personal stigma and attributed stigma result in 'othering' of people in the work place. Personal stigma items such as ''people with HIV are dirty'' shows how the work identity of people diagnosed with HIV can change from normal to 'dirty''. As suggested by Goffman, ''stigma reduces one's identity from a whole to tainted one'

Furthermore, endorsement of personal stigma items such as; 'people with HIV must be isolated,' 'people with HIV must not be allowed to work with children', 'I do not want to be friends with someone who has AIDS', 'I would not like to sit next to someone with HIV/AIDS in public or private transport.' 'I feel afraid to be around people with HIV/AIDS', and 'I would not drink from a tap if a person with HIV/AIDS had just drunk from it' confirm how the implication of 'othering' as depicted by the social identity theory can lead to isolation, discrimination and rejection of people diagnosed with HIV.

Furthermore, the VIsser *et al.*, scale which consists of two parallel scales which assess personal stigma -individual attitudes towards people diagnosed with HIV and attributed stigma-the attitudes of the community towards people diagnosed With HIV is in line

with social identity theory in that it seeks to unpack how people may use stigma as protective function as depicted by the social identity theory by attributing stigmatising attitudes to the community. In a study conducted by Mazorodze (2012), the process ''othering'' was confirmed as it was found that individuals perceived themselves to be less stigmatising but rather attribute stigmatising attitudes (deviant behaviour) to the community.

1.8   DEFINITIONS KEY CONCEPTS

In this section, the key concepts of the study, as listed below, shall be defined and explained.

1.8.1   HIV

HIV is an abbreviation for Human Immuno-deficiency virus. It is a virus that, overtime, causes a disease known as AIDS - which stands for Acquired Immune Deficiency Syndrome. The virus fights the body's immune system to a point where the body becomes weak and cannot fight infections anymore. Early symptoms of HIV include: rash, fever, night sweating, muscles ache, sore throat, swollen lymph nodes and ulcers. The virus can be spread through the following ways as listed below:

- HIV can be transmitted when an HIV infected person have unprotected sex with an uninfected person. The virus will be transmitted to the body of the infected through sperms. The unprotected sex can be vaginal or anal.
- HIV positive pregnant mothers transmit the diseases to their unborn babies. Yet research shows that, in some instances, some babies born by HIV positive mothers may be HIV negative. The chances that an HIV positive mother can transmit the disease to the unborn baby are higher (between 15 % to 45%) if the mother is not on treatment.
- HIV can be transmitted through blood. The sharing of the following equipment between an HIV infected and uninfected person e.g. razor blades, injections at hospitals and injections between drug users.

1.8.2   AIDS

As mentioned above, AIDS stands for Acquired Immune Deficiency Syndrome. AIDS is the final stage of HIV, thus it is when the HIV virus completely destroys the immune system of the body to an extent that it cannot resist infections. When the immune system is weakened, other opportunistic diseases such as TB can now enter the body, resulting in the deterioration of a person's health.

1.8.3   HIV related stigma

There seem to be a consensus among researchers regarding the definition of HIV related stigma the common definition of HIV related stigma is that of Goffman (1963). Goffman defined stigma as process where an individual's identity is reduced "from a whole and usual person to a tainted, discounted one". More definitions of related stigma will be provided in the next chapter. Without an agreed definition of HIV related stigma, it appears policy makers and researchers are finding it difficult measure it and to develop interventions aimed at reducing or eliminating HIV-related stigma (Mazorodze, 2012).

1.8.4   Farm worker

It is important to briefly explain the characteristics citrus farm workers. Citrus farm workers, in this study, are farm workers working on five citrus farms in Addo. There are two categories of citrus farm workers, namely pickers (mostly men who pick oranges from plantations) and packers (mostly females who pack oranges in the pack houses). The farm workers consist of permanent, casual and seasonal workers. A large number of these workers live in the farm compounds which are, in most cases, overcrowded due to the lack of accommodation, given that some of the workers do not reside in Addo. The living conditions of most the farm workers, like most of the farm workers in South Africa, remains poor and thus, they are mostly characterised by poverty, crime and poor health.

Given that the farms are located in rural areas, they are also characterised by strong belief systems that, in some instances, exacerbates the stigmatisation of people who are HIV positive. It is for this reason that Kruger (2005), classified farm workers as a

vulnerable group regarding HIV related transmission. According to study conducted by Magcai (2008), displayed beliefs and misconceptions about HIV fuels the stigmatisation of people who are HIV positive.

1.8.5 Rural

Previous research shows that various criteria have been used to define what is rural and what is urban. One of the simple definitions of rural is provided by Wikipedia, which defines a rural area as any area that is located outside cities or towns. Such areas are usually characterised by agricultural activities, a low population density and small settlements. In this context, Addo is the rural area and it is located 72 kilometres from Port Elizabeth. Citrus farming is the dominant agricultural activity in the area.

1.9   DIVISION OF CHAPTERS

The study at hand consists of the following chapters.

Chapter 1: Introduction

Chapter 2: Literature review

Chapter 3: Methodology

Chapter 4: Quantitative results and discussions

Chapter 5: Qualitative results and discussions

Chapter 6: Proposed recommendations for addressing HIV related stigma in rural areas.

Chapter 7: Recommendations and conclusion

1.10 CONCLUSION

In this chapter, the researcher provided the reader with an introduction to the study. The introduction provided the reader with the context in which the study is being conducted and the purpose of the study thereof. The chapter provided, in detail, the research questions and the objectives that the study seeks to achieve. The theoretical framework that guides the study was also explained so as to provide the reader with a theoretical perspective of HIV related stigma. The next chapter is a review of literature that is linked to this study.

CHAPTER TWO

LITERATURE REVIEW

2.1   INTRODUCTION

This chapter provides an overview of what has been studied regarding `HIV and AIDS related stigma in the rural context. The chapter begins by providing a detailed analysis of the citrus industry and the state of HIV & AIDS in South Africa. The chapter also unpacked the nature of HIV related stigma in the local context and a detailed review of previous and present interventions that have been/are being used to reduce the impact of HIV related stigma. The chapter will also seek to provide the reader with a clear understanding of the importance of investigating the forms and expressions of HIV related stigma in rural areas where research of this nature is scant.

2.2   THE CITRUS INDUSTRY IN SOUTH AFRICA

The agriculture sector is amongst the leading sectors that contribute significantly to the growth of the South African economy. As the third largest horticultural industry in South Africa1, the citrus industry has been, over the years, one of the biggest foreign exchange earners in South Africa. The Eastern Cape Province is the second largest citrus producer in terms of the number of hectares of citrus plantation after Limpopo. The diagram below shows the size of the citrus production in all the provinces in South Africa.

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[1] The citrus industry is the third after deciduous fruits and vegetables.

Figure 1:   Hectare of citrus production per province

Hectares of citrus production in South Africa

Other provinces, 3%
Northen Cape, 2%
Mpumalanga, 11%
Eastern Cape, 21%
Western Cape 15%, 15%
Limpopo, 42%
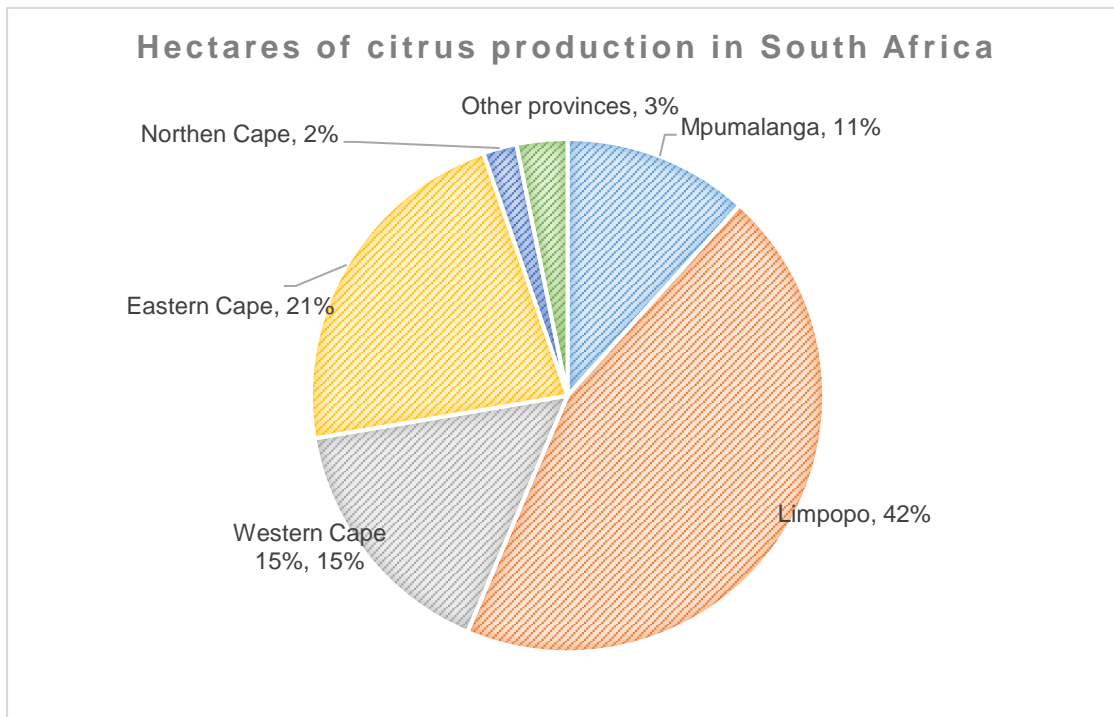
Adapted from Citrus Growers Association (2012)

The significance of this sector in South Africa is evidenced by the fact that, in 2012 alone, the following huge achievements were recorded:

- The citrus sector contributed 7.7 billion dollars, which is equivalent to 4.7% of the gross agriculture production of South Africa.
- 27% of South African agricultural exports was from the citrus industry in year 2012.
- Approximately 100 000 permanent employees were employed in the sector while almost the same number of seasonal employees were also employed in the sector.
- A large number of people were employed in the citrus supply chain, such as the transport sector.
- In that year, over a million of households depended on the citrus sector for survival.

In a study conducted by Siningu and Antwi (2014), the South African citrus industry is faced with a range of economic and social factors affecting the competitiveness of the

industry including HIV & AIDS. The sector is labour intensive and therefore it largely depends on human labour, which in turn requires attention. Research shows that the citrus farming industry, like any other farming sector, is not immune to factors that increase the risk of contracting HIV namely:

- Misconceptions about HIV.
- Stigmatisation of people who are HIV positive.
- Lack of health facilities.
- Risky sexual behaviours.
- Transactional sex.
- Poor standards of living.
- Beliefs about HIV.
- Isolated life style.
- Migration (International Organization for Migration, 2004, Sinngu & Antwi, 2014).

Whilst it is evident that the industry is one of the important contributors to the country's GDP (Agriculture, Forestry and fisheries, 2016) and that it is labour intensive (Sinngu & Antwi, 2014), justice has not been done to keep the industry on top of the game by investing in the health of the workforce, especially at a time when HIV remains one of the biggest threats to the entire South African workforce. According to an IOM report published in 2004, about 30% to 40% of farm workers in South Africa was HIV positive. Such an alarming statistic provides evidence that farm workers, as suggested by previous research (Kruger, 2005), fall under the same group as high risk populations such as sex workers and truck drivers.

A lack of access to scientific research, according Ndou and obi (2011), is one of the factors that is hindering the competitiveness of the citrus industry. Having worked as a wellness researcher in the citrus industry, the author was intrigued by the lack of research on how HIV related stigma (Herek, 1999; Herek & Capitano, 2002 & HSRC, 2014), continues to frustrate the government's efforts to reduce the impact of HIV on the society at large. To the author's knowledge, this is the first study to employ an explanatory approach to explore the forms and expression of HIV related stigma amongst farm workers in the citrus industry.

2.3   STATE OF HIV & AIDS IN SOUTH AFRICA

The Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (HIV & AIDS) continues to be a threat across the world despite massive investments by various like-minded institutions to reduce the burden of pandemic across the world. South Africa remains the region that is affected the worst by HIV when compared to the rest of the world. As proven by previous research, one in five people who are HIV positive in the world lives in South Africa (Statistics South Africa, 2016). Therefore the success of programmes aimed at alleviating HIV across the world, largely depends on the success of the HIV management programmes in South Africa (Williams, Gupta, Wollmers & Granich, 2017).

The South African government, through the South African National AIDS Council (SANAC), has adopted the UNAIDS strategy code named 90-90-90. According this strategy, by the year 2030, 90% of all people who are HIV positive will know their HIV status, 90% of all people with an HIV diagnosis will have received sustained antiretroviral therapy and 90% of all people receiving antiretroviral therapy will have achieved viral suppression. With the slow response to HIV & AIDS in South Africa, particularly in rural areas (Gilbert, 2016), the target to achieve the UNAIDS targets by year 2030, appears to be a utopian dream. Below is the progress of South Africa towards the achievement of the UNAIDS 90 /90/ 90.

Figure 2:   South Africa's progress towards achieving the 90/90/90 UNAIDS target
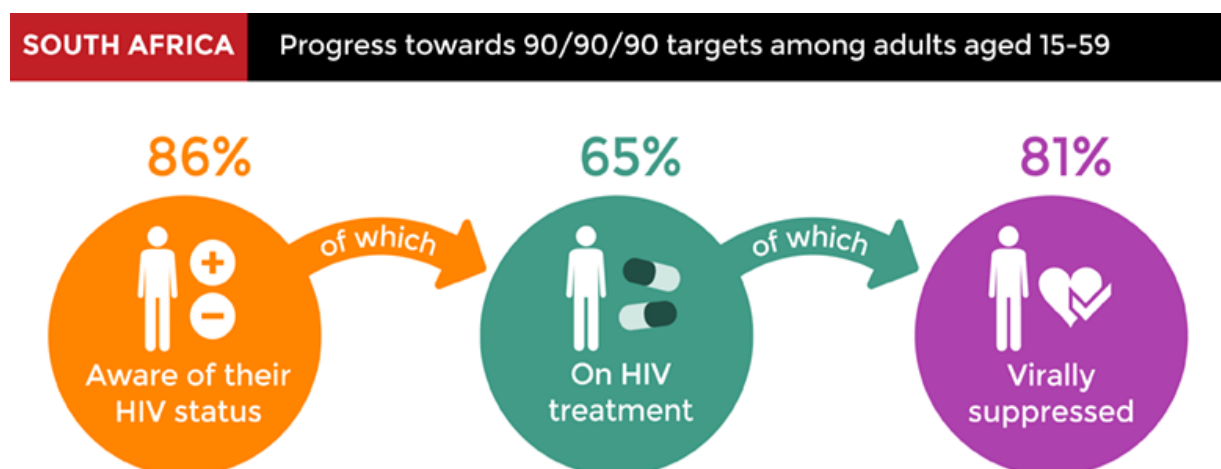
Source: UNAIDS (2017)

During the years 2016/2017, the ministry of finance allocated 17 billion Rands towards HIV & AIDS related initiatives (South African AIDS Council, 2017). This amount is 14 times more than the 2004/5 allocation to HIV related initiatives. Donors' support on the other hand, have been acknowledged by the government as an important partner in the fight against HIV.

The introduction of the 'ART for all policy' in September 2016, is expected to reduce HIV incidence and mortality significantly by the year of 2030 (Williams, Gupta, Wollmers & Granich, 2017). According to Williams *et al.,* (2017), the success of South Africa to achieve an AIDS free generation by year 2030, is largely dependent on the following factors: massive HIV testing, increase in ART distribution, a strong emphasis on adherence, the provision of support to people who are HIV positive and a research-based monitoring and evaluation system. Since the year 2000, the number of people who are HIV positive on treatment globally, has been increasing. Yet according to UNAIDS, 2017, this increase is not enough to meet the target by year 2030 (see table below for further details).

Figure 3:   Number of people accessing HIV treatment globally
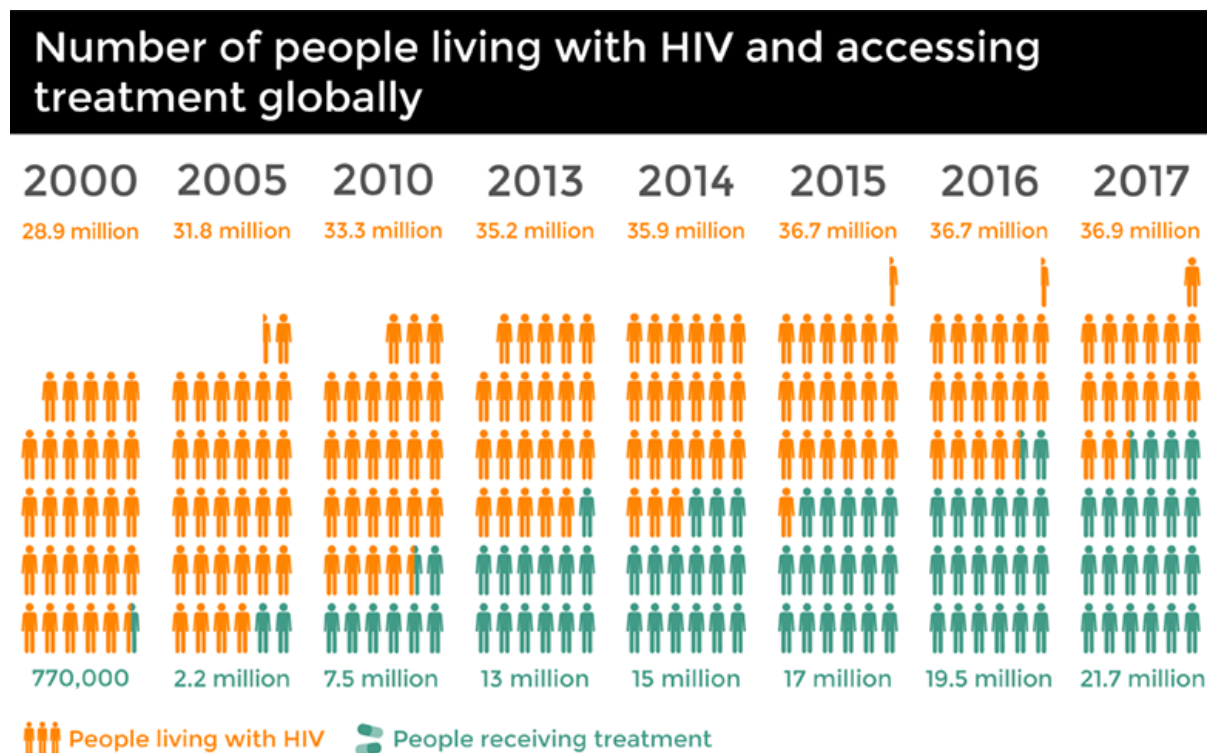
Source: UNAIDS (2017)

2.3.1   HIV prevalence in South Africa

With 7,053,987 people who are HIV positive and 3,422,724 on ART's in 2017, South Africa remains one of the leading countries that has recorded an alarming HIV prevalence across the world (Statistics South Africa, 2017). Interestingly, some African countries such as Zimbabwe, have witnessed a decrease in HIV prevalence (Hargrove *et al.*, 2011). The decrease has been linked largely to the massive HIV awareness campaigns launched in Zimbabwe. South Africa on the other hand has witnessed a steady decline of HIV prevalence among women attending antenatal clinics (STATS SA, 2016). Yet the so-called decline may be due the fact that it is not compulsory to test pregnant women for HIV any more (HSRC, 2014).

Figure 4:   The state of HIV in South Africa
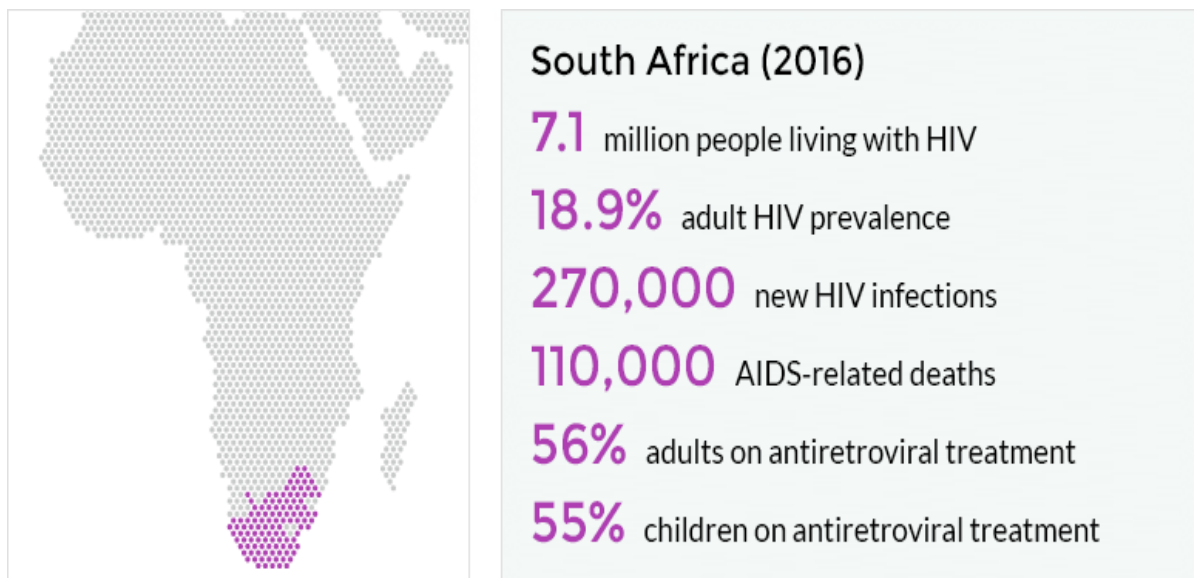
Source: UNAIDS, 2017

Of concern is the HIV prevalence that continues to rise despite the massive HIV campaigns and investments by the Department of health and other stakeholders who are working towards achieving an AIDS free generation. From year 2012 to 2016, HIV prevalence in South Africa increased by 0.5%, from 12.2% (6.4 million) in 2012, (HSRC, 2012) to 12.7% (7, 03 million) STATS SA, (2016). From 2002 to 2016, (see table below), there has been a sharp increase of HIV prevalence from 4.72 million people who are HIV positive in 2002 to 7.03 million in 2016. Yet the fact HIV

prevalence amongst the youth aged between 15 to 24 years since 2002 is slowly decreasing, is something worth celebrating (STATS SA, 2016).

According to an HSRC survey conducted in 2012, HIV prevalence differed significantly according to province. Further significant differences in terms of prevalence were also found between rural and urban areas. Similarly, a recent report published by the South African AIDS Council (SANAC, 2016), showed that HIV prevalence vary considerably according to age, sex, race, locality and geographical area. The SANAC report revealed that, HIV prevalence in South Africa is:

- High among females aged 35-39 and males aged 35-39 and 40-44.
- High among females than in men across all age groups.
- Higher among blacks (15%) than coloureds (3.1%).
- High among people living in informal settlements (19.9%) followed by rural areas (13.4%).
- High among people living in KwaZulu Natal (18%), Mpumalanga (15%) and Northern Cape (6.8%).

Table 1:   **HIV prevalence estimates and the number of people who are HIV positive, 2002–2016**

Year	Prevalence %				Incidence rate %	Total population in millions
	Women 15-49	Adults 15-49	Youth 15-24	Total population	15-49	
2002	19.6	17.1	7.6	10.3	1.77	4.72
2003	19.8	17.2	7.1	10.6	1.74	4.87
2004	19.9	17.3	6.6	10.7	1.76	5.00
2005	20.0	17.3	6.4	10.8	1.81	5.13
2006	20.1	17.4	6.3	11.0	1.83	5.26
2007	20.3	17.5	6.2	11.1	1.82	5.40
2008	20.5	17.6	6.2	11.3	1.77	5.56
2009	20.7	17.8	6.3	11.5	1.72	5.73
2010	20.9	17.9	6.4	11.6	1.65	5.89
2011	21.2	18.1	6.3	11.8	1.59	6.07
2012	21.5	18.3	6.2	12.0	1.50	6.27
2013	21.8	18.5	6.1	12.2	1.39	6.47
2014	22.0	18.7	5.9	12.4	1.34	6.67
2015	22.2	18.8	5.8	12.5	1.30	6.85

2016	22.3	18.9	5.6	12.7	1.27	7.03

Source: *Statistics South Africa (2016).*

The increase in access to ARVs contributed significantly to HIV prevalence (the number of people who are HIV positive) in South Africa, as many people who are HIV positive are now living longer. Although only half of the people who are HIV positive are currently on ARV's, research projects that, in 2019, the majority of HIV positive people will be able to access ARVs (Venter et. al., 2017). This projection is based on the current drug budget and the fact that more than 300 000 people who are HIV positive, access ARVs for the first time every year. Having the largest antiretroviral therapy (ART) programme in the world (UNAIDS, 2010 & Venter *et al.,* 2017), 75% of the budget allocated to alleviate the implications of HIV, is spent on acquiring ARVs in South Africa (Venter *et al.,* 2017).

2.3.2   HIV incidence in South Africa

Yet overall, the HIV incidence among young people (both males and females) from 15 years and above, declined sharply from 2.3% in 1996 to 0.65% in 2016 (Williams, Gupta, Wollmers & Granich, 2017). Like HIV prevalence, HIV incidence tends to vary considerably according to various socio- demographic variables. Previous research studies (HSRC, 2012 & STATS SA, 2016) have shown that HIV incidence is high among:

- Black African females (4.5%) as compared to black African males (1.8%).
- People living in urban areas (1.1%) that people living in rural areas (0.8%).
- Black Africans (1.3%) than other races (0.2%).
- People who are single (4.4%) than people who are married (3.6%).
- People who had sex with more than one partner (2.43%) in the last 12 months.

Figure 5:   HIV incidence in South Africa (15-49 years)
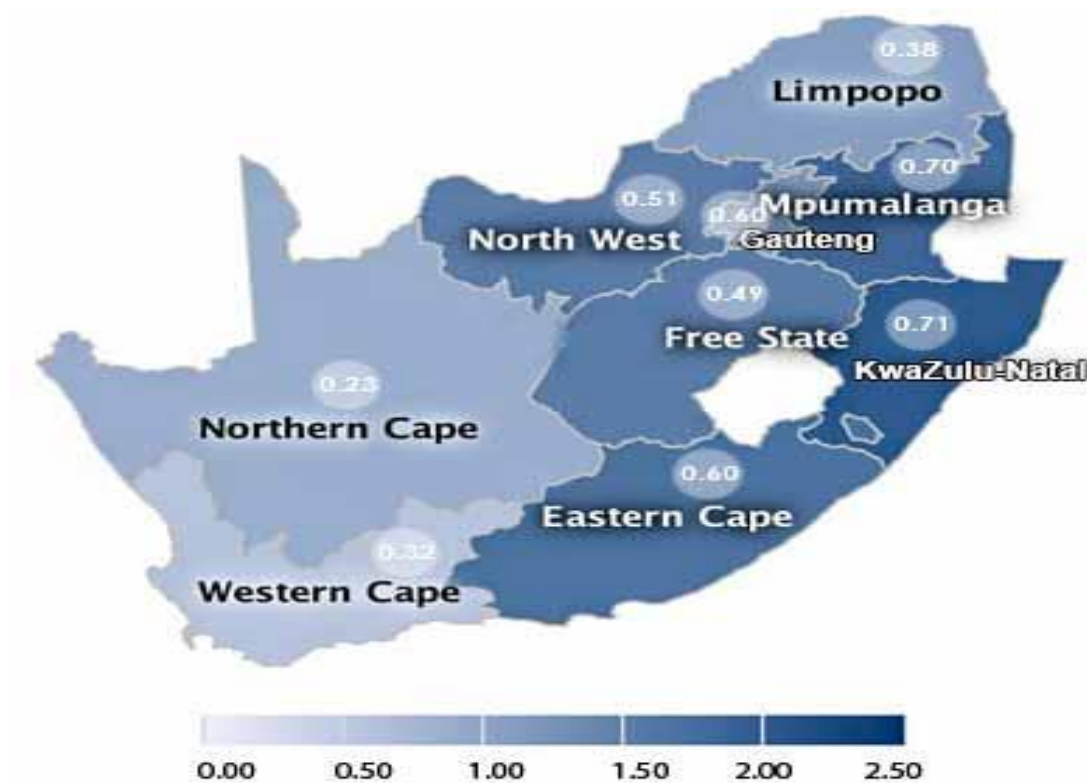
Source: SANAC (2016)

2.4   HIV & AIDS IN THE RURAL AREAS

The rural areas of South Africa consist of a significant population of people who are HIV positive, yet research on HIV in rural areas of South Africa remains scant (Semenya & Omole 2016). While HIV research in rural areas remains scarce, some studies have revealed that rural dwellers are more vulnerable to HIV as compared to their urban counterparts (Semenya & Omole 2016 & Steinert, Cluver, Melendez-Torres & Romero, 2016). The vulnerability of the rural population to HIV has been an issue among previous researchers. Some researchers alleged that, while HIV prevalence in urban areas tend to be high as compared to rural areas, it is projected that, in time, the HIV prevalence in rural areas will level up with that of urban areas (Steinert *et al*. 2015).

Factors (as suggested by previous research) that characterise rural areas, are namely the lack of knowledge about HIV (Zuniga, 2010; Semenya & Omole & Li *et al.*, 2017), poverty (Solomon, 2012), low literacy levels (Steinert, 2016), lack of health facilities (Solomon, 2012 & Semenya & Omole 2015), low standards of living due to low income levels (Semenya & Omole 2015), transactional sex (Mojola, 2014), lack of information/education about HIV (Steinert, 2016), inaccessibility of condoms (Soko, Moyo; Rusinga & Zvoushe, 2015) and the lack of entertainment (Soko *et al.*, 2015) increases the vulnerability of the rural populace to HIV.

2.4.1 Poverty and HIV & AIDS

Various research studies have confirmed the link between HIV and poverty in rural areas (Cohen, 1998; Barnett, Whiteside, & Desmond, 2001 & Cross, 2001, Parkhurst, 2009). Yet Mufune (2015) shares a different view. He argues that research on the link between poverty and HIV is somewhat misleading as it fails to take into consideration the following factors:

- The lack of a standardised definition of poverty.
- The lack of a tool that can be used to measure poverty.
- The failure of current research to establish the aspects of poverty that are linked to HIV.
- The lack of a conceptual basis to support the link between HIV and poverty.

According to Parkhurst (2009) and Anglewicz (2012), the view that poverty fuels HIV, is based on the previous studies that showed that poor people are likely to engage in an early sexual debut and transactional sex. The high level of deprivation in rural areas, according to Parkhurst and Anglewicz (2012), often results in women engaging in risky sexual behaviours in exchange of money or basic resources. Yet Parkhurst called for more research on the correlation between poverty/wealthy and HIV given that the majority of the studies are showing contradicting findings.

Some researchers (Wojcicki, 2005; Gillespie, Kadiyala, Greener, 2007, Parkhurst, 2009 & Anglewicz, 2012) also found a correlation between wealthy and HIV. The studies argued that wealthy individuals also engage in risky sexual behaviours as they sometimes participate in broader social and sexual networks. Hence, the

misconception that HIV is a disease of the poor, need further investigation. The synergistic and symmetrical nature of the relation between HIV and poverty is interesting as, to some researchers (Parkhurst 2009 & Anglewicz, 2012), poverty fuels HIV and to some, HIV fuels/exacerbate poverty (Twalo & Seager, 2005) given that it affects the economically active groups who are mostly bread winners.

2.4.2   Literacy levels

Previous studies have confirmed the link between HIV and literacy levels (the ability to read and write) (Ada, Okoli & Okoli, 2013). It is important to note that the definition of literacy goes beyond being able to read and write to include the ability to compute and solve problems. Put simply, one's literacy level can influence his/her ability to make informed health related decisions.

Low literacy levels that characterise rural areas, is according to research (UNESCO, 2010), closely linked to high HIV prevalence and high levels of HIV related stigma. Due to low levels of literacy, people in rural areas often find it difficult to read and comprehend the HIV related messages that are conveyed through various forms of media. This in turn, contributes to low levels of knowledge about HIV in rural areas. Low literacy levels among rural dwellers (especially women) have been identified as one of the contributing factors to the lack of awareness about HIV among women. This was further evidenced in a study conducted by Ada *et al.* (2013), which found a correlation between the lack of awareness about HIV and low literacy levels among women. According to Ada *et al.,* (2013), women who are literate are likely to make well informed decisions about how to manage HIV as compared to illiterate women.

Some researchers have opted for a narrowed definition of literacy to focus on HIV literacy. Schenker, (2005) and UNESCO (2010), defined HIV and AIDS literacy as the ability of an individual to interpret and understand the HIV related information as well as the ability to use such information to make well informed decisions such as engaging in safe sex. According to UNESCO (2010), HIV and AIDS literacy needs to be incorporated in various platforms and contexts such as schools, non-formal education, healthcare, higher education, teachers' preparatory colleges and vulnerable populations.

In support of the need to have a narrow definition of literacy, the Agency for Healthcare Research and Quality (AHRQ) (2011) advocated for health literacy. According to AHRQ, health literacy is the ability of individuals to access, process and utilise health related information to make informed decisions. According to a study conducted by AHRQ, people with high healthy literacy were likely to display health seeking behaviours than people with lower health literacy. High health literacy according to (Wawrzyniak, 2013), is closely linked to socio-economic status. This study also showed that poverty and low healthy literacy are closely correlated.

2.4.3 Poor infrastructure

It is quite evident that, despite efforts by the South African government to increase the number of health facilities in rural areas, these health facilities remain few. Poor infrastructure in rural areas is one of the major barriers to improving health services in South Africa. Most rural areas have poor road networks as well as poor transport systems.

This therefore follows that many people in rural areas walk long distances to access health facilities. A lack of transportation as well as long distances to health facilities, poses a great challenge to people who are HIV positive (Gaege & Veesterg, 2011). Poor roads in rural areas make it difficult for health practitioners to access patients. The transportation of drugs to the few clinics in rural areas, is also problematic due to poor roads. According to the South African Human Rights Commission (2009), the lack of emergency transport in rural areas poses a huge risk to patients who require emergency attention.

According to Mars (2013), there is a lack of an ICT e-health infrastructure in rural areas. The failure by the South African government to invest in telemedicine (the use of ICT for health purposes), especially in rural areas, exposes the rural population to health risks that requires specialised treatment. Telemedicine, according to Mars, is subset of e-health which includes the following aspects: the hospital information systems, maintenance of electronic medical records, management of clinical services, research and development. Poor information and communication infrastructure in rural areas only serve to exacerbate the existing health challenges in rural areas.

2.4.4 Migration and HIV & AIDS

Previous studies have confirmed the correlation between HIV and migration (Rai *et al.,* 2014). The high HIV prevalence among migrants, according to Rai *et al,* is a result of several factors namely: the migration of people (mostly men) who move from areas of low prevalence (rural areas) to areas with high prevalence (urban areas) to look for employment, the sexual behaviour of migrants, the HIV status of migrant sex partners at both locations, the frequency of migration and the desire to have new sexual experiences at the migrant destination.

2.4.4.1 Migration in the citrus sector

The seasonal nature of the citrus sector, increases the risk of HIV transmission. Migrants (mainly men) such as job seekers, miners, truck drivers and farm workers (seasonal workers), have been described by some researchers as 'potential bridge populations' as they are likely to transmit HIV from areas of low prevalence to areas of high prevalence (Aral, 2000 & UNAIDS, 2011). On the other hand, female partners of the migrants are often exposed to risky sexual behaviours as they try to quench their sexual desires in the absence of their partners (UNAIDS, 2011).

In the case of the Addo rural area in Eastern Cape, migrant workers travel all the way from places like Mthatha, Zimbabwe and Malawi. This therefore results in geographical interconnectedness between these places and therefore the prevalence (in the long run) is likely to be more or less the same as a result of circular migration (repeated trips from home to place of work). In a study conducted by Rai *et al.,* (2014), the behaviour of the migrants' wives, were found to be another area of research that needs further investigation.

Yet other researchers warned that the link between mobility/migration and HIV transmission should be understood with caution, given that the majority of the studies do not provide a clear link between mobility/migration and HIV transmission (Deane, Parkhurst & Johnston, 2010). According to Kevin *et al.* (2010), most of the studies focusing on the link between mobility/migration and HIV transmission do not take into consideration the nature of people who move, why they move and the characteristics of their place of residence as well as their destinations.

Research shows that rural areas suffer the blunt of HIV transmission due to migration for 2 reasons:

- Due to circular migration, people move from rural (areas of HIV low prevalence) to urban areas (areas of high HIV prevalence) seeking job opportunities and therefore non-migrants in rural areas are likely to be infected by their migrant partners.
- Most people in urban areas often go to rural areas for care when they have full blown HIV that might make it difficult for them to continue working (Kevin *et al*, 2010 & Rai *et al.,* 2014).

2.4.5   The unequal distribution of hospitals in South Africa

With the introduction of the district health system in 1994, there has been a significant improvement in the health care system of South Africa (e.g. the introduction free of the primary health care for every South African, the implementation of the essential drugs programme and hospital revitalisation). Yet according to Van Rensburg (2014), the implications of apartheid regarding the distribution of health facilities, are still being felt despite the South Africa government's efforts to improve the health care system. The apartheid system, through its policy of racial segregation, aggravated the marginalisation of rural areas by denying black people who are living in rural areas, access to health facilities.

While section 27 of the Constitution guarantees the right to health, research shows that private and public hospitals remain unequally distributed in South Africa (Gaege & Veesterg, 2011). According to van Rensburg (2014), the rural population in South Africa continue to feel the burden of disease due to the lack of health facilities. Research shows that most hospitals and health practitioners are more concentrated in urban centres. The uneven distribution of health facilities further deprives the rural populace their right to health care. The few private hospitals in rural areas tend to be expensive, therefore they are not affordable to the majority of the rural population (Gaege & Veesterg, 2011, Van Rensburg, 2013). Rural areas are therefore heavily reliant on the few public hospitals that, in most cases, are few, congested and do not have enough drugs.

Table 2: Percentage of rural population in South Africa

Province	% of rural population	Number of private hospitals/province
Limpopo	90	5
Northern Cape	80	3
Eastern Cape	62	13
Mpumalanga	61	9
North West	59	10
KwaZulu-Natal	55	27
Free State	25	15
Western Cape	10	39
Gauteng	4	95

Source: Gaege & Veesterg, 2011

Despite the efforts by the government to increase the number of public hospitals and mobile clinics (through the Primary Health Care Re-engineering strategy) in rural areas, research shows that it takes an hour for 15% of the rural population to reach the nearest public hospital (Gaege & Veesterg, 2011). Research also shows that only 12% of the doctors are serving 43.6% of the rural population in South Africa (Van Rensburg, 2013).

With 4 doctors and nurses per 1000 people, the doctor/patient ratio in South Africa, according to Ashmore (2013), is above the WHO benchmark of 2.5 doctors per 1000 people. Still, South Africa is facing the same problems that are being faced by other

African countries with a lower patient doctor ratio. This, according to Gaege and Veested (2011) and Ashmore (2013), is caused by the following factors:

- Some of the health professionals do not have the appropriate skills mix.
- The available health personnel are unequally distributed.
- The massive exodus of health professionals to developed countries in search of greener pastures.
- Most of the available health professionals prefer working in urban areas.

2.4.6   Condoms use in rural areas

With South Africa battling to control new HIV infections, condom use along with other preventive strategies such as a voluntary medical male circumcision (VMMC and HIV Counselling and Testing), are effective interventions with the potential to significantly reduce HIV incidence. Whilst the South African government is investing massively in condom distribution by providing free condoms, condom usage remains low. As reported in a study conducted by HSRC in 2012, condom usage in South Africa dropped from 45.1% in 2008 to 36.2% in 2012.

Low condom usage has been linked to various factors such as the lack of knowledge about condom use, gender inequality, violence between partners, a lack of trust between sexual partners and an inaccessibility of condoms (Jewkes, Levin, Penn-Kekana, 2003, & Mazorodze, 2012). The inabilities of women to safe guard their sexual autonomy and the patriarchal nature of the African society, have been cited in previous studies as some of the reasons why women cannot negotiate condom use when engaging sex (Shai; Jewkes; Levin; Dunkle & Nduna, 2010). According to Shai *et al.*, (2010), women need to be empowered with knowledge about condom use and they must be made aware of their rights to negotiate condom use. Recently, the South Africa department of health have increased the availability of female condoms in order to widen their choices regarding the negotiation of condom use (SANAC 2016).

In some other African countries such as Zimbabwe, research has shown that the condoms' supply is still poor, therefore this results in high risk sexual behaviours. According to Soko *et al.*, (2015), the inaccessibility of condoms, coupled with a lack of knowledge about condom use, exacerbates the vulnerability of people living in rural

areas to sexually transmitted diseases. Despite the distribution of free condoms in South Africa, condom use among farm workers is reported to be low at 33% (Tiruneh; Wasie & Gonzalez, 2015). This therefore means that a large number of people in rural areas cannot access condoms and therefore their risk of contracting HIV remains high.

In 2008/9 alone, 350 million condoms (12.5 condoms per every person who is 15 year and older) were distributed in South Africa. In 2010, during FIFA world cup, 2.5 billion condoms were distributed (Mags; Smit & Mantell, 2012). Whilst it is easy to monitor the number of condoms that has been distributed, such statistics do not translate to the number of condoms that has been correctly used. The consistence of condom use and correct condom use remains a challenge in South Africa. In a study conducted by Maharaj and Cleland (2006), while condom use was high (75%), consistency was reported to be very low at 21%. In that study, most participants were acknowledged to have used condoms during their first sexual encounters, yet they found it difficult to use a condom with the same person in many sexual encounters.

Incorrect condom use coupled with a poor knowledge about condom use, remains a challenge in South Africa, particularly in rural areas, where related information is scarce and cannot be easily accessed. In a study conducted by Kalichman, Simbayi, Cain and Jooste (2009), 48% of the participants acknowledged that they had experienced condom failure during one of their sexual encounters. This provides evidence why, despite the massive distribution of condoms across South Africa, HIV incidence remains a challenge.

2.4.7   Low income and Lack of entertainment in rural areas

It is common knowledge that rural areas are characterised by a lack of entertainment and income when compared to urban areas. In 2012, farm workers led a protest against farm owners in Western Cape. The protest came as no surprise given that farm workers are among the least paid workers in South Africa. During the protest, farm workers demanded better wages and better living conditions. According to the revised minimum wage by the department of labour, farm workers are entitled to wages not less than R3001.13 per month. Furthermore, given that there are few job opportunities in rural areas, unemployment rates tend to be higher.

Previous research has confirmed the link between low income, unemployment, the lack of entertainment and a vulnerability to HIV. According to Soko *et al.*, (2015), people who earn a low income and who are unemployed, are likely to be vulnerable to HIV. A combination of being unemployed and without any form entertainment, often results in people engaging in sexual activities in order to compensate for the lack of entertainment (Soko *et al.,* 2015).

2.5   DEFINING HIV & AIDS RELATED STIGMA

Over the years, HIV related stigma have suffered a crisis of definition. The lack of a widely accepted definition of HIV related stigma, according to Abrahams and Jewkes (2012), makes it complex and difficult to measure. The complexity of defining HIV related stigma is also exacerbated by the fact that it is unique, multidimensional and context specific

In an effort to provide a common definition of HIV related stigma, several frameworks have been proposed. According to the following authors, HIV related stigma must be understood as:

- As a by-product of social inequality (Parker & Aggleton, 2003).
- As product of fear rather than social control (Deacon, Stephney, & Prosalendis, 2005).
- As a result of different contexts in which stigma occurs, e.g. economic, social and political context (Campbell, Foulis, Maimane, & Sibya, 2005).
- As a process of human development (more focus on the impact of HIV related stigma on family members) (ecological model of human development) (Asiedu, 2007).
- As a phenomenon that can be understood through the use of cognitive theories (Mak *et al.,* 2007).
- As a cyclical process within a specific environment (Holzemer *et al.,* 2007).

Despite the unprecedented efforts to define HIV related stigma within the academic community, Goffman's (1963) definition of stigma has been widely accepted by many researchers. 53 years ago, Goffman provided the basis for defining stigma by describing it as 'an attribute that is deeply discrediting'. According to Goffman, stigma

reduces ones identity from a whole and usual person to a tainted, discounted one. Since 1963, several authors have attempted to provide a sound definition of HIV related stigma by defining it as:

> *"negative attitudes towards people with HIV & AIDS" (Link & Phelan, 2001)*

> *"violation of human rights e.g denying people who are HIV positive certain privileges" Kohi et al. (2006).*

> *"an undesired differentness that is manifested through marginalisation of people who are HIV positive (Herek, Saha, & Burack, 2013).*

> *"the devaluation of people living with or associated with HIV" (Restall & Gonzalez, 2014)*

The dynamic nature of HIV related stigma calls for the need to redefine the concept and to provide a definition that is context specific. Some researchers (Tal, 2012; Gilbert, 2016) have highlighted the need to redefine HIV related stigma and to replace it with another term that people are compatible with.

2.6   HIV RELATED STIGMA IN SOUTH AFRICA

Over the years, HIV related stigma has become a topic of interest among researchers as it has been confirmed as the major barrier to the fight against HIV (Herek, 1999; Visser *et al.*, 2008 & Soko *et al.,* 2015). While stigma remains an issue across the world, previous research shows that the levels of HIV related stigmavaries across countries (Bekalu, Eggermont, Ramanadhan, Viswanath, 2014). Yet no studies have been conducted to validate these findings.

Research shows that HIV related stigma seem to be moderate among western African countries when compared to Southern Africa (Bekalu *et al.,* 2014). Yet in a study conducted by French, Greeff, Watson, & Doak (2014), it was reported that South Africa has recorded more incidences of HIV related stigma when compared to other African countries. This finding is supported by a study conducted by Bekalu *et al.* (2014), which showed that HIV related stigma tend to be high in areas where HIV prevalence is high.

South Africa is one the countries that has recoded some shocking incidences of HIV related stigmatisation. The murder of Gugu Dlamini by community members after disclosing her HIV positive status in Kwazulu Natal and the case of SA Airways versus Hoffman in which the applicant was refused employment on the basis of being HIV positive. These few recorded incidences, present an opportunity to motivate for the development of interventions that are aimed at addressing HIV related stigma in South Africa.

South Africa, like other countries, have acknowledged HIV related stigma as a barrier to adopting the new UNAIDS strategy code named 90-90-90 which is aimed at achieving an AIDS free generation by year 2030. Furthermore, the realisation by previous researchers that HIV related stigma frustrates the efforts to curb HIV (Tomaszewski, 2012; Mazorodze, 2012; Ramirez-Valles, Molina, & Dirkes, 2013), has resulted in various like-minded stakeholders (including SANAC) wanting to invest more in the fight against HIV related stigma. Achieving an HIV related stigma free generation has been cited as one the top priorities of the newly drafted South African National AIDS Council (SANAC) (2017-2022).

HIV related stigma has, beyond a doubt, proved to be a key priority in the fight against HIV in South Africa. Contrary to the much celebrated findings that claimed that HIV related stigma is slowly decreasing in South Africa (Shisana, 2005; Shisana, Rehle; Simbayi; Zuma,Jooste & Pillay-van-Wyk, *et al.* 2009), recent findings show that HIV related stigma remains unabated despite various claims and ant-stigma interventions that are implemented in South Africa (Abrahams & Jewkes, 2012).

It is now widely accepted among researchers and other likeminded organisations that the fight against HIV & AIDS cannot succeed without addressing HIV related stigma. Acknowledging that stigma is a barrier to HIV prevention, treatment and care (Tomaszewski, 2012; Mazorodze, 2012; Ramirez-Valles, Molina, & Dirkes, 2013), the South Africa National AIDS council (SANAC), has, in its National Strategic Plan (NSP), included HIV related stigma as one of its key priority areas. As reported on the SANAC website, the number of people who are HIV positive in South Africa is pegged at 7 million and only half (3.4 million) are on ARV's. This therefore follows that there is an urgent need to address the stigma associated with taking HIV treatment.

2.7   HIV RELATED STIGMA IN RURAL AREAS

The study at hand acknowledges the scarcity of HIV related stigma research in rural areas across the world and in South Africa in particular. In a study conducted by Stangl, Lloyd, Brady, Holland & Baral (2013), it is stated that while HIV related stigma research is recently becoming common in communities, the majority of previous research studies focusing in HIV related stigma, have focused on students and health workers. Although previous research has noted the geographical shift of HIV related stigma research, literature on HIV related stigma in rural areas is still scant (Rao *et al.*, 2012), yet HIV related stigma is more common in rural areas when it is compared to urban areas (Naidoo, *et al.,* 2007 & Bekalu, Eggermont, Ramanadhan, Viswanath, 2014).

Conducting research in South African rural settings has its own challenges. According to Casale *et al.,* (2013), health practitioners in South Africa are faced with the difficulty of developing evidence-based interventions since health research is scant in rural areas. The hurdles of conducting research in South African rural areas, includes: a distrust of outsiders (researchers), difficulties in getting community buy-in, a communication barrier due to low literacy levels and the accessibility of participants and logistics difficulties (Casale *et al.*, 2013). These hurdles perhaps explain why HIV related stigma research is scarce in South Africa.

Previous research provides evidence that HIV related stigma tend to be exacerbated by factors that are associated with rurality. In a study conducted by Bekalu *et al.* (2014), where a participants' place of residence was the independent variable and HIV related stigma was the dependant variable, it was found that rurality was linked to high levels of HIV related stigma. This is reasonable given that factors that have been confirmed to increase HIV related stigma are common in rural areas. The differences regarding HIV related stigma between rural and urban areas, have been, to some extent, linked to differences in social structure, economic status, literacy levels and individual experiences in those contexts (Pretorius, Greeff, Freeks &Kruger, 2016).

Research shows that the lack of knowledge about HIV among the rural population exacerbates HIV related stigma in rural areas (Li *et al.,* 2017). People with lower levels of knowledge are likely to display high levels of stigma. Studies that compared the

levels of stigma between rural areas and urban areas, have confirmed that people in urban areas tend to be knowledgeable about HIV and therefore they display lower levels of stigma when compared to their rural counterparts, due to their access to health-related information.

The above assumption is based on the Structural Influence Model (SIM) that was developed by Viswanath, Ramanadhan & Kontos, (2007). SIM is a model of health communication that emphasises the use of tailored health communication strategies. According to this model, the implication of communication inequality is that some people will have a better access to health information than others and therefore the people with an access to health information are likely to make informed health decisions. Basing on this theory, research has shown that people with less access to health communication about HIV, are likely to display a negative attitude towards people who are HIV positive (Bekalu *et al.,* (2014).

Previous research has shown that rural areas are often deprived of health communication when compared to their urban counterparts (Casale *et al.*, 2013). In a study conducted by Bekalu *et al.,* (2014), the lack of exposure to media sources such as radio, TV and print among the rural sample, was linked to higher levels of HIV related stigma. In a similar study conducted by Casale *et al.*, (2013), urbanites were more exposed to health communication, therefore they displayed high levels of HIV knowledge, which is also a determinant of less stigmatising attitudes toward people who are HIV positive. Low literacy levels that characterise rural areas, also present a challenge for the implementation of health communication strategies in rural areas.

Media campaigns have been used over the past decades, to influence various health behaviours among the rural populations as a mode of health communication (Wakefield, Loken & Hornik, 2010). Literature suggests that such media campaigns not only impact the beliefs and attitudes, but also have a positive impact on behaviour change (Donovan & Carter, 2003). Media campaigns often target very large audiences and it aims to invoke emotional or cognitive responses from individuals and thus affecting them and their decision-making processes at the individual level as well as to initiate change in the recognition of unhealthy norms (Wakefield *et al.,* 2010).

HIV related stigma is known to be higher among people who have no contact with or who do not know someone who are living with HIV. Research shows that people who know or who have lived with someone with HIV are likely to be less stigmatising that people who do not know or who have never lived with someone with HIV (Herek and Capitano, 1999 & Mazorodze, 2012). As stipulated by Goffman (1963), the more contact a person has with a disease, the more the disease becomes normalised in that person's mind. Previous research conducted by Li *et al.*, (2017), also supported Goffman's argument. In that study areas with a high prevalence of HIV displayed lower levels of stigma, therefore the HIV prevalence imbalance that exists between urban areas and rural areas is well documented.

The above view is based on the assumption that since HIV prevalence is lower in rural areas, chances are that most of the people in rural areas might not have seen or lived with a person who are living with HIV. Yet this view is debatable, given that most people who live in urban areas often go to rural areas for care when they are seriously ill.

2.8 ASSESSMENT OF HIV RELATED STIGMA IN THE SOUTH AFRICAN CONTEXT

The measurement of HIV related stigma has been, and still remains, a topical issue as far as addressing HIV related stigma is concerned. There seem to be a consensus among researchers that addressing HIV related stigma requires valid, reliable and psychometrically sound tools that can measure stigma that is associated with HIV (Kalichman *et al.,* 2005; UNAIDS, 2007 & Mazorodze, 2012). While much of the research on HIV related stigma measures have been concentrated in western countries, local researchers are beginning to realise the need to develop tools that are context specific and tailored for South Africa.

Yet the validity of these tools remains a contentious issue. In a study conducted by Mazorodze (2012), which compared the validity and reliability of two competing HIV related stigma scales in South Africa, it was found that the psychometric properties of the scales varied significantly. The dynamic and complex nature of HIV related stigma, as suggested by previous research, further makes it difficult to develop tools that are valid and contextually relevant.

Previous researchers (Kalichman *et al.,* 2005; Maughan-Brown, 2006 and Maozorodze, 2012) have acknowledged the need for tools that into account the complexity and dynamic nature of HIV related stigma. Yet this seems to be an impossible mission given that HIV related stigma manifests itself in various forms and expressions and therefore, researchers often focus on specific forms of HIV related stigma. This is reasonable, yet the implication is that the implementation of the tools become a daunting task as the implementer will have to implement a range of tools to address various forms of HIV related stigma.

In an article entitled, '*HIV related stigma, where do we go from here"*, Nyblade (2016) emphasised the importance of the effective assessment of HIV related stigma. According to Nyblade, the rapid emergence of studies measuring HIV related stigma, have given a glimmer of hope that HIV related stigma measurement is possible and attainable. The measurement of HIV related stigma, according to Nyblade, can go a long way, not only in understanding the forms and expressions of HIV related stigma, but also in the development, design and monitoring of stigma associated with HIV.

2.8.1   The Siyamkela project (2003)

Siyamkela is a *Nguni* word which means 'we are accepting'. The Siyamkela project is one of the initial projects in South Africa that sought to provide a measure of external and internalised stigma. The project was funded by the United States Agency for International Development (USAID). The objective of the project was to identify and develop indicators for internal and external stigma as shown in table below

Table 3:   Internal and external indicators for HIV related stigma

Internalised stigma indicators	External stigma indicators
Self-exclusion	Avoidance behaviours
Negative perception of self	Rejection
Social withdrawal	Moral judgement
Overcompensation	Stigmatisation by association
Fear of disclosing HIV status	Discrimination
	Abuse
	Unwillingness to support people who are HIV positive.

2.8.2   Kalichman *et al.,* (2005) personal stigma scale

The Kalichman *et al.,* (2005) personal stigma scale is a nine-item scale that was developed to quantitatively assess HIV related stigma in the local context. The scale was piloted in Cape Town and it was administered among Xhosa speaking (814), Afrikaans speaking (338) and English-speaking people (1154). The items assess personal stigma. For example, participants are asked if they agree or disagree with the statements that people who are HIV positive are dirty, cursed, must be ashamed and did something wrong so they deserve to be punished therefore they must be restricted.

The scale was translated in Isixhosa, English and Afrikaans. All the scales reported an acceptable internal consistency[2] (English- α =0.78, Isixhosa- α=0.88). The scale reported an accepted internal consistency of the scale that was acceptable at α=0.75.

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[2] The internal consistency is a measure of reliability that assesses how different items measuring the same theme can be correlated. Internal consistency is measured using Cronbach's alpha. (α)

In a study conducted by Mazorodze (2012), which sought to validate the reliability of the Kalichman *et al.*, personal stigma scale in Eastern Cape Province, the scale reported a slightly lower internal consistency of 0.63[3].

2.8.3   Visser *et al.* scale (2008) parallel scale

The Visser *et al.* (2008) is a 12-item parallel stigma scale that attempts to address and capture the multi-dimensionality of stigma by focusing on internalised stigma, personal stigma and attributed stigma. The scale was piloted among 1077 participants in the urban townships of Pretoria. The internal consistency of all the scales was acceptable, ranging from 0.70 to 0.87. According to Visser *et al.*, attributed stigma tends to be higher than internalised and personalised stigma. This is reasonable given that individuals are likely to view themselves as less stigmatising and therefore they would rather attribute the stigma to the community.

In a study conducted by Mazorodze (2012) to assess the psychometric soundness of the Visser *et al.,* scale, all three scales reported an acceptable internal consistency ranging from 0.71 to 0.80. The assessment of validity and reliability showed that the Visser et *al.* had a higher reliability score than the Kalichman *et al.* scale. Based on these findings, it was therefore hypothesised that the Visser *et al.* scale can be used across all settings in South Africa. Furthermore, the multidimensionality of the scale has been cited as one of the comparative strengths of the scale.

2.8.4   The people living with HIV stigma index

This is one of the largest surveys conducted among people who are HIV, since the inception of HIV in South Africa. The survey, which was commissioned by the South African National AIDS Council (SANAC), consisted of 10 473 participants across 18 districts of South Africa. The survey was conducted by HRSC on behalf of SANAC. The study confirmed that 40% of people who are HIV positive in South Africa, experience internalised stigma. The stigma index reported an acceptable internal consistency and was proved to be valid across all settings.

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[3] The commonly accepted internal consistency is 0.70 (Spector, 1997).

The index focused on various dimensions of stigma that are experienced by people who are HIV positive, namely: the exclusion of people who are HIV positive from social activities, the physical and verbal harassment of people who are HIV positive, external stigma (overall), internalised stigma, avoidance behaviours that results from being stigmatised, the fear of the likelihood of being stigmatised (potential stigma) and the willingness to disclose an HIV positive status.

2.8.5 A Versatile and Multidimensional Scale by Smith, Miller, Newsome, Sofolahan, and Airhihenbuwa, (2013)

This scale attempted to overcome the weakness of the previous, local HIV related stigma scales namely Kalichaman et al., (2005) personal stigma scale and Visser et al., parallel stigma scale (2008). The Smith *et al.*, (2013) offers an alternative measure of HIV related stigma that is multidimensional, multi-cultural and based on a mixed method research design. The scale is a 12-item scale that focuses on the following domains of HIV related stigma: Individual Support, Shame and Rejection, and Government Support.

The scale was piloted among two populations that are culturally and geographically separate from each other (Western Cape and Limpopo). The validity of the scale was confirmed as no differences were found between the two samples. This therefore confirms that the scale can be used in various cultural setting without its validity being compromised. The scale also reported an acceptable internal consistency ranging from a Cronbach alpha of 0.67 to 0.80.

2.9 TYPES OF HIV-RELATED STIGMA

HIV related stigma manifests itself in various forms and expressions. An understanding of the forms and expressions of HIV related stigma, can, to a large extent, form the basis for developing tools that can be used to address HIV related stigma. In this section, the forms and expressions of HIV related stigma are discussed in detail.

2.9.1   Internalised stigma

Internalised stigma is the stigma that is directed to people who are HIV positive. (Visser *et al.*, 2008 & HSRC, 2014). Misconceptions about HIV often results in people who are living with HIV, blaming themselves for contracting HIV. Because of the fear of being stigmatised, research shows that most people who are HIV positive often find it difficult to disclose their status and therefore denying themselves access to medical and family support (Allanise *et al.*, 2010). According to HSRC (2014), internalised stigma often results in self-blame, reduced self-esteem and the abandonment of future plans.

Internalised stigma is believed to be more mentally damaging when compared to other forms of stigma. The fear of communicating one's status to the community, according to previous studies (Egyptian Anti-Stigma Forum, 2012), often results in the loss of confidence to seek medical assistance and support from friends and community members, yet evidence from previous studies show that provision of support to people who are HIV positive, can go a long way in reducing internalised stigma. A survey conducted in Zimbabwe for a period of twelve weeks found that the provision of support to people who are HIV positive, resulted in the reduction of internalised stigma (61%), depression (78%) and fears around HIV disclosure (52%) (PLHIV Stigma Index, 2015).

2.9.2   Enacted stigma

This refers to the negative perception of people towards people who are HIV positive. This type of stigma is often expressed through rejection, blame and judgement, avoidance and physical violence (Maughan-Brown, 2006; HSRC, 2014 & Apanga 2014).

2.9.3   Anticipated stigma

This is the type of stigma that an individual anticipates in the event that he/she will test HIV positive in the future. According to Allanise *et al.*, (2010), this type of stigma often results in many people being scared of taking a medical test for HIV due to fear of the unknown.

2.9.4   Courtesy stigma

This is the type of stigma that one perceives or experiences due to associating with already stigmatised groups (HSRC, 2014).

2.9.5   Physical stigma

This is the type of stigma whereby individuals avoid people who are HIV positive e.g. by refusing to sleep with them on the same bed, share the same meal and talking to them. This type of stigma, according to Allanise *et al.,* (2010), often results from the misconceptions about the transmission of HIV.

2.9.6   Social stigma

This type of stigma, according to Allanise *et al.*, (2010), is a combination of physical and moral stigma. This form of stigma often (known as double-stigma) is the stigma that is associated people that are viewed by some sections of the society as immoral such as gays and lesbians, drug addicts and sex workers.

2.9.7   Resource based stigma

This is type of stigma whereby people who are HIV positive are denied access to resources. This type of stigma is based on the assumption that people who are HIV positive are sick, therefore they are not productive.

2.9.8   Attributed stigma

This refers to the negative views of the society towards people who are HIV positive. Such negative views according to (Visser *et al.*, 2008; Allanise *et al.*, 2010 & Mazorodze, 2012), often results in people who are living with HIV, being afraid of disclosing their status due to the fear of being stigmatised.

2.9.9   Government stigma

Government stigma is a form of stigma that is relatively new as far as HIV related stigma is concerned. This is a form of stigma that has something to do with the country's laws, rules and policies that are put in place to protect people who are HIV

positive (UNAIDS, 2013). According to UNAIDS (2013), only 64% countries across the world, had laws and policies that protect people who are HIV positive in 2013. Yet 72 countries had laws and policies that exacerbated the stigmatisation of people who are HIV positive.

UNAIDS (2013) states that 60% of the countries had laws and policies that made it difficult for people who are HIV positive to access treatment, care and support. Some already stigmatised groups, drug users (Herek, 1999), gays and lesbians (Herek & Capitano, 2002) often suffer from double stigma due to their association with HIV and they were reported to being stigmatised in 73 countries in 2016 (Rubenstein, 2016). Research also shows that sex workers are still being criminalised in 100 countries across the world (WHO, 2014). The criminalisation of the already stigmatised groups makes it difficult for them to seek treatment or disclose their status.

Research shows that some countries have gone to the extent of restricting the travel of people who are HIV positive. A study conducted by UNAIDS (2015), showed that, in 2015, 35 countries across the world had laws that restrict the entry, stay and residence of people who are HIV positive. In that study, 17 countries promised to deport foreigners once their HIV positive status is discovered, 5 countries had already banned people who are HIV positive from entering their countries, 4 countries require people who intent to visit their countries to undertake a medical test for HIV.

2.9.10 Healthcare stigma

Healthcare professionals, on a daily basis, assist people with various illnesses including HIV. Health professionals are expected to treat patients fairly and equally without discriminating against them, given that they work closely with many people, including people who are HIV positive on a daily basis and their work has been under scrutiny by various stakeholders. According UNAIDS (2017), HIV related stigma among healthcare professionals has been reported to be an issue in many countries. According to UNAIDS (2017), the stigmatisation of people who are HIV positive by health professionals, come in various forms, namely:

- HIV testing without consent or counselling.
- Avoiding contact with patients living with HIV.

- Denying them their right to treatment.
- Isolating on the basis of their status (e.g asking them to stand in a que only for people who are HIV positive.
- Charging them more for extra services rendered.
- Involuntary sterilisation of women living with HIV.
- Violation of privacy and confidentiality of people who are HIV positive.

2.9.11 Employment stigma

Co-workers and employers can have negative attitudes towards people who are living with HIV. Employment stigma entails all forms of HIV related stigma that takes place in the workplace. Cases of employees being isolated and ridiculed on the basis of their HIV status have been reported in previous studies. In 2012, a study which aimed at developing an HIV index among people who are HIV positive showed that 8% (Estonia) and 45% (Nigeria) of people who are HIV positive had lost their jobs due to their HIV positive status (GNP & ILO in 2012). The study revealed that the denial of employment opportunities to people who are HIV positive, is also common among employers. 5% (Mexico) and 27% (Nigeria) were reported to have been denied employment on the basis of their status.

Previous research conducted in South Africa, also confirmed the existence of HIV related stigma in the workplace. According to Mazorodze (2012), HIV related stigma interventions in the workplace must take into account that the complex and dynamic nature of stigma, hence interventions to address stigma, must be tailored according to the context in which they are being implemented.

2.9.12 Community and household level stigma

This is a form of stigma that people who are HIV positive experience at their homes and in the community. It is this form of stigma that causes people who are HIV positive to leave their homes or communities. Household stigma often causes people who live with HIV, to feel unwanted by their families and therefore this results in weakened family bonds. In a study among HIV positive women that was conducted by Halli (2017), 88% of the participants were reported to have been rejected and isolated by their families when they discovered their HIV positive status.

2.10   CAUSES OF HIV-RELATED STIGMA

An assessment of the underlying causes of HIV related stigma is essential as it allows for the development of tailored interventions. The lack of information/knowledge about HIV, the close link between HIV and already stigmatised groups and the lack of laws that protect people who are HIV positive are some of the factors that exacerbates the stigmatisation of people who are HIV positive (Fatoki, 2016).

2.10.1   Lack of knowledge and information about HIV

Accurate knowledge about HIV is one of the determinants of sexual behaviours and HIV related stigma (HSRC, 2012). While the measurement of HIV knowledge has been a bone of contention among researchers, UNAIDS (2013) developed an internationally recognised HIV knowledge scale that has become popular among researchers. The scale consists of 5 items measuring knowledge about HIV transmission and prevention. According to UNAIDS (2013), for an individual to be considered knowledgeable about HIV, he/she must be able to answer all the following five items correctly:

- Can a person reduce the risk of getting HIV by using a condom every time he/she has sex?
- Can a person reduce the risk of HIV by having fewer sexual partners?
- Can AIDS be cured?
- Can a healthy-looking person have HIV?
- Can a person get HIV by sharing food with someone who is infected?

The HSRC survey (2012) is one of the first, large scale surveys in South Africa to make use of the UNAIDS knowledge scale. In that survey, HIV knowledge differed significantly according to demographic variables as follows:

- Age: Participants who are more than 50 years old were more likely to be less knowledgeable about HIV.
- Race: low levels of knowledge was common among blacks
- Locality: People living in urban areas who were more likely to be knowledgeable than people living in rural areas.

- Province: HIV knowledge was high in Freestate as compared to other provinces.

The link between HIV knowledge and HIV related stigma is well documented (Goffman, 1963; Herek, 1999; Mazorodze, 2012 & Fatoki, 2016). According to Herek (1999) and Mazorodze (2012), people with lower levels about HIV are likely to be more stigmatising than people with high levels of HIV. Research shows that rural areas are often characterised by misconceptions about HIV related stigma, therefore HIV related stigma is often a challenge in rural areas. This is also exacerbated by the fact that HIV related programmes are often concentrated in urban centres (Pellowski, 2013 & Dickninson, 2013), hence people in rural areas are often not well informed about the pandemic as compared to their urban counterparts.

2.10.2 HIV related stigma and fear

Research shows that most people often display avoidance behaviours towards people who are HIV positive due to the fear of contracting the disease (HSRC, 2014). This is also exacerbated by misconceptions about HIV transmission (Gilbert, 2016) and also the fact that HIV & AIDS is often associated with imminent death (Ogdane & Nyblade 2005 & Iverach, Menzies, Menzies, 2014). Furthermore, anticipated stigma (stigma that an individual anticipates in the event that he/she will test HIV positive in future, Allanise *et al.,* 2010) also results in people being afraid to: undertake a medical test for HIV, disclose their HIV positive status (Sano et al, 2016) and make contact with people who are HIV positive.

2.10.3 People who are viewed as immoral in the society

Previous studies provides evidence that the association between HIV & AIDS and other stigmatised groups exacerbates HIV related stigma (Parker & Aggleton, 2002; Skinner & Mfecane, 2004 & Senzanje, 2011). This therefore results in 'double stigma'. Since its inception in the early 80's, HIV & AIDS has been linked to sex workers, gays and lesbians and drug users (Senzanje, 2011). These groups are in sections of the society, are viewed as careers of HIV & AIDS and therefore they are stigmatised by the society.

2.10.4 Laws that protects people who are HIV positive

Laws that prohibit HIV related stigma and discrimination, needs to be developed and communicated. Research shows that there are a lot of HIV related stigma and discrimination incidences that have gone unreported in South Africa (Mazorodze, 2011). It is good business practice for employers to have an HIV policy in the workplace. An HIV policy protects people who are living with HIV, from any form of stigma and discrimination (Dickinson, 2013).

2.10.5 HIV association with death

Research show that HIV remains a stigmatised illness due to the fact that it is often associated with death (Senzanje, 2011). This view emanates from misconceptions among certain sections of the society that believe that HIV cannot be managed and therefore being HIV positive is viewed as a death sentence (Mazorodze, 2012). In a study conducted by Visser and Sipsma (2013), a positive correlation was found between HIV diagnosis and death. In that study, an HIV diagnosis also correlated with immoral behaviour and lack of adherence to medical treatment.

2.11 THE IMPLICATIONS OF HIV RELATED STIGMA ON THE FIGHT AGAINST HIV

Despite massive budget allocations and campaigns aimed at reducing the impact of HIV across the world, stigma has been singled out as the major barrier to HIV management (Kalichman *et al.,* 2005 & Peltzer (2012). In the early 80's, Jonathan Mann (WHO Global Programme on AIDS) described HIV related stigma as '*the third epidemic'* which is more dangerous than HIV & AIDS. Research provides evidence that HIV related stigma continue to be a stumbling block to HIV prevention, treatment and care (Maughan-Brown, 2010 & Peltzer, 2012).

2.11.1 HIV related stigma as barrier to HIV prevention

Research shows that HIV related stigma can frustrate efforts aimed at preventing new HIV infections (Peltzer, 2012). The acceleration of HIV prevention is the first goal of the National Strategic Plan (NSP) for SANAC (2017). According to the new NSP draft of 2017, more resources needs to be invested in 'breaking the cycle of HIV

transmission' by increasing the coverage of HIV prevention programmes to the disadvantaged populations such as the rural areas. The new NSP aims to reduce HIV incidences by 60% in 2022.

Despite the SANAC's commitment in preventing new infections, research suggests that HIV related stigma continues to frustrate all the efforts aimed at breaking the cycle of HIV transmission (Peltzer, 2012 & Tomaszewski, 2012). In a study conducted by Hubach (2015), a large number of participants highlighted the use of condoms as a sign that one is not trustworthy or is HIV positive. The fear of being labelled HIV positive often results in people engaging in risky sexual behaviours in order to please their partners.

2.11.2   HIV related stigma as barrier to treatment

According to the newly adopted UNAIDS strategy code named 90-90-90, the South African AIDS Council (2017) is looking forward to ensure that: 90% of the people who are HIV positive will have access to treatment in 2030 and 90% of the people who are HIV positive who are on treatment will achieve viral suppression by year 2030. While the supply of ARV's is gradually improving in South Africa, only half of the people who are HIV positive are on treatment. Yet it remains unknown if this ambitious target will be reached, given the overwhelming evidence that the majority of people are still afraid to access ARV's due to the fear of being stigmatised (Peltzer, 2012). According to Hubach (2015), the fear of being stigmatised prevents people from taking ARVS as well as disclosing their status.

According to Steward, Bharat, Ramakrishna, Heylen, Ekstrand (2013), HIV related stigma can result in people delaying to take treatment due to fear of being stigmatised. In that study by Steward *et al.,* (2013), a large number of people who are HIV positive, highlighted that they were afraid to be seen taking treatment with their friends and family hence it took time for them to take treatment and disclose their status. Previous research has also revealed the close link between HIV related stigma and likelihood of a patient to adhere to medication.

According to Peltzer, (2012), people who score high in internalised stigma are less likely to adhere to treatment. In another study conducted in Kwazulu Natal by Mepham,

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Zondi, Mbuyazi, Mkhwanazi, and Newel (2011), some pregnant women indicated that they had to hide their 'prevention of mother-to-child transmission' (PMTCT) medication from their partners and family. The study also revealed that a large number of HIV positive mothers were reported to have skipped taking their PMTCT medication and hospital visits as they attempted to hide their status.

2.11.3 HIV related stigma as barrier to care

HIV related stigma affects the health seeking behaviors of people who are HIV positive in various ways. In an environment characterized by stigma, people who are HIV positive may choose not to disclose their status, adhere to treatment and to adopt preventive measures (Steward, Bharat, Ramakrish, Heylen, Ekstrand, 2013). Non-disclosure of an HIV positive status automatically denies one's right to care (National Centre in HIV Social Research, 2012). Like any other patients, people who are HIV positive depend on the support from health practitioners and family members who provide them with care and support during serious illnesses. Given that HIV is a highly stigmatized disease, the caring of people who are HIV positive is often compromised.

The fear of contracting HIV may also result in caregivers (such as nurses and family members) avoiding getting in contact with people who are HIV positive and thereby denying them proper care (Churcher, 2013). One of the important aspects of the code of conduct for health practitioners is to provide quality health services to all patients without discrimination. Yet a study conducted by National Centre in HIV Social Research (2012), showed that some nurses displayed stigmatising behaviors towards people who are HIV positive through avoiding eye contact, using excessive safety precaution measures and denying care by not touching patients. In another study by Grierson, Pitts & Koelmeyer (2013), nurses were reported to have labeled their patients as drug users and sex workers because of the misconception that HIV is a disease for drug users and sex workers.

Yet researchers have identified several strategies that can be used by health practitioners and the communities to provide quality care for people who are HIV positive namely; training nurses to become role models for demonstrating kindness to people who are HIV positive (Johnstone, 2010), encouraging discussions about confidentiality, raising awareness about the implications of HIV related stigma and

using people who are HIV positive to share their experiences with community members (Strobel & Ward, 2012).

2.11.4 HIV related stigma as a barrier to testing

Previous studies have confirmed the link between HIV testing and HIV related stigma. The fact that people who have not tested for HIV in the past, are likely to be stigmatising rather than people who have never tested, confirms the fact that stigma is a barrier for HIV testing (Visser *et al.*, 2008 & Mazorodze, 2012). While a study conducted by HSRC (2012) supports the above finding, the study also found that the relationship between HIV related stigma and HIV testing tend to vary according to gender. The study showed that women are more likely to go for HIV testing than men. On the contrary, a study conducted by Mepham (2011), showed that a number of pregnant women in Kwazulu Natal were afraid to undertake a medical test for HIV due to the fear of being stigmatied by their partners and family.

Achieving high HIV testing rates is one of the SANAC priorities. In 2015, South Africa adopted the UNAIDS ambitious goal that will ensure that at least 90% of the population gets tested for HIV. According to Young, (2011), South Africa can only achieve high HIV testing if it adequately addresses the stigma that is associated with HIV.

Due to the fear of being stigmatised if found to be HIV positive, many people prefer not to get tested. HIV testing is a gateway to making informed sexual decisions as well as receiving early treatment.

2.11.5 HIV related stigma as a barrier to disclosure

Zunniga (2010) defined HIV disclosure as the process of making an individual's seropositive or seronegative HIV status known to others. The disclosure of an HIV status remains a contentious issue across the world. The Code of Good Practice on Key Aspects of HIV & AIDS and Employment in South Africa, categorically states that no employer may require an employee or applicant to undertake an HIV test as an requirement for employment. This therefore follows that employees are not obliged to disclose their HIV status unless they voluntarily do so. While HIV disclosure is not mandatory, the benefits of disclosing an HIV positive status often outweighs the benefit

of not disclosing. Early disclosure allows people who are HIV positive to take corrective action (e.g early treatment) in time. Previous studies also show that HIV disclosure can significantly reduce new HIV infections (Klopper, Stellenberg & van der Merwe, 2014).

Nondisclosure or the delayed disclosure of an HIV status has been linked to internalised stigma (Klopper *et al.,* 2014). The association of HIV with unsafe sexual practices and promiscuity, often results in people being afraid to disclose their status due to the fear of being stigmatised. Research suggests that married men with more than one sexual partner, are more likely to hide their status to their sexual partners when compared to women (Okello *et al.*, 2015). Yet in a separate study conducted by Kloper *et al.,* (2014), it was found that women are more likely to disclose to their family members than their spouses, hence the risk of HIV transmission still exists.

Reasons for the non-disclosure, include fear of rejection, loss of employment, loss of business, discrimination and fear of being accused of being unfaithful to a partner. Research shows that perceived stigma often causes people to be afraid of disclosing their HIV status (Li *et al.,* 2017). In a study conducted by Okello *et al.*, (2015), 39% of the participants indicated that they were not willing to disclose their HIV positive status to anyone and 19% indicated that their sexual partners did not know that they are positive. In that study, non-disclosure was closely linked to internalised stigma. In another study conducted by Simbayi, as cited by Klopper (2014), 42% of the participants indicated that they were afraid to disclose their status to their partners.

2.12   HOW HIV RELATED STIGMA AFFECTS INDIVIDUALS AND COMMUNITIES IN SOUTH AFRICA

Individuals and communities view being HIV positive differently. In a study conducted by Visser *et al.,* 2009, significant differences were found between personal stigma (individuals' attitudes towards people who are HIV positive) and attributed stigma. In that study, it was revealed that people are likely to view themselves as being less stigmatising than the communities they live in. Literature shows that the implications of HIV related stigma on individuals and communities, vary across communities (Smith *et al.,* 2013).

Literature is pregnant with examples of how people living HIV have been avoided, rejected, isolated and punished on the basis of their status (Visser *et al.*, 2008 & Okello et *al.,* 2015). The recent South African stigma index for people who are HIV positive, showed that a lot needs to be done to address internalised stigma. The index revealed that 40% of people who are HIV positive in South Africa, experience internalised stigma (HSRC, 2014). In various studies, a large number of people who are HIV positive, indicated that after they discovered their positive status, their self-confidence was reduced, their motivation dropped, they withdrew from social contact as well as their interaction with friends and work colleagues (HSRC, 2014 & Vlassoff, *et al.*, 2012). To some, an HIV positive status means they will die at any time, hence they abandon future plans (HSRC, 2014).

The stigma index report also revealed that a number of people who are HIV positive were reported to have been excluded from social activities based on their status, 44% reported that they were excluded from social gatherings, 44% were excluded from family gatherings, 28% were excluded from workplaces activities, 29% were excluded from religious activities and 34% were excluded from school activities. The exclusion of people who are HIV positive is not only common in South Africa. In a study conducted in India, a large number of participants indicated that people who are HIV positive must be served separately at social gatherings such as weddings (*Vlassoff et al.,* 2012).

Research also suggests that people who are HIV positive are also subject to gossiping, verbal and physical assault. A research conducted by HRSC (2014), revealed that people who are HIV positive indicated that they were being verbally and physically assaulted on a daily basis. In that study, 42% reported being gossiped about, 37% reported that they were once discriminated on the basis of their status, 35% reported that they were once verbally assaulted and 26% reported that they were once physically assaulted.

Figure 6:   How stigma leads to sickness

HOW STIGMA LEADS TO SICKNESS

Many of the people most vulnerable to HIV face stigma, prejudice and discrimination in their daily lives. This pushes them to the margins of society, where poverty and fear make accessing healthcare and HIV services difficult.

HIV & AIDS   SEX WORK   SEXUALITY   DRUG USE   GENDER

STIGMA

HARRASSMENT & ABUSE   DISCRIMINATION

POOR HEALTH SERVICES, ACCESS & UPTAKE   VIOLENCE

MARGINALISATION (social, economic & legal)

POOR SOCIAL OR EMOTIONAL WELLBEING   POVERTY   RISKY SITUATIONS & BEHAVIOURS

SICKNESS

Source; Avert, 2016

2.13   TACKLING HIV RELATED STIGMA

Tackling HIV related stigma has, since the origin of HIV in the early 1980's, been one of the challenges that are faced by policy makers and researchers as far the fight against HIV is concerned. The complex nature of HIV related stigma (Li *et al.*, 2017), the lack of a universal definition of stigma (Tal, 2012 & Gilbert, 2016) and the lack of psychometrically sound measure of HIV related stigma (Gilbert, 2016) have been cited by various researchers as stumbling blocks to the development of effective interventions that can address stigma (UNAIDS, 2007; Mazorodze, 2012 & Stangl, Lloyd, Brady, Holland, Baral, (2013).

Whilst research suggests that HIV related stigma remains high in Africa (Jacobi *et al.*, 2013), structured interventions that address HIV related stigma in the continent are still lacking (Wariki *et al.,* 2013). Moreover, the few existing interventions have not been tried and tested. The reduction of HIV related stigma remains a priority, especially in countries that have a high HIV incidence and prevalence like South Africa. The complex nature of HIV related stigma presents a challenge for researchers and other stakeholders to develop interventions that are context specific and effective.

One of the first global reviews on strategies that have been proposed by various stakeholders to address HIV related stigma, was conducted by Brown et al. (2003). In this review, four interventions based on the psychosocial conceptualisation of HIV related stigma, were proposed, namely:

- Information based strategy - The strategy is based on the promotion of strategies that can enhance the spread of anti-stigma messages. Examples of such tools include the use of brochures and posters. Yet such an approach can only be utilised among literate people.
- Skills building sessions - These are sessions that are aimed at increasing people's knowledge about HIV. The sessions are based on the assumption that when people are armed with knowledge about HIV, they are likely to be less stigmatising.
- The provision of counselling and support - This is one of the strategies that have become popular and compulsory when people undergo a medical test for HIV. Counselling empowers an individual with knowledge about how to live a normal life after testing positive.
- The involvement of people who are HIV positive – This is one of the popular strategies whereby people who are HIV positive voluntarily engage with the general public to discuss how they manage HIV. The close contact between people who are HIV positive and the public, according to research, normalises the pandemic (Goffman, 1963), thus reducing HIV related stigma towards people who are HIV positive.

The interventions proposed by Brown *et al.* (2003), have since been tried and tested by some researchers. A follow up study was conducted by Sengupta *et al.* in 2011, to

ascertain the effectiveness of the above interventions. In that review, it was found that the HIV counseling and testing can go a long way in reducing HIV related stigma.

Yet, recently, the use of structural and biomedical approaches to address HIV related stigma have been suggested as a viable alternative by various researchers (Tsai, 2012 & Stangl, *et al.*, 2013). The structural approach emphasises the use of structural factors to reduce stigma, namely the introduction of laws that protect people who are HIV positive, encouraging hospitals and workplaces to develop policies that protect people who are HIV positive and ensuring the availability of grievance procedures that can be utilised when people who are HIV positive are discriminated against on the basis of their status. The biomedical approach, on the other hand, emphasises the normalisation of HIV infection, in order to influence people to view HIV as a normal sickness such as influenza.

Another recent review of HIV related stigma intervention, also revealed that behavioral, educational and social interventions also go a long way in reducing HIV related stigma (Wariki *et al,* 2013). Behavioral interventional interventions seek to increase the knowledge about HIV and to reduce HIV related stigma through the use of opinion leaders such as people who are HIV positive and peer educators (Li, 2013). Educational interventions ensure the empowerment of people who are affected by HIV related stigma with necessary knowledge on how to manage HIV. Educational interventions may include workshops, improving the educational curriculum and the training of people on how to become tolerant to people who are HIV positive. On the other hand, social interventions are aimed at improving the social relations of people who are HIV positive.

A review of 2368 articles on HIV related stigma reduction strategies, revealed that there has been a remarkable increase in the number of studies focusing on the reduction of HIV related stigma (Stangl *et al.,* 2012). As compared to previous HIV related stigma reduction interventions, researchers have also noted that the quality and geography of the recent interventions have also increased (Sengupta *et al.*, 2011). Recent studies have widened their area of focus to include less privileged communities and when compared to previous studies, they focused more attention on health practitioners and students.

While there has been much progress as far as research on HIV related stigma reduction is concerned, some limitations have been noted. The lack of a standardised measurement of stigma (Stangl *et al.,* 2012), the lack of a methodologically sound approach that takes into account the complex nature of HIV related stigma (Baral *et al.*, 2012), the slow geographical shift of research, focusing HIV related stigma reduction (Rao, 2012), the lack of rigorous, multifaceted interventions that addresses HIV related stigma at individual level (Stangl *et al.,* 2012), the paucity of data regarding the use of behavioral and biomedical interventions to address HIV related stigma (Stangl *et al.,* 2012) and the lack of interventions that can assist people who are living with HIV, to access their right to be treated fairly (UNAIDS, 2010), have been noted as stumbling blocks that needs further action and research.

Despite the above limitations, there has been a concerted effort by SANAC to fight against HIV related stigma in South Africa. SANAC (2017) has prioritised the reduction of HIV related stigma in its five years National Strategic Plan for HIV (2017-2022). In its goal number 5, SANAC intends to tackle HIV related stigma through the protection of human rights by introducing programmes that are aimed at raising awareness about people's rights, investing on social and behavior change programmes that addresses the root causes of HIV related stigma, raising awareness about HIV among healthcare workers. Below are the objectives and sub-objectives of SANAC with regards to the reduction of HIV related stigma.

Table 4:   SANAC Objectives and sub-objectives

Objectives	Sub-objectives
Reduction of stigma among people who are HIV positive, TB Sexually transmitted illnesses.	• The revitalisation of support groups within communities in order to deal with internalized stigma. • Education programmes aimed at reducing HIV related stigma in communities. • Sensitisation of people in position of authority on cases of human rights abuse and stigma related to HIV.
Facilitate the accessibility of legal services to protect the abuse of people living with or vulnerable to HIV and Tuberculosis (TB).	• Increase awareness about of the available laws and regulations in relation to HIV and TB among people who are HIV positive and TB • Ensure the availability and accessibility of legal services in relation to HIV and TB
The promotion of a stigma free environment that encourages the protection of human and legal rights in relation to HIV and TB.	• The implementation of a scorecard that will ensure there is human rights accountability. • Continuous monitoring and improvement of laws, regulations and policies in relation to HIV and TB. • Continuous sensitisation of law makers and enforcers about the right PLHA and TB • Training of health workers on how deal with HIV and people affected and infected with HIV or TB.

Figure 7:   Interventions to address HIV related stigma

Source; UNAIDS (2010)

2.14   A CONCEPTUAL FRAMEWORK FOR ANALYZING HIV & AIDS RELATED STIGMA IN RURAL AREAS

This section presents a detailed review of some of the demographic variables that have been suggested by previous studies to have been linked to HIV related stigma. Given that HIV & AIDS related stigma is a complex and unique concept, a thorough understanding of variables that are linked to HIV is quite important. The potential determinants of HIV & AIDS related stigma in rural areas, will be unpacked and grouped into independent and dependent variables. The term 'variable' is often used by researchers without providing a clear meaning of the term. A variable, according previous researchers, is something that can change its value in response to a given situation. Kerlinger, (1973) defined a variable as a property of something (e.g height and weight). Variables can be divided into two broad categories, namely independent and dependent variables.

2.14.1 Independent variables

Independent variables are variables that can be changed or manipulated by the researcher. Put simply, an independent variable is an empirical phenomenon that affects another variable (dependent variable). Previous research has shown a close relationship between the following independent variables and HIV related stigma: gender, age, education, race, place of residence, literacy and religion.

2.14.1.1 *Gender*

Several definitions of gender have been suggested by various researchers. According to Occa (2012), the term gender refers to the social attributes and qualities that are associated with being male or female and the relationships that exist between males and females. Previous studies confirm the link between gender and HIV related stigma (Herek, 1999; Maughan-Brown, 2006 & Li *et al.,* 2017). As an independent variable, research shows that gender is a strong determinant of HIV related stigma (dependent variable).

According to previous research, HIV related stigma tend to vary according to gender (HSRC, 2014). In a study conducted by Mazorodze (2012), women displayed lower levels of HIV related stigma than men. This finding is reasonable, given that women are the caregivers in many households and therefore they are likely to be more tolerant of people who are HIV positive. Yet despite displaying lower levels of personal stigma, internalised stigma seems to be common among women (HSCR, 2014). On the contrary, a study conducted by Vlassoff, Weiss, Rao, Ali, Prentice (2012) showed that older women (more than 60 years) displayed negative attitudes when compared to their male counterparts.

2.14.1.2 *Age*

Age is defined as the period of human life which is characterised by mental and physical development. According to a survey conducted by the automotive industry in 2012, the majority of farm workers fall within the age range of 18 to 55 years. This is in line with section 43 of the Basic Conditions of Employment Act (BCEA) of South Africa that prohibits the employment of children under the age of 15.

Previous research shows that while personal stigma is common among people below the age of 24 years, internalised stigma is more common among old people who are aged 50 years and above (HSRC, 2014). Yet according to Maughan-Brown (2006), it is uncommon for young people to display stigmatising attitudes towards people who are HIV positive. Similarly, in a study conducted by Li (2017), participants who were between the ages of 21-49, were less stigmatizing towards people who are HIV positive compared to other age groups. Furthermore, regarding disclosure, young people aged 25 to 49, are more or less to speak openly about their status as compared to other age groups.

2.14.1.3 *Education (basic education)*

According to Murungi (2015), the term 'basic education' found its origins in the World Declaration on Education for All (1990). There has been no consensus amongst scholars regarding the definition of basic education. According to the World Declaration on Education for All, basic education has to do with the actual learning acquisition and the outcomes. The definition of basic education, according to section 29 of the South African constitution, is twofold. Firstly, the term that is described, indicates a level of learning (education) based on a specific time frame, e.g. 5 years of primary school. The second definition focuses on the content of learning (education) such as reading and arithmetic skills. In this study, the first definition will be used, therefore the following levels of education will be considered: primary school, matric, diploma, degree and none.

Previous studies have confirmed the link between education and HIV related stigma (Kalichman *et al.,* 2005, Mazorodze, 2012). According to the findings, participants that have higher levels of education seemed to be less stigmatising (Bekalu, 2014). Similarly, a study conducted by HSRC (2014), found that participants who had no formal education, displayed higher levels of the fear of contracting HIV. In a separate study by Klopper *et al.,* (2014), the level of education was found to be a strong determinant of HIV disclosure. In that study, participants who reached secondary school, displayed higher levels of internalised stigma and therefore they were more likely to hide their status from their partners.

2.14.1.4   Literacy

While there seem to be a general consensus amongst scholars that literacy is a basic human right (UNESCO, 2008, Keefe & Copeland, 2011), scholars remain divided on the definition of literacy. One of the widely used definitions of literacy is one provided by UNESCO, where literacy is defined as one's ability to read and write. In this study, the definition provided by UNESCO was considered.

Previous studies have confirmed the link between HIV related stigma and literacy levels. Lower literacy has been linked to high levels of HIV related stigma. In a study conducted by Li *et al.,* (2017), participants with lower levels of education, displayed high levels of stigma when compared to participants with high levels of education.

As defined by Varas-Diz *et al.*, (2010) religion is the belief in the existence of superhuman controlling powers, e.g. believing in God. There is evidence that suggest that, since the inception of the HIV pandemic, it has been associated with religious beliefs. In the early 1980's when HIV was first discovered, a lot of misconceptions about HIV transmission became common with some religions labeling it as 'God's punishment for sinners' and as a 'gay plague'.

While South Africa is a secular state (a country that guarantees freedom affiliation). Christianity remains the dominant religion. The following religions that are common in Eastern Cape, South Africa will be considered in this study.

Table 5:   Common religions in Eastern Cape

Religion	%
Christianity	83%
Islam	0.4%
Judaism	0.0%
Other beliefs	0.2%
Ancestral, tribal, animist or other traditional African religions	5.4%
No religion	7.2%
Undetermined	1.4%

Source. Stats SA 2015

Research suggests that religious beliefs can exacerbate the stigmatisation of people who are HIV positive (Varas-Díaz, Neilands, Malavé Rivera, Betancourt, 2010). The common belief among certain religions that HIV is associated with sex and that sex outside marriage is a sin and is immoral, exacerbates HIV related stigma (Herek, 1999, Parker & Birdsall, 2005 & Varas-Diz *et al.*, 2010). Such beliefs are known to be common among Christians. In a study conducted by Zou *et al.,* (2009), it was reported that some members of Catholic, Lutheran and Pentecostal churches believed that having HIV was a punishment from God.

Acknowledging the implications of religion of HIV related stigma, UNAIDS (2010) recommended that HIV related stigma interventions need to focus on religious institutions as well. Some researchers are of the view that, besides exacerbating HIV related stigma, some religious beliefs can foster the desire to be more accepting to each other in a community, hence the sense of 'oneness' will, in a way, reduce stigma (Lindley, Coleman, Gaddist & White, 2010). As suggested by Brown, BeLue, and

Airhihenbuwaa (2010), the implication of religion on HIV related stigma must be investigated further.

According to Reyes-Estrada, Varas-Díaz, and Martínez-Sarson (2014), there are four religious features that supports the manifestation of HIV related stigma: 1. The view that stigma is a consequence for breaking moral rules, therefore it is justified for people who are HIV positive to be stigmatized. 2. The use of various mechanisms by religious institutions to exacerbate HIV related stigma (e.g. secular sources) through blaming people who are viewed as immoral such as sex workers and drug users, who are often at risk of contracting HIV. 3. Activities that justify and perpetuate the moral views of stigma through the use of media and 4. The use of government sponsored institutions to exacerbate stigma.

2.14.1.5 Race

Social conditions are undoubtedly a determinant of vulnerability to disease. As a social construction, race, according to previous research (Coates, 2003, Jones *et al.* 2008), perpetuates socio-economic inequalities that exacerbate the stigmatisation of people who are HIV positive. The definition of race is multidimensional. Various researchers have attempted to provide a convincing definition of race, but no single definition seem to dominate. Taylor (2006) provided a comprehensive summary of various definitions of race whereby race was defined as:

- *A social construction* - Whereby race is viewed as a by-product of human interaction. Thus, race is defined by what people want to be.
- *A biological category* - this definition attempts to define race according to biological categories such as white, black and coloured.
- *As an ethnic group* - some definitions of race evolved around ethnicity whereby people that share the same culture are said to belong to one race.
- *A social class* - some definitions of race use social class to categories race. In Brazil, wealthy people are likely to be classified as white regardless of their skin colour.
- *A racial formation of society's institutions* - the definition of race in this regard is determined by institutions of authority such as the government, the education system and the judiciary.

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- *As self-defined -* this definition is based on what the person calls him/her when asked, what race are you*?*

The following are the common races in South Africa: White, Indian, Colored and Black Africans. Although sections of the society do not agree to this classification, it has been noted that the classification remains important as it aids in the understanding of the history of race in South Africa.

Historically, the apartheid system in South Africa has, according to research, resulted in widening gaps between races along economic lines. The inequality which is still being felt in the health system, has caused untold suffering among the poor and the rural population. According to Brown, BeLue, and Airhihenbuwaa (2010), the racialisation of HIV (where HIV is viewed as a disease common among certain races), e.g some studies have revealed that some people think that HIV is 'an African disease' and a 'disease for the poor', Brown *et al.,* (2010).

The social construction of HIV as a disease for the poor, is common in South Africa where the racial wounds are still fresh. Therefore the gap between the poor and rich is still visible. As suggested by Brown *et al.,* (2010), HIV prevalence is high among races that have high poverty rates (Black Africans and coloureds). Perhaps this explains why internalised stigma is common among blacks (HSRC, 2014). The association between HIV related stigma and race, as confirmed by literature, provides evidence that demographic variables are strong determinants of HIV related stigma (Earnshaw, Bogart, Dovidio & Williams, 2013).

2.14.1.6 Place of residence

The definition of rural remains unclear despite efforts by various researchers to come up with a common definition. In South Africa, the lack of a common definition of what rural is, has resulted in various institutions such as government institutions, academic institutions and other stakeholders, using a range of criteria when defining rural, including population density, the availability of infrastructure and the predominance of agriculture. According to census data (2001), the following indicators were used to define rural:

- If a place falls under a traditional authority.
- If a place is located outside the metro.
- If a place lacks the infrastructure that characterises an urban area.

As discussed earlier, rural areas are often deprived of basic infrastructure, which makes it difficult to access health facilities and health information. The lack of health-related information in rural areas often results in misconceptions about HIV, which then causes the stigmatisation of people who are HIV positive. Several studies have shown that rural participants are likely to display stigmatising behaviors when compared to their rural counterparts (Li, 2017).

2.15   DEPENDENT VARIABLES

The dependent variable is the variable that is being tested. In this study the following dependent variables will be considered.

- Personal HIV & AIDS related stigma.
- Attributed HIV & AIDS related stigma.
- Knowledge about HIV.

2.16   CONCLUSION

The purpose of the literature review is to contextualise the study through the review of similar studies that has already been conducted. The literature review chapter started by providing recent statistics about HIV prevalence and HIV incidents in South Africa. Literature showed that South Africa remains one of the leading countries in terms of HIV prevalence and incidences. A review of HIV related stigma in the rural context was provided and it was clear, after various studies were reviewed, that HIV related stigma research in the rural context is scant in South Africa. The forms and expressions of HIV related stigma were also discussed in detail so as to provide an understanding of the various forms of HIV related stigma. The chapter also revealed how demographic variables are linked to HIV related stigma. In the next chapter, the methodology used in this study is discussed.

CHAPTER THREE

METHODOLOGY

3.1   CHAPTER REVIEW

This chapter presents the researcher's approach in understanding the nature of HIV related stigma among farm workers in the citrus sector of Addo in the Eastern Cape. The research method (mixed method) that was used in this study, was carefully chosen, while taking into consideration, the sensitive and unique nature of HIV related stigma. Below is a detailed description of the research setting, paradigm, research paradigm, the scales of measurement, sampling technique, reliability and validity of the study, data collection method, data analysis process and ethics standard followed in his study.

3.2   THE RESEARCH SETTING

The research at hand focuses on the citrus farm workers residing in the Addo rural community. Addo, which falls under Sarah Baartman District municipality, is located 72 kilometres from Port Elizabeth. The Addo Elephant National park makes the area popular amongst tourists from various countries and continents. Besides being a favourite for the tourists, the land in Addo has one of the best soil types in South Africa suitable for citrus farming.

Citrus farms are the largest employer in this area, with migrant workers coming from areas such as Mthatha, Port Elizabeth, Uitenhage and outside South Africa, namely Zimbabwe, Mozambique and Malawi. While migrant labour has its own benefits to the farm owners and the community, the health risks associated with migrant labour cannot be ignored (further details provided in literature chapter). Migrant workers, according to August (2009), continue to be underprivileged and sometimes exploited because of their desperate situations when searching for work.

This remote area is characterised by poor road networks, poor health facilities, low literacy levels due to a lack of better education, poor water supply, high HIV and TB

prevalence. Typical of any rural area (as confirmed by literature, Steinert, Cluver, Melendez-Torres, Romero, 2016), HIV research in rural areas of Addo remains scarce.

Table 6:   Demographics of Addo in 2011

Population		16,935
Race	Blacks	82%
	Coloureds	16%
	Indians	0.1%
	Whites	1%
	Other	0.9%
Languages	isiXhosa	75%
	Afrikaans	19%
	English	3%
	Other	3%

Source: STATS SA (2012)

3.3   RESEARCH PARADIGM

A research paradigm is the researcher's fundamental view point about the world of realism (Scotland, 2012). It informs the researcher's choice of methodology. A paradigm consists of the following components: ontology (the researcher's assumptions about the reality), epistemology (the acquisition, creation and communication of knowledge), methodology (the plan of action) and methods

(techniques for data collection) (Scotland, 2012). The following paradigms (which form the basis of this study) will be discussed in detail.

3.4   THE SCIENTIFIC OR POSITIVIST PARADIGM

Comte (1798), also known as the father of positivism, was the first scholar to apply scientific methods to understand the natural world during the enlightenment period. The ontological stance of the positivist approach is based on realism and there is no relationship between the object and the knower. Positivists believe in objective reality (epistemology) and thus they seek to discover the absolute truth about objects by treating the researcher and the researched as separate entities. The strength of this paradigm is that the researcher is able to generalise findings across the population.

In the 20th century, a new school of thought with a similar ontological and epistemological stance emerged (post-positivism). Post-positivism differs from the positivist approach in two ways. First, the truth produced by the positivist approach is based on a tested hypothesis, and second, scientific theories must be treated as tentative statements that must be proven through the use of empirical data (Creswelll, 2013).

The positivist methodology seeks to explore, in quantitative terms, the relationships between variables in order to formulate laws that can be used as a basis for prediction. Predictions and generalisations are based on data that is collected through closed-ended questionnaires, standardised tests and standardised observation tools (Creswelll, 2013).

3.5   INTERPRETIVE PARADIGM

The interpretive approach, according to Scotland (2012), is based on relativism. Reality varies according to one's subjective interpretation of phenomena. In contrary to the positivist approach, the interpretive epistemology is based on the premise that the real world can be understood through subjectivism. Interpretive methodologies aim to understand (in qualitative terms) the reality from an individual perspective through the use of various methodologies such as case studies, phenomenology,

hermeneutics and ethnography. Focus groups, interviews, observations and open-ended questionnaires are used to collect data.

3.6   RESEARCH DESIGN

A research design is a strategy of enquiry that provides the direction of a study (Creswelll, 2013). When selecting a research design, the researcher has three options, namely the quantitative research design, the qualitative research design and the mixed method design. As mentioned earlier, the unique nature of the study at hand was considered, hence, a mixed research design was used to provide a detailed understanding of the forms and expressions of HIV related stigma in the rural areas of Addo.

One of the important methodological issues to be considered when implementing the mixed method approach, is the determination of the research design that will carry more weight than the other. In this context, the quantitative research design carried more weight and therefore the qualitative approach was used to validate the findings from the quantitative approach. The issue of priority regarding the research designs in mixed methods have been a contentious issue among researchers, yet Creswell (2003), argued that while it is the researcher's choice to select the design that carries more weight, it makes sense to prioritise the quantitative design as per the sequence of the explanatory mixed method.

The second point to consider in a mixed method design, is integration (the stage at which the researcher combines quantitative and qualitative data, Green, Caracelli, and Graham 1989). The following are the stages at which quantitative and qualitative data can be integrated:

- Formulation of the research questions - In this stage, the researcher can formulate the quantitative research questions as well as well as follow up qualitative questions. In this study, the quantitative research questions were linked to qualitative follow up questions, thereby integrating the quantitative and qualitative methodologies.
- Data collection - by ensuring that participants who are selected for the focus group discussions are drawn from the quantitative sample (as is the case in this

study), it ensures the integration of the two methodologies during data collection phase.

- Interpretation phase - the quantitative and qualitative designs can also be intergraded during the interpretation phase. In this study, Chapter 5 (qualitative design) provided a follow up of Chapter 4 (quantitative design).

3.6.1   Quantitative research methodology

According to Allwood (2011), the quantitative research methodology is a research approach that is aligned to the positivist paradigm, which allows the researcher to measure variables using various appropriate statistical methods. While various researchers have employed the quantitative methodology to study HIV related stigma (Visser & Sipsma, 2013 & HSRC, 2014), it remains unknown if the quantitative design alone is sufficient or adequate to explore a dynamic and unique phenomenon like HIV related stigma in a rural context, characterised by low education levels and specific beliefs about HIV. In this study, the quantitative research methodology will enable the researcher to, in quantitative terms, assess the levels of HIV-related stigma amongst the participants using various statistical methods.

3.6.2   Qualitative research methodology

The qualitative research methodology, according to Maxwell (2010), is more aligned to the interpretive paradigm which enables the researcher to explore the participants' real-life experiences using data collection methods such as interviews and focus group discussions. In this study, focus group discussions will be used to explore the participants' understanding of HIV-related stigma. Participants had an opportunity to share their experiences of HIV related stigma in their communities.

3.6.3   The mixed method

In situations where the researcher explores a complex and unique phenomenon such as HIV related stigma, it makes scientific sense to not only rely on one approach (Nataliya, Ivankova, Creswell, and Stick, 2006). One fundamental question posed in this study, is, "*can we rely on the positivist or constructivist approach alone to explore a sensitive, unique and complex phenomena such as HIV related stigma?*"(Ivankova

et al. 2006). This question presents a typical scenario that needs to be considered when researching a complex phenomenon that requires a thorough investigation especially given the fact that the quantitative measurement of HIV related stigma remains a contested subject (USAID 2006 and Mazorodze, 2012), and also the fact that scales that measure HIV related stigma in the local context remains scant. (Visser *et al.,* 2008 & Mazorodze, 2012). The mixed methods approach will provide an opportunity for the research to thoroughly explore the forms of HIV related stigma in detail.

Defined as a process of data collection, analysing and reporting using a quantitative and qualitative approach in the same study (Nataliya *et al.* 2006, Creswelll, 2013), mixed methodology emerged in the early 1980s and up to date, the design remains relatively new. Out of the forty mixed method approaches (Tashakkori and Teddlie 2003, Nataliya *et al.,* 2006) that were highlighted in previous studies, Creswelll (2013) identified six commonly used mixed research methodologies, namely: the explanatory mixed method, the exploratory mixed method, the convergent mixed method, the transformative research method, the embedded research method and the multiphase research method.

3.6.4   Convergent parallel mixed methods

The convergent parallel mixed method is a type of mixed method whereby the researcher merges quantitative and qualitative data to provide a comprehensive analysis of data. Quantitative and qualitative data is collected at the same time.

Figure 8:   Convergent parallel mixed methods
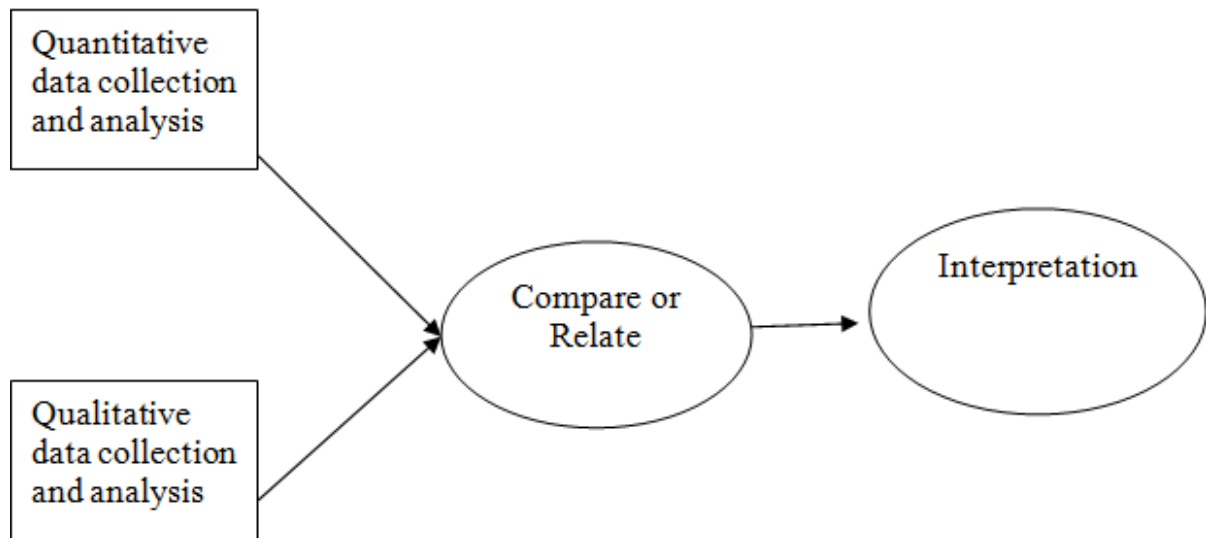
Source; Subedu, (2016)

3.6.5   Exploratory sequential mixed methods

Contrary to the explanatory design, the exploratory sequential mixed method emphasises the use of qualitative research first and the quantitative research then follows. The qualitative data is used to develop appropriate research instruments.

Figure 9:   Exploratory mixed method
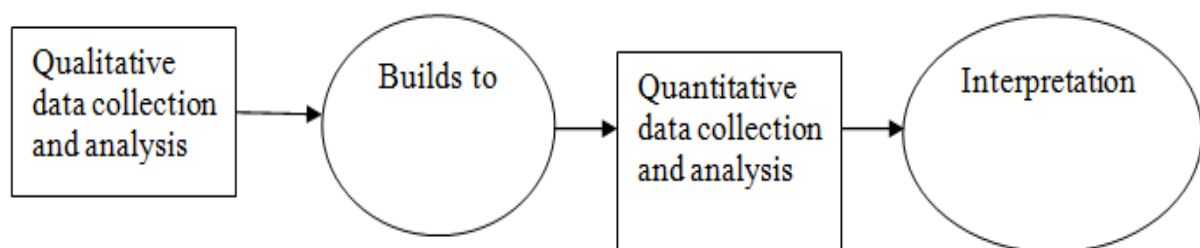
Source; Subedu, (2016)

3.6.6   Explanatory sequential mixed methods

The explanatory sequential mixed method design consists of two phases, namely the quantitative and the qualitative design. According to Subedu (2016), the explanatory mixed method is the most popular among researchers as it allows the researcher to follow up the quantitative findings with qualitative findings. The first phase, involves the collection and analysis of the quantitative data. Findings from the quantitative

approach will then form the basis for qualitative research data collection (Subedi, 2016). The findings from the quantitative approach will assist the researcher in refining and tailoring the qualitative research questions so as to provide an in-depth and comprehensive analysis of HIV related stigma in this context.

The study at hand will utilise the explanatory sequential mixed method to provide a thorough understanding of HIV related stigma among citrus farm workers.

Figure 10: Explanatory sequential mixed method
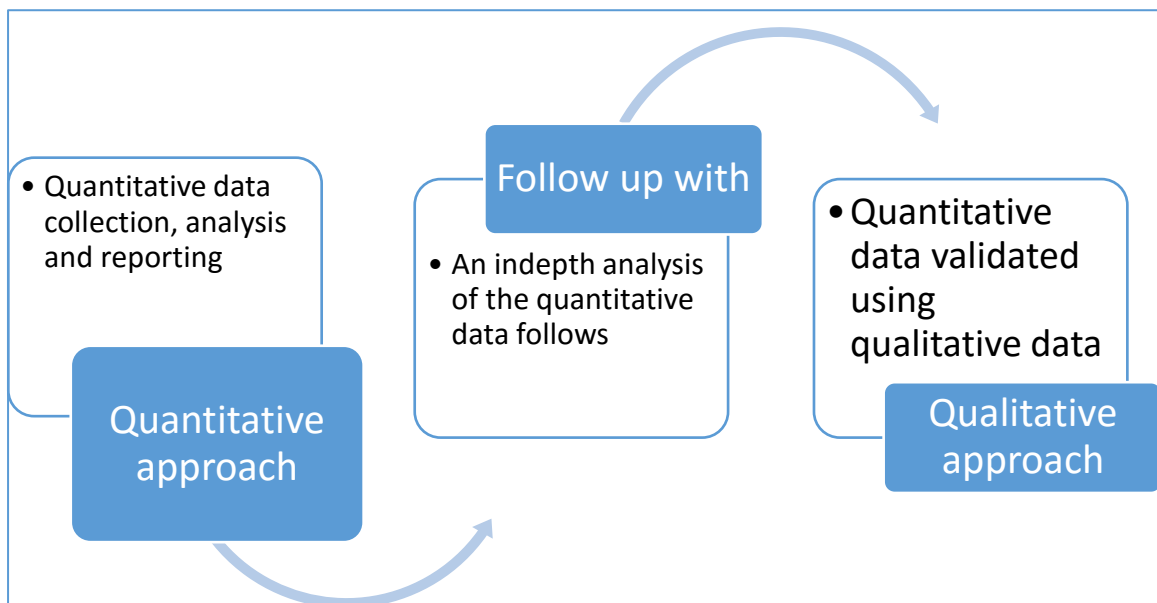
Source: Subedi (2016).

The logic behind the explanatory mixed research method is that the quantitative data provides a general picture of the findings and the qualitative data explains and refines the statistical data from the quantitative approach. According to Subedi (2016), previous research has not sufficiently explained the research process followed when using the explanatory research method. Below is a simplified process which, according to Subedi, provides a more simplified and realistic process to a novice researcher who may be interested in applying the explanatory mixed research method.

Figure 11: Explanatory mixed method process explained

Phase	Procedure	Product
Quantitative Data Collection	Cross sectional survey	Numeric data
Quantitative Data Analysis	Use of descriptive and inferential statistics	Meaningful measures
Connecting Quantitative and qualitative Phase	Selection of participants purposefully and interview questions development	Interview protocol
Qualitative Data Collection	In-depth interview	Textual data
Qualitative Data Analysis	Coding and thematic analysis Theme development cross thematic analysis	Codes and themes similar and different themes and categories cross thematic matrix
Integration of the Quantitative and Qualitative results	Interpretation and explanation of the quantitative and qualitative result	discussion implication future research

Source: Subedi (2016)

3.6.7 The embedded mixed research method

Using the embedded mixed method, the researcher simultaneously or in some instances, sequentially collects quantitative and qualitative data. The purpose of doing so is to ensure that the two methodologies complement each other as presented below.

Figure 12: The embedded mixed method
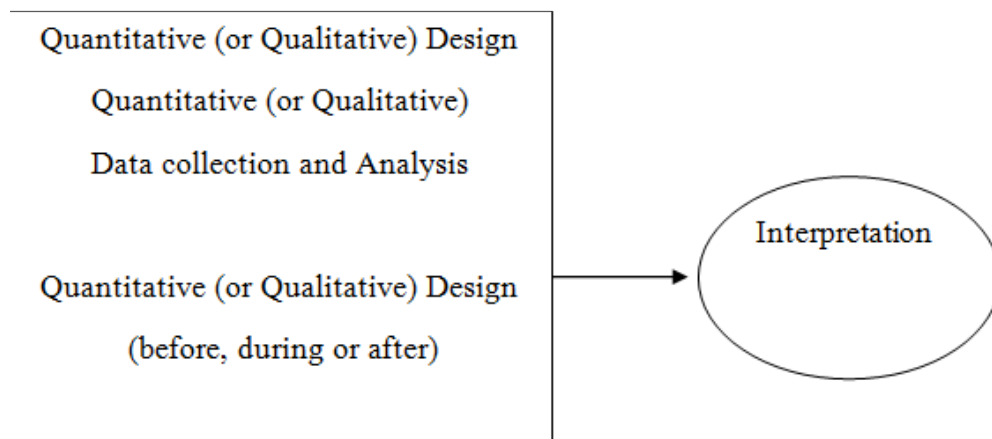
Source: Creswell (2013)

3.6.8 The transformative mixed method

According to Creswell and Clark (2011), the transformative mixed research method makes use of one of the above-mentioned methodologies, namely: explanatory, exploratory, and convergent and embedded mixed research method. The purpose of this research methodology is to encase these methodologies into a transformative framework. The transformative research methodology is often used when the research is aimed at bringing social change.

Figure 13: The transformative research methodology
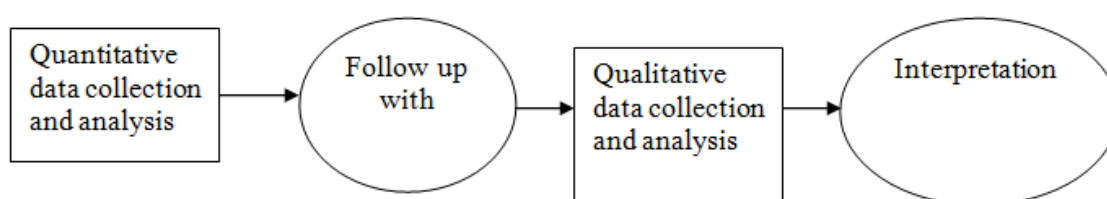
Source: Subedi (2016)

3.6.9 Multiphase mixed research

Multiphase (as the name implies) consists of a series of mixed research studies aimed at exploring social issues. Similar to the transformative mixed method, the multiphase builds on the above-mentioned mixed research methodologies.

Figure 14: Multiphase mixed research method
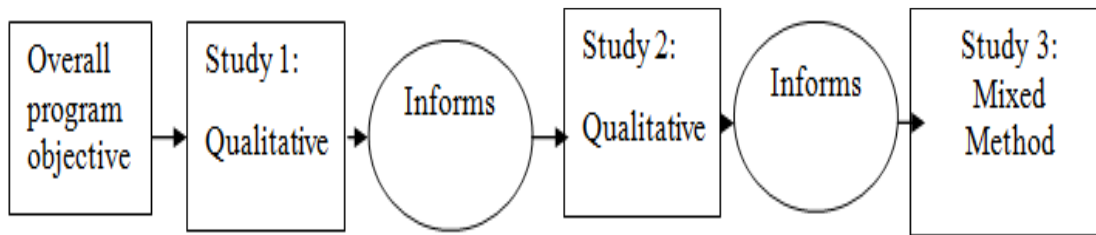
Source: Subedi (2016)

3.7   SELECTING A MIXED RESEARCH METHODOLOGY

The debate around the best methodology to use, has a long history which dates back to the 1980s. Proponents of the mixed research (Maxwell & Looms, 2003; Niglas, 2004; Hunter & Brewer, 2006; Flick, 2006; Teddlie and Tashakkari, 2009; Bryman, 2012; Ritche & Lewis, 2013 & Subedi, 2016) approach, have at least, according to Creswell (2013), six methodological options (mentioned above) to choose from. According to Subedi (2016), when selecting a mixed research methodology, novice researchers need to take note of the following points:

- The nature of research questions - Novice researchers need to determine whether the nature of their research questions can be answered by a quantitative or a qualitative method. If the research questions cannot be answered by one methodology then a mixed methodology can be applied.
- Novice researchers are required to read extensively and understand all the types of mixed methodologies and decide on the appropriate one to use.
- While novice researchers who are interested in conducting a mixed research methodology have six options to choose from, they are not obliged to choose a methodology that is a perfect fit and therefore they may generate their own.
- Novice researchers need to understand the criteria for each mixed research methodology, and the implications thereof, to their study. According to Creswell (2013), the following criteria need to be considered:

  o Implementation
  o Priority
  o Stage of integration

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- The novice needs to make a list of the above-mentioned criteria and decide whether to conduct a mixed research methodology or not.

- Align the criteria to the choice of the research design, e.g. if the researcher believes that the criteria best suits the quantitative approach and requires validation using the qualitative approach, then an exploratory sequential approach will be the ideal design to use.

- In some instances, the novice researcher may have to develop his/her mixed method research methodology in a way that best suits the objectives and research questions of the study.

3.8   THE BENEFITS OF USING MIXED METHODS

To ensure the credibility and validity of the findings of the study, the mixed method approach will be used. The obvious advantage of using multiple data collection methods is that the weaknesses, bias and problems associated with a single data collection method are minimised.

The study at hand will demonstrate the three common advantages of using the mixed method approach. Firstly, it increases the comprehensiveness and relevance of overall findings, by showing how qualitative data (from focus group discussions) provides explanations for statistical data (from the survey questionnaire). Secondly, it expands the dimensions of monitoring and evaluating data. Thirdly, it increases the methodological rigour as quantitative data and qualitative data can be checked for consistency.

3.9   THE MEASURES

Self-administered questionnaires and focus group discussions will be used to collect data. The followings scales will be used to collect data:

3.9.1   The HIV knowledge scale

This is a six-item HIV knowledge scale developed by the Joint United Nations Programme on HIV and AIDS (UNAIDS, 2012). The scale will be used to assess the levels of knowledge about HIV amongst participants. The HIV knowledge score will be

used to assess whether HIV knowledge and HIV-related stigma are closely linked. The HIV knowledge scale has been tried and tested locally.

3.9.2   Kalichman *et al.* (2005) HIV-related stigma scale

The Kalichman *et al.* HIV-related stigma scale is a 9-item scale measuring personal stigma.

3.9.3   Visser *et al.* (2008) HIV-related stigma scale

Visser *et al.,* (2008) developed a parallel stigma scale that was aimed at capturing the dimensions of HIV related stigma. The scale consists of 3 sub-scales namely (1) personal stigma, which constitutes individual attitudes of belief about people who are HIV positive, (2) attributed stigma, which describes- the attitudes or beliefs of the community towards people who are HIV positive and (3) internalised stigma, which is experienced by people who are HIV positive. Assessing the three dimensions will, according Visser *et al.* (2008), allow for comparisons between personal stigma and attributed stigma to be contributed as scores, as it is done in this study.

While for the purpose of this study, the personal and attributed stigma scales were used. The internalised stigma scale was not used in this study as it was beyond the scope of the study to interview people who are HIV positive.

The internal consistencies of the scales can be reported as follows:

Attributed stigma (0.87)

Personal stigma (0.73)

Internalised stigma (0.70)

3.9.4   Focus group discussions

Focus groups discussion questions were developed by using the findings from the quantitative approach. The questions were open-ended and therefore participants had an opportunity to discuss deep issues around HIV related stigma in their communities. The purpose of conducting focus group discussions will be to gather more in-depth information, especially from participants who are not able to read or write, given that literacy levels are low in rural areas (Steinert, 2016).

Examples of probes used during focus group discussions;

What is the perception of your community about people who are HIV positive?

 How do you think community members would feel if you tell them that you are HIV positive?

3.10   TARGET POPULATION

A target population refers to the larger group of research subjects to whom the researcher wants the findings of the study to apply to (Creswell, 2013). The population consists of 800 citrus farm workers who are employed at the Sun Orange, Sun Citrus, Bono Farm, Glenrove and Sophumelela farms.

3.11   SAMPLE

A sample is defined as a selection of participants for research (Garson, 2012). A random sample of 200 (N=200) participants from 5 citrus farms (40 (N=40) participants from Sun Orange farm, 40 (N=40) participants from Sun Citrus farm, 40 (N=40) participants from Bono farm, 40 (N=40) participants from Glenrove farm and 40 (N=40) participants from Sophumelela farm) in Sundays River Valley, will take part in the study.

Conducting research with large populations can be costly and time consuming, therefore samples allow researchers to conduct their research with a small and manageable sample and still be able to produce results that are valid and reliable. The two common sampling methods are probability sampling and non-probability sampling.

3.11.1 Probability sampling

This is a democratic method that is often used in quantitative research, whereby every participant has the same chance of being selected to participate in the study. There are several probability sampling methods, namely cluster sampling, systematic sampling, stratified sampling and simple random sampling. For the purpose of the study, simple random sampling will be discussed.

3.11.1.1 Simple random sampling

This is a sampling technique that involves the use of a sampling frame (a list of research participants). The researcher uses a number generator to select the nth subject (interval sampling). This sampling technique ensures that every participant has an equal chance of being selected and therefore the findings can be generalised across populations. The study at hand will make use of simple random sampling.

3.12 SAMPLE FOR QUANTITATIVE RESEARCH

The researcher used random sampling to select the sample. The researcher (with permission from the management) gather all employees at each farm (preferably during lunch time) to brief them about the study as well as to select the participants who are eligible for the survey. The researcher will put randomly mixed, small pieces of paper in a tin that are equal to the number of employees at the specific farm with 40 pieces marked with the letter 'E' (for eligible). All the employees will be asked to pick one piece of paper without looking into the tin. The 40 participants who will pick a piece of paper with letter 'E', will be eligible to participate in the study.

3.13 SAMPLE FOR QUALITATIVE RESEARCH

A random sample of ten participants were selected from the 200 (N=200) participants who were selected to participate in the survey. Only 10 (N=10) participants (5 (N=5) male and 5 (N=5) female) were selected from each farm. The criteria used to select the participants is that the participants must have participated in the quantitative survey. A small sample of 10 (N=10) participants per focus group is easy to manage and it ensures the maximum participation of all the participants (Creswell, 2013). The qualifying criteria for participants for the focus group discussion are as follows:

- Only 10 (N=10) participants (5 (N=5) male and 5 (N=5) female) will be selected from each farm.
- The participants must have participated in the quantitative survey.

3.14   NON-PROBABILITY SAMPLING

Non-probability sampling is a sampling technique that is often used by qualitative researchers. This form of sampling allows the researcher to select convenient subjects (case selection) with qualities of interest to the researcher. Examples of non-probability sampling include quota sampling, consecutive sampling, snowball sampling and judgmental sampling. For the purpose of the study, judgmental sampling will be discussed further.

3.14.1   Judgmental sampling

Judgmental sampling is also known as purposive sampling. Judgmental sampling methods involve the selection of participants based on the researchers' criteria. When using judgmental sampling, the researcher will select the participants that he believes matches the selection criteria (Subedu, 2016).

3.15   DATA COLLECTION

As per the explanatory mixed methodology, the data collection consisted of two phases, namely:

- Phase 1- Quantitative data collection phase.
- Phase 2- Qualitative data collection phase.

3.15.1 Quantitative data collection

Quantitative data was collected from the 9th to the 13th of April, 2018. Two boxes were used for the submission of the questionnaires. One box was for the surveys and the other box was for the consent forms. Participants were asked to put the completed questionnaire and the consent form in their respective boxes. The separation of the two documents, were aimed at ensuring anonymity as well as the confidentiality of the whole process.

3.15.2 Qualitative data collection

Qualitative data was collected two weeks (5ᵗʰ of May 2018) after the collection and analysis of quantitative data was done. The collected was analysed, to allow the alignment of qualitative questions with findings from the quantitative data. The focus group discussions were conducted at Addo public hall, which can be used by the public after a booking has been made. The participant made use of the transport that was provided to them by the farm owners to attend the focus group discussions at the Addo public hall. The discussions were held during after work hours to avoid the disruption of production, given that the session took between 1 hour 30 minutes to 2 hours.

3.16   DATA ANALYSIS

As mentioned above, the explanatory sequential mixed method, quantitative data analysis was conducted first and then analysed. The findings from the quantitative approach was then validated by the findings from the qualitative approach.

3.16.1 Quantitative data analysis

A statistical analysis was conducted to analysis quantitative data. The quantitative data was entered in a Microsoft excel spread sheet for further analysis using Statistica Version 9.

For the purpose of this study, the following statistical methods were used:

- *Descriptive* - descriptive statistics were used to characterise the participants. Descriptive statistics uses frequencies distributions, means and standard deviations to present quantitative data.
- *T-tests* - were used to compare the means between two groups of variables to establish whether the difference is statistically significant.
- *General linear model* - described by Bhattacherjee (2012), as a powerful statistical tool, the General linear model is a family of statistical methods that seek to establish the difference between categorical factors and independent variables. The general linear model was used to establish if demographic variables are strong determinants of HIV related stigma and HIV knowledge.

- *Reliability and validity-* reliability tests were conducted to assess if the findings can be generalised across populations while validity assessed if the measures used in this study measured what they are supposed to measure*.*
- *Pearson correlations* - correlation were conducted to assess the nature of relationship between variables.

3.17   RELIABILITY AND VALIDITY

Reliability and validity are important concepts in social science that are used to ensure the credibility of the study. It is good research practice to ensure that a research design is of good quality (Drost, 2012). The reliability and validity of this study is one of the key aspects that the researcher has considered.

3.17.1 Reliability

It is important in any research study, to ensure that the assessment tool is psychometrically sound and reliable. According to Drost (2012), reliability refers to consistency or repeatability of results that are obtained using a specific method of measurement. Put simply, it is the extent to which measurements can be repeated using one sample and still produce the same results. Below are the most common methods that are used to assess reliability in social sciences as suggested by Drost (2012).

Figure 15: Types of reliability tests in social science
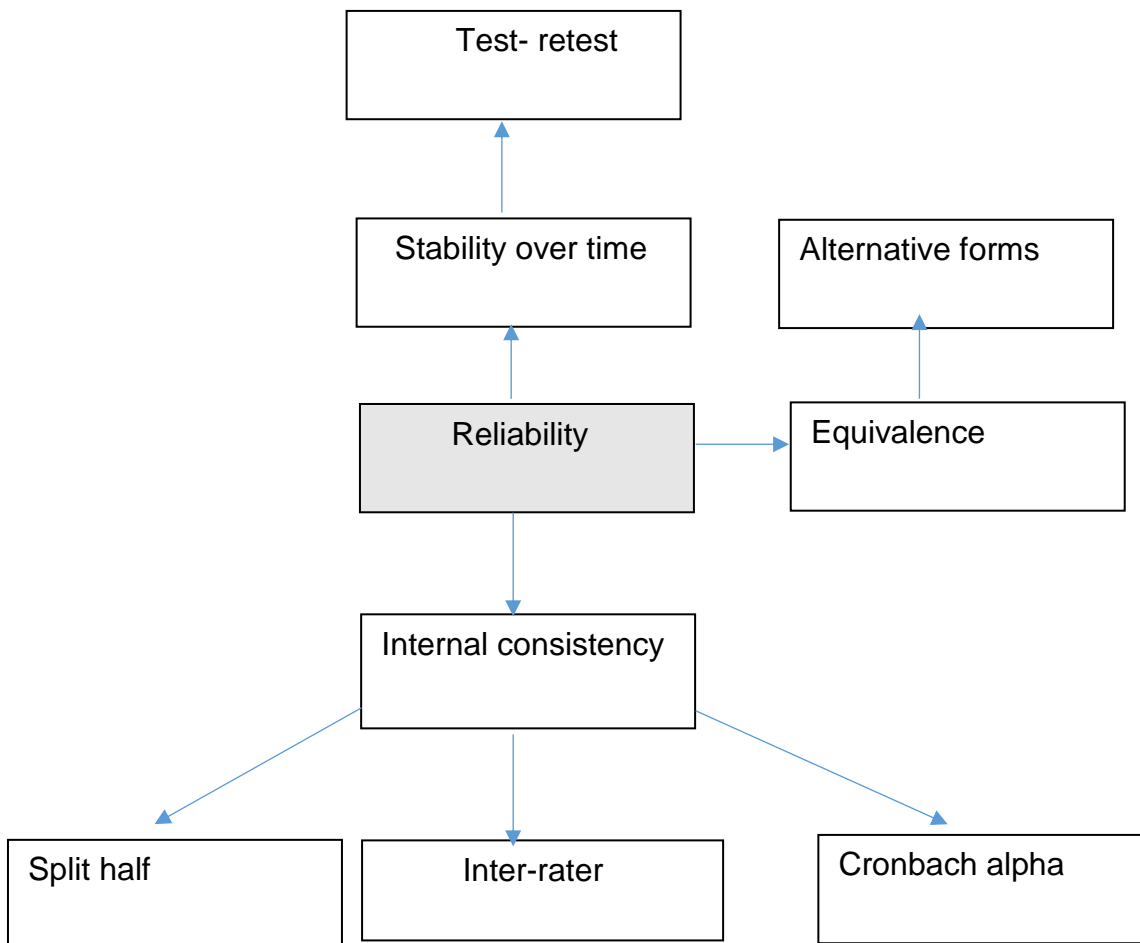
Source: Drost (2012)

3.17.1.1 Test-retest reliability

This is when a test is conducted with a group of participants and the same test is administered again at a later date using the same group of participants. If the scores of the two sets of tests correlates, then a test is deemed to be reliable. While this test is appealing to novice researchers, Rosenthal & Rosnow (1991) argued that the test has its limitations, e.g. if the period between the two tests is too short, participants are likely to remember their responses and if the period is too long, then the results may be influenced by other factors or interventions.

3.17.1.2   Alternative forms

This test is similar to test re-test reliability, except for the fact that it uses different forms of tests to measure a specific phenomenon at different times. If the correlation of items between the tests are low, then the tool is deemed to be unreliable or it may also confirm the existence of a measurement error. The limitations of the test retest, also apply to the alternative forms test.

3.17.1.3   Inter-rater reliability

This is a reliability test whereby judges are asked to measure a specific behaviour and their ratings are tested for reliability. This is similar to TV shows where several judges are asked to rate the performance of a number of musicians and their ratings are then combined to decide the winner. The only difference is that their ratings are not tested for reliability using the Cronbach alpha. For research purposes, the ratings of the judges are correlated and tested for reliability as shown below. The ratings from each judge are computed (known as effective reliability) and the Spearman-Brown formula is used for calculating reliability (Rosenthal & Rosnow, 1991 & Drost 2012).

Table 7:   Inter-rater reliability

Judge 1	Rating	Judge 2	Rating	Judge 3	Rating
Subject 1	----	Subject 1	----	Subject 2	-------
----	----	----	----	-----	------
Subject 10	----	Subject 10	----	Subject 10	------

3.17.1.4   Split-halves

This test of reliability is based on the premise that a set of items that measures a specific behaviour should correlate when split into two halves. If the two sets of items weakly correlate with each other, then the test is deemed unreliable. In contrary to the test re-test, the split half test is done at the same time. The obvious advantage of the split-halves over the test re-test is the fact that the tests are conducted at the same

time, hence the issue of participants memorising their responses, is eliminated. Furthermore, some researchers have argued that the split-halve test is cheaper and easier to administer when compared to other tests (Bollen, 1989 & Drost, 2012). Yet the disadvantage is the fact that the parallel tests may weakly correlate due to the fact that the items may be poorly divided or one set may consist of weak items only.

3.17.1.5   Internal consistency

Internal consistency refers to how well the items/questions measure a particular attribute or behaviour. Internal consistency measures how items in a scale correlate with each other as well as the degree to which the research questions are measuring a particular behaviour. The Coefficient alpha (also known as Cronbach's alpha), which is used to test internal consistency, is popular in social sciences (Subedu, 2016). For the purpose of this study, internal consistency was used. The internal consistency allowed the researcher to assess the reliability and quality of the research instruments that are to be used in this study.

3.17.2   Factors affecting reliability

It is important for a researcher to be aware of any factors that may possibly affect the reliability of the tools so as to eliminate such factors in order to increase the reliability of the study. While there have been no consensus among researchers regarding factors affecting the reliability of research tools, the following factors have been highlighted as the major factors that can impact reliability (Drost, 2012 & Subedu, 2016).

3.17.2.1   Number of items

Research show that the number of items of a scale can have an impact on the reliability of a scale (Charter, 1999). A scale with 5 items is likely to have a lower reliability score when it is compared to a scale with 10 items. In this study, the HIV knowledge scale had 5 items, Kalichman et al personal stigma scale (9 items) and the Visser et al. (12 items). The reliability scores of these scales shall be explained in detail in the next chapter.

3.17.2.2 The source of errors

It is important for the researcher to be aware of the potential source of errors that may impact the reliability of a scale. According to Drost (2012), sampling items can be a source of such errors e.g. some participants may choose to skip some questions when completing a questionnaire, hence this affects the reliability of a questionnaire.

3.17.2.3 Differences between tests

When administering reliability tests such as the split half test, novice researchers have to take into consideration, the fact that the content of the two sets of scales may be significantly different, therefore this can affect the reliability of the scales (Drost 2012 & Subedu, 2016).

3.17.2.4 Language

According to Mazorodze (2012), language has the potential to affect the reliability of a measure. The utilisation of measure/ research questionnaire that is translated in the first language of the participants, is likely to yield an acceptable reliability score. The findings (as discussed in the next chapter) confirmed the above claim, given that the Xhosa and Afrikaans versions of the scale scored high reliability scores when compared to the English version that scored a lower reliability scores as per the cut-off point of 0.70.

3.17.2.5 Sample size

Sample size is one aspect to consider when assessing reliability. According to previous research (Charter (1999), research tools that are administered on small samples, scored low reliability scores when compared to those administered on bigger samples (Charter, 999).

3.18 ACCEPTABLE RELIABILITY SCORE

One fundamental question that is often asked in quantitative studies, is 'what is the acceptable reliability score? While there has been a lot of debate around this question, the most commonly acceptable Cronbach's alpha according to previous research is

0.70 or higher (Nunnally (1978) & Drost, 2012). All items with a coefficient alpha less than 0.70 will not be considered in this study.

3.19   VALIDITY

One fundamental question that novice and expert researchers often ask themselves, is whether the research tools measure what they are intended to measure. It is good research practice to ensure that assessment tools are valid and the following are the common methods that are used to measure validity:

- Internal validity
- Translation validity
- Construct validity
- Face validity
- Content validity (Subedu, 2016)

Figure 16: Types of construct validity tests

Face validity		Content validity

	Translation validity	

	Construct validity	

	Criterion validity	

Prediction validity		Concurrent validity

Convergent validity		Discriminant validity
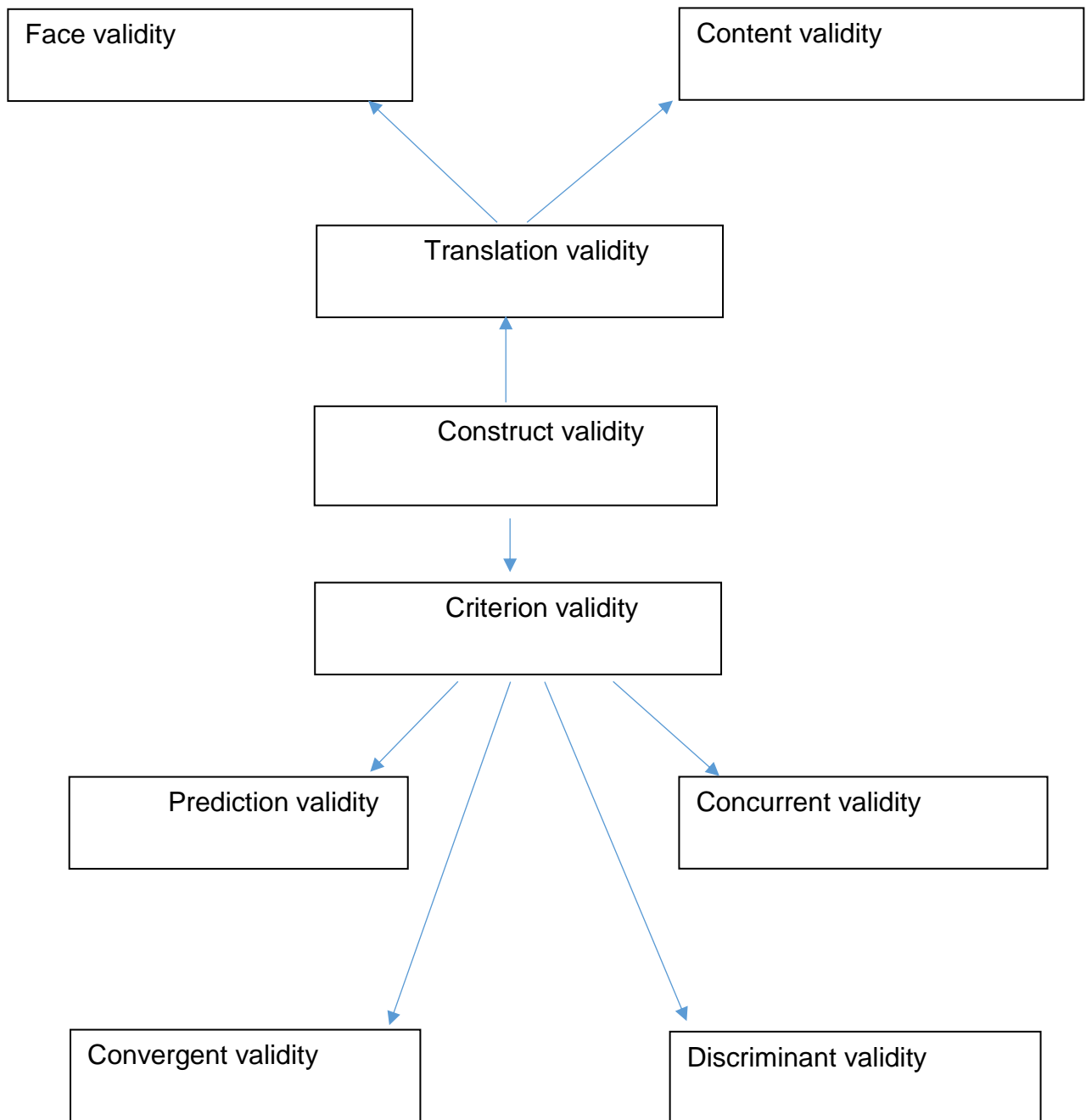
Source: Drost (2012)

3.19.1 Construct validity

Construct validity assesses whether a scale measures what it is supposed to measure, thus, the degree to which the measured variables that are used in the study, represent the hypothesised constructs. It assesses how an idea or construct can be operationalised to reality. According to Trochim (2006), construct validity is a

combination of six types of validity, namely: discriminant validity, convergent validity, internal validity, concurrent validity, content validity and predictive validity. These types of validity can be further grouped into two forms of validity, namely criterion related validity and translation validity.

Translation validity, as the name implies, refers to the extent in which constructs can be translated or operationalised to reflect the true picture of reality based on subjective judgement. This can be achieved through face validity and content validity (Drost, 2012).

3.19.2 Face validity

This is a type of validity where a researcher uses his subjective judgement when operationalising constructs. For example, a researcher attempting to measure HIV related stigma can read through various scales and select the best two, based on his judgement. Yet face validity has often been criticised by previous researchers as a weak type of construct validity (Creswell, 2011).

3.19.3 Content validity

This a type of validity whereby the researcher clarifies the content and seek approval from fellow researchers. Using content validity, the researcher provides a theoretical explanation of the construct using a set if indicators and peer researchers who are also experts in that field, will then assess whether the measure provides a true reflection of reality (Creswell, 2011).

3.19.4 Criterion-related validity

Criterion-related validity refers to the extent to which a measure provides similar findings to other measures (Creswell, 2013). To assess criterion-related validity, the researcher may compare the findings from a test with the actual data. e.g. in a survey where participants were asked about their salaries, the research may compare the responses with the actual salary figures from the Human Resource Department.

3.19.5 Concurrent Validity and Predictive Validity

Concurrent validity is type of validity whereby the criterion and the measure co-exist to provide a prediction of an event in the present. Predictive criterion predicts whether a measure is likely to produce the same results in the future. Put simply, predictive validity assesses whether a test measure can produce the same outcome in the future. A good example of predictive validity, is the use of matric results to determine a learner's performance at university (Creswell, 2011 & 2013).

3.19.6 Convergent and Discriminant Validity

Coined by Campbell and Fiske (1951), convergent and discriminant validity is a type of construct validity that involves a two-way validation process whereby the first stage involves the testing of convergence across tests or test items and the second validation assesses how that test or test items diverge or differ. Using a convergent and discriminant method, validity is assessed in terms of how items or tests converge and diverge, allowing the researchers to eliminate some of the items with poor correlation.

3.19.7 External validity

External validity assesses the causal relationship between constructs on how the relationship can be generalised across participants or settings. It is important to take note of the fact that the generalisability of tests or surveys, as per external validity, differs from the generalisability of quantitative methods. While the generalisability, as per the external validity, can only be applied from person to person, quantitative findings can be generalised across populations (Creswell, 2011).

3.20 QUALITATIVE DATA ANALYSIS

Focus group audios were transcribed and a thematic analysis was conducted to establish common themes that explain why there are or no significant differences between the variables in question. The qualitative data assisted the researcher to explain the quantitative data in qualitative terms, thereby providing a rich and in-depth understanding of the forms and expressions of HIV related stigma in rural areas.

3.21   ETHICS STANDARDS

The research proposal was sent for consideration to the Research Ethics Proposal Review Committee and was approved (REF:H17-BES-DEV-032) (Refer to appendix 10). Ethical considerations are an essential part of any research design since they serve to protect participants from being ill-treated or harmed by researchers. The researcher is aware of the ethical considerations that are to be taken into account when conducting a study of this nature (Triangulation). It is important to highlight the fact that HIV and AIDS-related stigma is a sensitive topic (Mazorodze, 2012), therefore participants were assured of the confidentiality and voluntary nature of the study.

One of the fundamental principles of research ethics, beneficence, obligates researchers to maximise possible benefits from the research and to minimise the harms and risks to their subjects (Aluwihare-Samaranayake, 2012). This research project has the potential to add value to existing literature by expanding our understanding of HIV and AIDS stigma. The researchers' claims about the benefits of their research will rest, for the most part, on their ability to collect useful data (Aluwihare-Samaranayake, 2012).

Permission to conduct the study were sought from the management. The researcher made use of peer educators as the field workers. The peer educators did an accredited peer educator course in disease management in the workplace. The training of peer educators was conducted by the Automotive Industry Development Centre in Eastern Cape (AIDCEC) (2012). The researcher had sessions with the field workers to ensure that they were aware of the ethical considerations that were to be considered when collecting data. The field workers were responsible for coordinating the data collection process under the supervision of the researcher.

3.21.1 Informed and voluntary consent

Informed consent was sought from all of the participants. Participants were asked to sign a consent form to provide evidence that they were not forced to take part in the study. The voluntary nature of the study was communicated to the participants.

3.21.2 Confidentiality of information shared and anonymity of research participants

The participants were informed about the confidentiality of the study. No names of the participants were recorded and therefore the study is highly anonymous. (Aluwihare-Samaranayake, 2012).

3.21.3 Ethical considerations when conducting mixed method research

The research proposal was sent for consideration to the Research Ethics Proposal Review Committee and was approved (REF: H17-BES-DEV-032) (Refer to appendix 10). The researcher was aware of the ethical considerations that were to be taken into account when conducting a study of this nature (Triangulation). It is important to highlight the fact that HIV and AIDS-related stigma is a sensitive topic (Mazorodze, 2012), therefore participants were assured of the confidentiality and voluntary nature of the study.

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Convergent design - When using the convergent design, researchers need to take note of the fact that the sample sizes from the quantitative and qualitative approach may be different and therefore the bias associated with sample size needs to be eliminated.

- *Explanatory design* - The fact that the researcher may use a big sample in quantitative approach and follow on the same sample using a qualitative approach, means that an identifier will have to be used carefully without compromising the identity/confidentiality of the participants. The researcher is not allowed to capture the participants' names without consent.

- *Embedded design* - This design involves the use of interviews (qualitative design) to develop an intervention. While the design is good for developing an intervention, Creswell (2013) argues that the use of the participants as a control group, may constitute an ethical issue, given that the participants may not receive any benefits for taking part.

3.22   CONCLUSION

The methodology chapter provides the reader with an understanding of the procedures that were undertaken to collect data and analyse the findings. Due to the sensitive nature of the study and to eliminate the bias associated with the use of one methodological approach, the explanatory mixed method design was used. A review of all the mixed method designs were done so as to provide a clear understanding of the various methodologies and why the explanatory mixed methods was the best approach to provide the answers to the research questions. The chapter provided, in sequence, how that quantitative and the qualitative data was collected and analysed respectively. The next chapter presents the quantitative findings and discussion thereof.

CHAPTER FOUR

QUANTITATIVE RESULTS AND DISCUSSION

4.1   INTRODUCTION

While Chapter 3 presented the methodological approach of this study, this chapter seeks to provide quantitative findings and discussion thereof. More importantly, the chapter provided a comprehensive presentation of the answers to the research questions posed in Chapter 1 which are re-iterated as follows;

4.1.1   Research questions

- Are the Visser *et al.*, and Kalichman *et al.* HIV related stigma scales reliable and valid measures of HIV related stigma among farm workers at Addo, Eastern Cape?
- Are the demographic variables, namely marital status, race, gender, education, age and religious beliefs strong determinants of HIV-related stigma and HIV knowledge among farm workers in the citrus industry in the Eastern Cape?
- How can the assessment of HIV knowledge contribute to the development of interventions aimed at managing HIV AND AIDS among citrus farm workers in the Addo community in the Eastern Cape?
- What are the forms of HIV related stigma amongst citrus farm workers in Addo, Eastern Cape?
- Is HIV related stigma a barrier to HIV disclosure among the citrus farm workers in Addo, Eastern Cape?

4.1.2   Research objectives

- To establish if the local HIV related stigma scales (Visser *et al.* and Kalichman *et al.* scales) are reliable assessment tools that can be used to assess HIV related stigma amongst citrus farm workers working in the Addo community in Eastern Cape.

- To establish if demographic variables, namely race, gender, marital status, education, age and religious beliefs are strong determinants of HIV-related stigma among farm workers in the citrus industry in the Eastern Cape.
- To assess the levels of knowledge about HIV amongst farm workers working at the citrus farms in the Addo community in the Eastern Cape.
- To establish the forms of HIV related stigma amongst citrus farm workers in Addo, Eastern Cape.
- HIV related stigma discourages HIV disclosure among citrus farm workers,
- To establish if HIV related stigma discourages HIV disclosure among citrus farm workers in Addo, Eastern Cape.

Following the explanatory sequential method, the chapter at hand will focus on quantitative data analysis and discussion. Chapter 5 will then follow with an in-depth qualitative analysis and discussion of findings which aims to validate the quantitative findings. This chapter aims to provide answers to the quantitative research questions as provided in Chapter 3. By so doing, the chapter will provide evidence of the relevance and significance of the study. Descriptive statistics, correlations, T-tests and a general linear model will be used to provide a quantitative measure of the nature of HIV related stigma amongst farm workers at Addo.

4.2   DEMOGRAPHIC VARIABLES

The majority of the studies on the determinants of HIV related stigma, have shown that demographic variables are closely associated with HIV related stigma (Herek, 1999; Maughan-Brown, 2006; Mazorodze, 2012; Bashe, 2012; Coleman, Tate, Gaddist, White, 2016). In this study, the following variables were considered:

- Gender
- Age
- Education
- Religion
- Race

4.2.1 Gender

Gender, a known strong determinant of HIV related stigma (Bashe, 2012), was included in this study to ascertain if HIV related stigma among farm workers, varies according to gender. The relationship between gender and HIV related stigma will be explored in this chapter. Defined as the social attributes and qualities that are associated with being male or female and the relationships that exist between males and females, gender was included in this study given its close link with HIV related stigma.

More males participated in this study (54%) as compared to females (45%). This is typical of the agriculture sector (especially the citrus farming) given that most of the jobs in this sector are manual and therefore, this reinforces the general perception that jobs that require physical dexterity are suitable/reserved for men (Cross, 2002; Weisgram, Dinella & Fulcher, 2011). The influence of gender stereotypes on occupational choice is, according to research (Weisgram, Dinella & Fulcher, 2011), still common in this modern society. Nevertheless, there is strong evidence that suggests that such stereotypes are gradually fading.

Whilst there have been various conflicting findings regarding the relationship between HIV related stigma and gender, the majority of the findings show that there is a close link between gender and HIV related stigma (Maughan-Brown, 2006; Mazorodze, 2012 & Coleman, Tate, Gaddist & White, 2016). These studies purported that, the attitude of males and females towards people who are HIV positive is statistically different. Some studies revealed that, whilst women are more likely to be tolerant-towards people who are HIV positive when compared to men (Maughan-Brown, 2006 and Mazorodze, 2012), they are, in most cases, victims of HIV related stigma (Bashe, 2012). On the contrary, a study conducted by Van Hollen (2010), showed that women living with HIV experienced less stigma in public than in private. Yet this study was criticised for being biased in that only women participated.

4.2.2 Education

The link between HIV related stigma and the level of education is well documented (Klopper *et al.*, 2014; HSRC, 2014) with the majority of previous findings pointing to

the fact that people with lower levels of education are likely to display higher levels of HIV related stigma (HSRC, 2014 & Li *et al.*, 2017). As discussed in the literature chapter, for the purpose of this study, education has been defined as the level of learning (education), based on a specific time frame e.g. five years of primary school (Murungi, 2015).

Findings show that more than half of the participants reached high school (53%), 27% reached primary, 14% reached matric and 4% have a Diploma/Certificate as their highest level of education. Lower levels of education among participants can be linked to the following factors:

- Educated youth move to urban areas in search for work.
- The nature of work in the citrus sector does not require highly educated workers
- Colleges and universities are mostly located in urban areas.

4.2.3   Religion

Findings show that the large number of participants are Christians (66%), followed by traditional Africans (21%). Similar findings were also found in a study conducted by STATS SA (2015) in the Eastern Cape, where the majority of participants were Christians (83%), followed by traditional Africans (8.6%). It is interesting to note that these religions differ sharply regarding their way of doing things (tradition, beliefs and values). The link between these divergent religions with HIV related stigma will be explored in this chapter.

Religion (the belief in and worship of a superhuman controlling power) has been, in previous studies, closely linked to HIV related stigma (Herek, 1999, Parker & Birdsall, 2005, Varas-Diz et al., 2010 & Coleman et al., 2016). In a study conducted by Coleman et al. (2016), religiosity was closely linked to HIV related stigma with participants who had greater religious intensity displaying high levels of stigma. This was, according to Coleman et al., (2016), a clear indication that, religion remains a strong determinant of HIV related stigma.

Previous research on HIV related stigma and religion (Senzanje, 2011; Coleman et al., 2016) revealed that religious beliefs play a significant role in exacerbating HIV related stigma. In churches, the stigmatisation of people who are HIV positive was

exacerbated by the following factors: lack of disclosure and the lack of discussions about sexually transmitted diseases were deeply rooted in religious beliefs. In the contrary, some previous studied found that, besides exacerbating HIV related stigma, some religious beliefs can foster the desire to be more accepting to each other in a community, hence the sense of 'oneness' will in a way reduce stigma (Lindley, Coleman, Gaddist & White, 2010).

4.2.4   Age

A large number of the participants (64%) constitutes of the youth and economically active. 21% of the participants are between the age of 45 to 54 years. 9% are older than 55 years of age. While, according to previous research, the forms and expressions of HIV related stigma varies according to age category (HSRC, 2014), the majority of studies shows that young people tend to be less stigmatising towards people who are HIV positive than old people (Li, 2017).

4.2.5   Race

The majority of the participants were blacks (80%) followed by coloureds (12%). This is typical of the Eastern Cape population where the majority of the population are blacks followed by coloureds. The link between HIV related stigma and race has been confirmed by previous studies. This link will be examined and explored later in this chapter.

Table 8:   Demographic variables

Variable	Category	N	%
Gender	Male	108	54%
	Female	90	45%
	No response	2	1%
Age	18-24	52	26%
	25-34	76	38%
	35-44	42	21%
	45-54	17	9%
	55+	11	6%
	No response	2	1%
Education	Primary	54	27%
	High school	105	53%
	Matric	27	14%
	Diploma/Certificate	7	4%
	No response	7	4%
Race	Black	160	80%

	Coloured	24	12%
	No response	16	8%
Language • Able to read and write	IsiXhosa	150	75%
	Afrikaans	34	17%
	No response	16	8%
Religion	Christianity	132	66%
	Buddhism	4	2%
	Judaism	6	3%
	Traditional African	42	21%
	Other	8	4%
	No response	8	4%

4.3 TESTS OF NORMALITY

It is research practice and important for scientific studies that utilise inferential statistics (as is the case in this study) to consider testing for normality. The normality assumption is based on the premise that data is normally distributed or the population which the sample is derived from, is normally distributed. Data can be assessed for normality using two ways, namely: graphically (Q-Q probability plots and Cumulative frequency (P-P) plots) and statistically (W/S test, Jarqueue-Bera test, Shapiro-Wilks test, Kolmogorov-Smirnov test and D'Agostino test).

According to Ghasemi & Zahedias (2012), half of the previously published articles have at least one statistical error, hence, normality tests serve to eliminate or reduce such statistical errors. While the obvious advantage of assessing normality is that it increases the reliability of the study, Ghasemi & Zahedias (2012) argued that the test of normality may not be an issue with samples of more than 30 (as is the case in this study), therefore parametric procedures may be conducted even if the researcher may choose not to conduct normality tests. Their argument is based on the following points:

- Distribution of data may be ignored when using large samples.
- When using large samples, the researcher may assume that the sample is normally distributed.

The means of large samples are mostly to follow a normal distribution.

In this study the Kolmogorov-Smirnov test was used to assess the normality of the key variables in this study. Findings show that the data used in this study meet the conditions of normality given that the p-value for all the key variables is greater than 0.05. This further confirms the reliability of the findings as indicated earlier by the internal consistency scores.

Table 9:   Normality distribution of key variables

Variable	P-value
HIV Knowledge	0.27
Personal stigma (Xhosa version Kalichman *et al*., Xhosa version)	0.25
Personal stigma (*Kalichman et al*., Afrikaans version)	0.52
Personal stigma (Visser *et al.* version)	0.24
Attributed stigma (Visser *et al.* version)	0.21
HIV disclosure	0.12

4.3.1 Quantitative research Question 1

"Are the Visser *et al.*, and Kalichman *et al.* HIV related stigma scales reliable and valid measures of HIV related stigma among farm workers at Addo, Eastern Cape?"

The quantitative measurement of HIV related stigma has been, and is still, an issue in the fight against HIV related stigma in South Africa and across the world (USAID, 2007, Visser *et al.*, 2008, Deacon *et al.* 2009 & Mazorodze, 2012). Issues around the quantitative measurement of HIV related stigma, have been, according to previous research, exacerbated by the fact that it is unique, dynamic and multi-dimensional (Ogdane & Nyblade, 2005, Deacon *et al.*, 2009; Mazorodze, 2012 & Nyblade 2016).

The fact that this study is being conducted in a rural setting where literacy levels are quite low, the reliability and validity of research tools, most of which were English, was prioritised. For that reason, it is important to assess whether the tools measured what they were intended to measure as well as the generalisability of the findings.

The internal consistency of research tools used in this study, was assessed using reliability tests (Cronbach Alpha). The reliability, which is the stability and consistency of research tools or how well the items/questions measure a particular attribute or behaviour (Drost, 2012), and validity, -whether the research tools are measuring what they are supposed to measure (Drost, 2012), allows the researcher to assess the psychometric soundness of the tools of assessment used in a study. In this study the Cronbach alpha ranged from 0.58 to 0.99. The reliability test in this study is essential as it enabled the researcher to assess how the items in each scale correlates with each other (Drost, 2012). The scale(s) that scored less than the commonly acceptable Cronbach alpha of 0.70 (Spector 1997 & Drost, 2012), were not considered in this study.

4.3.2 Kalichman *et al.,* HIV related stigma: English version

The nine item, English version personal stigma scale by Kalichman *et al.* reported a reliability score of 0.58. It is important to highlight the fact that the reliability score of the Kalichman *et al.,* English version scale was lower than that of the developers (α = 0.78) and the commonly acceptable reliability of 0.70 (Spector 1997). Given that the

majority of the participants (75%) can read and write Isixhosa and the fact that 80% did not reach matric, provides evidence that the Kalichman *et al.*, HIV related stigma English version scale may not be suitable for use among rural participants with low literacy levels.

There is ample evidence from previous studies that show that the language of a research tool plays a significant role in participants' ability to comprehend and understand research questions (Dorney, 2003; Zohrabi, 2013; Hayakawa & Keyser 2018). This, according previous studies (Dorney, 2003 and Mazorodze, 2012), in turn affects the reliability of the questionnaire. Furthermore, given the fact that the Kalichman *et al.* (2005) stigma scale has been translated in 3 languages, it is safe to assume that process of translation can have an impact on the reliability of the scales (Dorney, 2003 & Zohrabi, 2013).

The English version scale was excluded as the scale scored a weaker internal consistency. The Kalichman *et al.* (2005) personal stigma scale provided an opportunity for participants to complete a version in the language of their choice. It is reasonable to expect that when participants complete a survey in their native language, they are more likely to relate with the questions and therefore the responses would most likely to be valid and reliable.

Whorf (1956) is one of the researchers who first articulated the idea that language influences people's cognitive abilities and perceptions in the early 1950's. In his argument, Whorf indicated that language, to a larger extent, shapes our thought process. In a recent study conducted by Bowen, Govender and Edwards (2016), it was confirmed that the use of a language that is not native to the participants have a potential to influence the reliability and interpretation of the questions.

Yet, if small samples compromises reliability as suggested by previous research (Charter, 1999), the low reliability score of the Kalichman *et al.,* English scale may be due to fact that the majority of participants chose to complete the isiXhosa and Afrikaans version and therefore a few participants completed the English version.

In this study, the majority of the participants were black, Xhosa speaking and therefore most of them were comfortable completing the Xhosa version scale. This was also confirmed by the positive correlation between race and language ($r = 0.563$ $p < 0.00$).

To further confirm the positive correlation between race and language, cross tabulations were done to further confirm if it is indeed safe to assume that, for instance, all the black participants completed the Xhosa version scale.

Results in the table below show that, while it is reasonable to assume that all black participants were comfortable in completing the Xhosa version personal stigma scale, it is also important to highlight the fact that some black participants (although few, 9%) completed the Afrikaans version of the personal stigma scale. Findings also show that some coloured participants (9%) also completed the Xhosa version scale.

Table 10:   Race and Language

Race	Xhosa version	Afrikaans version	No response
Black		86%	9%	5%
Coloured	8%	87%	5%

4.3.3   Is language a determinant of personal stigma?

The fact that the English version of the stigma scale scored a weaker reliability score, raises questions about whether language has an effect on personal stigma. A correlation analysis confirmed that language and personal stigma scores were positively correlated (r = 0. 393, p<0.00), therefore confirming that language has an effect on Kalichman *et al* personal stigma.

Further analysis also showed that the difference between the stigma scores of participants who completed the Kalichman *et al.* Xhosa version scale and the Afrikaans version, was statistically significant. Participants who completed the Xhosa version, scored high personal stigma scores when compared to participants who completed the Afrikaans version (mean score= 0.63 and 0.17 respectively: t= 7.18, df=398, p=0.00).

Table 11: Mean scores for Xhosa and Afrikaans version

Kalichman *et al* stigma scale	Xhosa version	0.63
	Afrikaans Version	0.17

4.3.4   Kalichman *et al.* HIV related stigma: IsiXhosa version

Given the fact that 75% of the participants are able to read and write IsiXhosa, it is reasonable to expect the majority of the participants to choose to complete the IsiXhosa version when compared to other version. For a sample of 200 participants, the Kalichman *et al*. HIV related stigma: IsiXhosa version reported an acceptable internal consistence of α = 0.99. This is a much higher score than the commonly accepted cut off of 0.70 and the English version scale. This score is also much higher than that of the developers (α =0.88).

If indeed language influences reliability as suggested by previous studies (Dorney, 2003 & Zohrabi, 2013), the above findings provides evidence that the Kalichman *et al.,* Xhosa version, personal stigma scale scores high when the version administered is in the participants' first language. Based on this finding, the researcher therefore suggests that the Xhosa version scale may be used for future studies to assess the level of HIV related stigma amongst Xhosa speaking participants.

4.3.5   Kalichman *et al.* HIV related stigma: Afrikaans version

The above findings show that 17% of the participants are able to read and write Afrikaans. Again, the language issue might have contributed to the reliability score in this context. People who are able to read and write Afrikaans may have opted to complete a questionnaire in Afrikaans. Similar to the IsiXhosa version, the Afrikaans personal stigma scale scored an acceptable reliability score (α = 0.97) but much higher than the acceptable cut off score of 0.70 and that of the developers (α = 0.71).

This above finding also provides evidence that the Kalichman Afrikaans personal stigma scale may be suitable for use in a rural setting where there are participants that are able to read and write Afrikaans.

4.3.6   Visser *et al.,* personal stigma scale

The Visser *et al.,* (2008) personal stigma scale reported an acceptable reliability score of 0.98, which is much higher than the cut-off point ($\alpha = 0.70$). It is therefore safe to conclude that the Visser *et al.* personal stigma scale is suitable for assessing HIV related personal stigma among rural participants with lower literacy levels. The Visser *et al.* personal scale scored high in terms of reliability regardless of the fact that it is an English version.

One would have expected that the Visser *et al.* English scale to score low as is the case with the Kalichman *et al.* English version scale. While, this may put to rest the assumption that language might have impacted the reliability of the Kalichman *et al.* English scale, it may also raise questions around the translation of the Kalichman *et al* English version scale. Put simply, the reliability of the Kalichman *et al.* scale might have been impacted during the translation process as meaning is likely to have been lost during translation. Given that the reliability also depends on the number of items on the scale (Mazorodze, 2012), it is reasonable to expect the Visser *et al.* English scale to score high reliability score as compared to the Kalichman, since it has more items than the Kalichman *et al.* scale (12 items vs. 9 items).

While this may be the case, it is important to point that low reliability scores can be due to number of factors beyond the scope of this study.

4.3.7   Visser *et al.* attributed stigma scale

The 12 item Visser *et al.*, (2008) attributed stigma scale reported an acceptable reliability score of 0.97. The attributed stigma scale was administered in English, which is a second language for the participants in this study. This is evidence that the Visser *et al.* attributed stigma scale can be used across rural settings. The fact that all the Visser *et al.* scales reported an acceptable internal consistency, provides evidence

that the scales have sound psychometric properties and therefore they can be used across settings.

4.3.8 UNAIDS (2012) HIV knowledge scale

HIV knowledge, according to previous research (Herek, 1999; Mazorodze, 2012 & HSRC, 2014), is a strong determinant of HIV related stigma. In this study it was important to measure the levels of HIV knowledge amongst participants in quantitative terms to allow the researcher to determine the number of participants who can accurately answer all the HIV knowledge items. More importantly, the reliability of this scale allows the researcher to assess the credibility of the scale as a measure of HIV knowledge among rural participants.

Findings show that the 5 item UNAIDS (2012) HIV knowledge scale reported an acceptable reliability score of 0. 73. The score is higher than the acceptable reliability score (0.70) (Spector (1997). This provides evidence that the scale can be used to assess HIV knowledge amongst rural participants.

Table 12:   Summary of reliability scores

Visser *et al.* parallel stigma scales	Personal stigma scale	0.98
	Attributed stigma scale	0.97
	Internalised stigma score	This scale was excluded since it was beyond the scope of this study.
Kalichman *et al.* personal stigma scale	English version	0.58
	IsiXhosa version	0.99
	Afrikaans version	0.97
UNAIDS (2012) HIV knowledge scale	English version	0. 73

Reliability score marked in red was less than the cut off score (α = 0.70)

4.3.9   Validity

The validity of a scale of measurement provides evidence whether the scale measures what it is supposed to measure. In this study, validity was assessed to ascertain whether the scale provided a true reflection regarding the attitudes, perceptions or beliefs of people living in rural areas towards people who are HIV positive. An assessment of the validity of the findings was based on previous findings which showed that people with low levels of HIV knowledge (Herek & Capitano, 2002; Maughan-Brown, 2006; Visser *et al.* 2008; Mazorodze, 2012 & HSRC, 2014) and who are afraid to disclose their status (Zunniga, 2010, HSRC, 2014 & Li *et al*, 2017) are

likely to display high levels of HIV related stigma. All the scales confirmed these findings as shown below.

4.3.9.1 Low level of knowledge about HIV is linked to high level of HIV related stigma

Previous research shows that there is a positive relationship between HIV knowledge and HIV related stigma (Herek & Capitano, 2002; Maughan-Brown, 2006; Visser *et al*. 2008; Mazorodze, 2012 & HSRC, 2014). The validation process is therefore presented below.

Independent t-tests, by variables was conducted to establish if indeed, participants who score low levels of HIV knowledge display high levels of HIV related stigma as suggested by previous studies (Visser *et al*. 2008; Mazorodze, 2012 & HSRC, 2014). Findings from this study confirmed the validity of the scales as participants who scored low in the HIV knowledge scale, reported statistically significant high levels of HIV related stigma on Kalichman *et al.* isiXhosa version (mean score= 0.63 versus 1.62; t=17.7 df=398, p=0.00), Afrikaans version (mean score= 0.17 versus 1.62; t= 34.2, df=398, p=0.00) and Visser *et al.* personal stigma scale (mean score= 1.47 versus 1.62; t=3.01, df=398, p=0.00).

Table 13: HIV knowledge vs HIV related stigma

Scale	Personal stigma Mean scores for participants who displayed high level of knowledge about HIV	HIV related stigma Mean scores for participants who displayed low level of knowledge about HIV	t	df	p
Kalichman *et al.* isiXhosa version	0.63	. 1.62	17.7	398	0.00
Kalichman *et al.* Afrikaans version	0.17	1.62	34.2	398	0.00
Visser *et al.* personal stigma scale	1.47	1.62	3.01	398	0.00

The confirmation of validity as reported above, provides evidence that the findings at hand are valid and reliable, hence they can be generalised across farming and rural communities.

4.3.9.2   *HIV related stigma is a barrier to HIV disclosure*

The second validation of the HIV related stigma scales was assessed using the commonly and scientifically proven fact stigma discourages people from disclosing their status. (Zunniga, 2010; Klopper *et al.,* 2014; Greef, 2013; Okello *et al.*, 2015 & Li *et al.,* 2017). Participants who revealed that they would keep their HIV positive secret,

stated: *'if I test positive I will make a big effort to make sure that my HIV is kept a secret'* and displayed high levels of stigma.

Findings confirmed that participants who are not comfortable with disclosing their HIV status, displayed higher levels of HIV related stigma across all scales: Kalichman *et al.* isiXhosa version (mean score= 0.63 versus 1.64; t = 15.4 df = 397, p = 0.00), Afrikaans version (mean score= 0.17 versus 1.64; t = 26.4, df = 397, p = 0.00) and personal stigma scale (mean score= 1.47 versus 1.64; t = 2.81, df = 397, p = 0.00).

Table 14: HIV related stigma vs. HIV disclosure

HIV related stigma scale	HIV related stigma Mean scores for participants who are not afraid to disclose an HIV positive status	HIV related stigma Mean scores for participants who are afraid to disclose an HIV positive status	t	df	P
Kalichman *et al.* isiXhosa version	0.63	1.64	15.4	397	0.00
Kalichman *et al.* Afrikaans version	0.17	1.64	26.4	397	0.00
Visser *et al.* personal stigma scale	1.47	1.62	2.81	397	0.00

The above finding is interesting, given previous literature that reported that HIV disclosure in rural areas in South Africa is relatively low (Peltzer, 2005 & Klopper *et al.,* 2014). Similar findings were also found in a survey conducted by Peltzer (2005), where only 36% of the participants were prepared to disclose their status. In contrary, a study conducted by HSRC (2014), reported that people living in rural areas were

more likely to disclose their HIV positive status. The qualitative chapter will unpack some of the issues that are causing people in Addo to be reluctant to disclose their statuses.

4.4   QUANTITATIVE RESEARCH QUESTION 2

"Are the demographic variables namely gender, age, race, marital status, education and religious beliefs strong determinants of HIV-related stigma and HIV knowledge among farm workers in the citrus industry in the Eastern Cape?"

Various research studies have confirmed the fact that demographic variables are strong determinants of HIV related stigma (Herek, 1999; Maughan-Brown, 2006; Mazorodze, 2012; Bashe 2012 & Coleman, Tate, Gaddist, White, 2016). It is for that reason that, in this study, the researcher sought to assess this relationship in a rural context in order to inform future interventions that are aimed at alleviating HIV related stigma in rural areas. In this section, the assessment of whether demographic variables are strong determinants of HIV related stigma, was conducted using the Kalichman *et al*. and Visser *et al.* stigma scales. The Kalichman *et al.* English version stigma scale was excluded as it scored less than the acceptable reliability score.

4.4.1   Demographic variables vs. HIV related stigma. Findings as per the Kalichman *et al* personal stigma scales

This section assesses whether demographic variables can be used to predict HIV related stigma As highlighted above, the Kalichman, *et.al.,* English version scale was excluded as it scored a weaker reliability score.

4.4.1.1   Are demographic variables determinants of HIV related stigma according to Kalichman et al personal stigma scales (Xhosa version scale)?

A general linear model was conducted to determine the demographic variables that are strong determinants of HIV related stigma according to the Kalichman *et al.* personal stigma scale (Xhosa version scale). Findings showed that the Kalichman *et al.* Xhosa version did not report and significant variation between demographic

variables and HIV related stigma: gender (F=0.20, p=0.65), Age (F=1.68, p=0.12), marital status (F=0.86, p=0.45), education (F=2.0, p=0.09), race (F=0.66, p=0.57) and language (F= 2.25, p=0.11).

4.4.1.2 Hypothesis testing

Using the results above, the following hypothesis (as mentioned in Chapter 1) will be assessed:

H0: Using the Kalichman *et al.* personal stigma scale (Xhosa version) the identified demographic variables are **not** determinants of HIV related stigma in rural areas.

H1: Using the Kalichman *et al.* personal stigma scale (Xhosa version) the identified demographic variables are determinants of HIV related stigma in rural areas.

Using the Kalichman *et al.* personal stigma scale (Afrikaans version), findings displayed in table above show that the effect of the following demographic variables was not statistically significant: gender, age, educations, marital status, language and religion, given that the p-value of these variables is greater 0.05 (P>0.05). It can be concluded therefore, that using the Kalichman *et.al*. personal stigma scale (Afrikaans version), the null hypothesis is retained only for variables, namely gender, age, education, marital status, language and religion. Based on these findings, it can be concluded that the above demographic variables are not determinants of HIV related stigma, except for race. Yet findings showed that the effect of race on HIV related stigma, was statistically significant since the p-value was less than the threshold of 0.05 (p<0.05). Based on this finding, the null hypothesis is therefore rejected and it can be concluded that race is a determinant of HIV related stigma.

Given that the Kalichman *et.al.* stigma scales (Xhosa version and Afrikaans version) showed slightly different findings regarding the effect of demographic variables on HIV related stigma, confirms earlier findings that showed that language has an effect, not only on the reliability of the scales, but also on the level of HIV related stigma. Yet this warrants further research that establishes when a scale is administered in more than one language, whether it may produce different findings.

4.4.1.3 Demographic variables as determinants of HIV related stigma according to Kalichman et al. personal stigma scales (Afrikaans version scale)

Using demographic variables as the categorical variables and the Kalichman *et al.* (Afrikaans version) personal stigma scores as the dependant variable, the only significant effect was race (F=20.1, p=0.00). Coloureds were more likely to display stigmatising attitudes (mean score=1.05) towards people living with AIDS when compared to blacks (mean score= 0.01). The remaining variables, gender (F=0.06, p=0.94), age (F=0.34, p=0.91), education (F=0.81, p=0.52), language (F=0.03, p=0.97) religion (F=0.55, p=0.79) and marital status (F= 0.11, p= 0.95) were not statistically significant.

Table 15: Demographic variables vs. HIV related stigma

Variables	F	P-value
Gender	0.06	0.94
Age	0.34	0.91
Education	0.81	0.52
Race	20.1	0.00
Language	2.64	0.07
Marital status	0.11	0.95
Religion	1.54	0.15

Variable highlighted in red is statistically significant

4.4.1.4   HIV related stigma and race unpacked

The fact that race has been found to be a strong determinant of HIV related stigma in this study is not surprising given that several previous studies also confirm this finding (Jones *et al*., 2008 & HSRC, 2014). In a study conducted by Fredrics (2014), the effect of race on HIV related stigma was also statistically significant. Similarly, coloureds displayed higher levels of HIV related stigma than blacks. The historical link between race and social conditions (Coates, 2003 & Brown, 2016) and the misconception that HIV is a disease for the poor (Brown, BeLue & Airhihenbuwaa (2010), only serve to exacerbate the stigma that are associated with HIV in South Africa, which is a country with a sad history of apartheid. In a study titled, '*How did a white girl get AIDS*,' by Brown (2016), white students perceived HIV as a disease common among poor, black and coloured people.

Contrary to the findings at hand, in a study conducted by HSRC (2014), blacks were more likely to display HIV related stigma than coloureds. Such contradictory findings confirm the complex and unique nature of HIV related stigma. To get an in-depth understanding of race as determinant of HIV related stigma, qualitative questions where developed. An example of a race specific question asked as a follow up to this finding during the focus group discussions was: *'What is your understanding of HIV related stigma as member of the black or coloured community?'*

4.4.1.4.   Hypothesis testing

This section assesses whether, according Kalichman *et al.* personal stigma scale (Afrikaans version), demographic variables are determinants of HIV related stigma. The hypothesis can be stated as follows:

H0: Using the Kalichman *et al.* personal stigma scale (Afrikaans version) the identified demographic variables are **not** determinants of HIV related stigma in rural areas.

H1: Using the Kalichman *et al.* personal stigma scale (Afrikaans version) the identified demographic variables are determinants of HIV related stigma in rural areas.

Using the Kalichman *et al.* personal stigma scale (Afrikaans version), findings displayed in the table above show that the effect of the following demographic

variables were not statistically significant: gender, age, educations, marital status, language and religion, given that the p-value of these variables is greater 0.05 (p>0.05). It can be concluded therefore, that, using the Kalichman *et al.* personal stigma scale (Afrikaans version), the null hypothesis is retained only for variables, namely gender, age, educations, marital status, language and religion. Based on these findings, it can be concluded that the above demographic variables are not determinants of HIV related stigma except for race. Yet findings showed that the effect of race on HIV related stigma was statistically significant since the p-value was less than the threshold of 0.05 (p<0.05). Based on this finding, the null hypothesis if therefore rejected and it can be concluded that race is a determinant of HIV related stigma.

Given that the Kalichman *et al.* stigma scales (Xhosa version and Afrikaans version) showed slightly different findings regarding the effect of demographic variables on HIV related stigma, confirms earlier findings that showed that language have an effect not only on the reliability of the scales but also on the level of HIV related stigma. Yet this warrants further research that establishes that when a scale is administered in more than one language, it may produce different findings.

4.4.2 Demographic variables vs. HIV related stigma. Findings as per the Visser *et al* attributed stigma scales

Using demographic variables as the categorical variables and the Visser *et al.* personal stigma scores as the dependant variable, the effect of marital status (F=3.58, p=0.00) and religion (F=7.17, p=0.03) on HIV related personal stigma was statistically significant. People who are married, scored (mean score=1.56) higher on personal stigma than people who are single (mean score=1.35). Christians also scored higher (mean score=1.55) on personal stigma than traditional Africans (mean score= 1.39). The effect of other variables was not statistically significant: gender (F=0.20, p=0.81), Age (F=0.79, p=0.57), education (F=1.17, p=0.32), education (F=1.17, p=0.32), race (F=0.27, p=0.84) and language (F=1.05, p=0.84).

Table 16: Personal stigma (Visser *et al*. scale) vs. demographic variables

Variables	F	P-value
Gender	0.20	0.81
Age	0.79	0.57
Education	1.17	0.32
Race	0.27	0.84
Language	1.05	0.84
Marital status	3.58	0.00
Religion	7.17	0.03

P-values in red are statistically significant

4.4.3 Christians are more likely to display stigmatising attitudes towards people who are HIV positive than traditional Africans and other religions.

Above findings have shown that religion is a strong determinant of HIV related stigma. Christians, as revealed by these findings, are more or less likely to display stigmatising attitudes towards people who are HIV positive than traditional Africans. Interestingly, one would expect Christians to be more sympathising to people who are HIV positive given the gospel of loving one another that is often preached in many churches. Yet previous research have shown that there are several beliefs/ misconceptions among Christians that exacerbate the stigmatisation of people who are HIV positive (Senjanje, 2012).

The belief held by some Christians that HIV is a punishment from God, despite being scientifically incorrect, still provides strong evidence that some beliefs that Christians have around the pandemic needs to be corrected, especially in rural areas where information about HIV is still lacking (Parker & Birdsall, 2005; Sithole, 2001, & Dickinson, 2013). Furthermore, Senanje (2010) pointed out two factors that contribute to the stigmatisation of people who are HIV positive in churches, namely the lack of discussions about HIV and sex as well as information about HIV.

The stigmatisation of people who are HIV positive in churches is not something new in Africa. In some churches in Namibia (Senjani, 2011), Nigeria and Uganda (Kafuko,

2009) couples are asked to undertake compulsory HIV testing before they get married, hence the couples may reconsider the decision to marry based on HIV test results. According to UNAIDS (2005), the misconception among Christians that God is vindictive makes them believe that God can inflict HIV on an individual as a way of punishment. The punishment theory of disease, according to Kafuko (2009), places much emphasis on the moral concept rather than the causal concept. Hence illness is viewed as a consequence of bad behaviour.

It is quite interesting that the findings revealed that traditional Africans are likely to display a lower level of HIV related stigma. Traditional Africans believe in ancestral powers as opposed to Christians who believe in God. One of the common beliefs among traditional Africans, is that contracting HIV is a sign of ancestral displeasure. While the role of religious beliefs has been mainly based on anecdotal evidence (Sithole, 2001), recent research has shown that there is a strong link between religious and HIV related stigma (Dickinson (2013). According to Dickinson (2013), the role of religion in shaping people's beliefs about HIV, should not be viewed as speculation as it based on scientific evidence.

While some religious beliefs have been linked to HIV related stigma, some studies have pointed out positive outcomes of religiosity (Lindley, Coleman, Gaddist & White, 2010). The view of sex before marriage as a sin by Christians emphasises being faithful to one partner, thereby reducing chances of contracting or transmitting HIV. Furthermore, according to Dickinson (2013), it appears the role of religion in understanding the unique nature of HIV has been underestimated.

To follow up on this finding, focus group questions where designed to explore how religion exacerbates the stigmatisation of people who are HIV positive thereby contributing to HIV related biomedical theories and health promotions. Christians and traditional Africans were given an opportunity share their views about HIV and people who are HIV positive.

4.4.4 Married people are likely to display stigmatising attitudes towards people who are HIV positive.

The marital status was found to be a strong determinant of HIV related stigma with married people likely to be more stigmatising than single people. Similar findings were

also found in study conducted by Dahlui *et al.,* (2015). In this study, married people displayed a higher personal stigma towards people who are HIV positive than people who are single. Perhaps, by the virtue of being married, people who are married may perceive themselves as morally upright, hence their risk of contracting HIV is low. This in turn makes them view people who are single as immoral in that their chances of being involved in multi-concurrent partnership may be high. This assumption is also supported by the findings from the HSRC (2012) study that showed that HIV prevalence among married people is relatively low when compared to single people. From a theoretical standpoint, as suggested by Tajfel and Turner, members of the in-group (married people in this context, given the low HIV prevalence) may view single people as out-groups, given the high HIV prevalence among single people in South Africa (HSRC, 2012).

4.4.5   Hypothesis testing

Using the Visser *et al.* personal stigma scale, statistical hypothesis on the effect of demographic variables on HIV related stigma can be stated as follows:

H0: Using the Visser *et al.* personal stigma scale the identified demographic variables are **not** determinants of HIV related stigma in rural areas.

H1: Using the Visser *et al.* personal stigma scale the identified demographic variables are determinants of HIV related stigma in rural areas.

With the fact that the effect of marital status (F=3.58, p=0.00) and religion (F=7.17, p=0.03) on HIV related personal stigma was statistically significant, it can be concluded that some of the demographic variables (marital status and religion) are determinants of HIV related stigma. Regarding the above hypothesis, it can be concluded that, using the Visser *et al.* personal stigma scale, the null hypothesis be retained only for the variables namely gender, age, education, language and race. It can be concluded therefore that these variables are not determinants of personal stigma among citrus farm workers.

Yet given that the effect of marital status and religion on HIV related stigma was statistically significant, the null hypothesis is therefore rejected and it is safe to

conclude that using the Visser et al scale, marital status and religion are determinants of HIV related stigma among farm workers.

4.5 FINDINGS AS PER THE VISSER ET AL. ATTRIBUTED STIGMA SCALE: DEMOGRAPHIC VARIABLES VS. HIV RELATED STIGMA

Regarding attributed HIV related stigma, the following categorical variables had a statistically significant effect on attributed stigma: marital status (F=9.71, p=0.00) and education (F=2.63, p=0.03). No statistically significant effect was found on attributed stigma regarding the following categorical variables: `gender (F=0.61, p=0.54), age (F=1.85, p=0.09), race (F=1.27, p=0.28), language (F=1.65, p=0.19) and religion (F=1.54, p=0.15).

Table 18:   Attributed stigma (Visser et al scale) vs. demographic variables

Variables	F	P-value
Gender	0.61	0.54
Age	1.85	0.09
Education	2.63	0.03
Race	1.27	0.28
Language	1.65	0.19
Marital status	9.71	0.00
Religion	1.54	0.15

P-values in red are statistically significant

4.5.1 Hypothesis testing

In this section the statistical hypothesis is tested using the Visser *et al.* attributed stigma scale. In doing so, the researcher is interested in establishing whether demographic variables are determinants of HIV related stigma. The hypothesis is therefore stated as follows:

H0: Using the Visser *et al.* attributed stigma scale the identified demographic variables are **not** determinants of HIV related stigma in rural areas.

H1: Using the Visser *et al.* attributed stigma scale the identified demographic variables are determinants of HIV related stigma in rural areas.

Given that the effect of gender, age, race, language and religion on HIV related stigma was not statistically significant (p>0.05), it is therefore safe to retain the null hypothesis for the above variables except for education and marital status. While the null hypothesis is retained and a conclusion is made that, gender, age, race, language and religion are not determinants of HIV related stigma among farm workers, the same cannot be said regarding education and marital status. Therefore it can be concluded that, using the Visser *et al.* attributed stigma scale, marital status and education are determinants of HIV related stigma among farm workers and therefore on that basis, the null hypothesis is rejected (p<0.05).

4.5.2 People who are single are more likely to display high level of attributed stigma

Similar to the personal stigma scale, the effect of the marital status on attributed stigma (the societal views towards people who are HIV positive) was found to be statistically significant. In contrary to the above findings, single people (mean score=1.69) are more likely to display attributed stigma when compared to married people (means score=1.41).

This finding shows that, while single people are more likely to display stigmatising attitudes (personal stigma), they do not want to be viewed as stigmatising but rather perceive the community as stigmatising (attributed stigma). Previous findings show that people often find it convenient /easy to attribute stigma rather than them being

associated with stigma (Visser *et al.,* 2008). Yet this does not / may not mean they do not hold negative attitudes towards people who are HIV positive.

4.5.3 People with lower level of education are likely to display high level of attributed stigma

While the effect of education on personal stigma was not significant, further analysis showed that the effect of education on attributed stigma was statistically significant. For the purpose of this study, education has been defined as the level of learning (education) based on a specific time frame (Murungi, 2015) e.g. five years of primary school, therefore each of the participants' level of education was assessed to establish the level of HIV related stigma per level of education.

In this study, while the educational levels of the majority of the participants were quite low, participants who reached primary level (mean score=1.60) as their highest level of education were more likely to display stigmatising attitudes towards people who are HIV positive than people with matric certificates (mean score=1.50).

Similar to the current findings, previous findings also showed that people with lower levels of education are more likely to be more stigmatising towards people who are HIV positive than people with high levels of education (Maughan-Brown, 2006 & HSRC, 2014).

4.6   QUANTITATIVE RESEARCH QUESTION 3

"How can the assessment of HIV knowledge contribute to the development of interventions aimed at managing HIV and AIDS among citrus farm workers in Addo community in the Eastern Cape?"

This research question was aimed at exploring the level of HIV knowledge among participants. Given that previous studies have confirmed the link between HIV knowledge and HIV related stigma (Herek 1999, Mazorodze, 2012, HSRC, 2014), it is interesting to know how the level of knowledge among farm workers influences their likelihood of displaying negative attitudes toward people who are HIV positive and more importantly how this knowledge varies according to demographic variables. The

UNAID HIV knowledge scale was used to assess the level of knowledge among participants.

4.6.1 Are demographic variables strong determinants of HIV knowledge according to UNAIDS knowledge scale?

The following demographic variables were considered in this study: age, marital status, education, race, religion, gender and language. A general linear model was conducted to determine the demographic variables that are strong determinants of HIV knowledge. Findings shows that gender (F=12.2, p=0.00), marital status (F=5.73, p=0.00) and religion (F=3.19, p=0.00) were strong determinants of HIV knowledge.

Further analysis showed that females scored high HIV knowledge scores than males. (mean score=1.65 and mean score=1.58), single people (1.65) are likely to display high levels of HIV as compared to married people (1.60), Christians also scored high HIV knowledge scores as compared to traditional Africans (mean score=158 and mean=1.74 respectively.

The effect of the following demographic variables on HIV knowledge was not statistically significant, age (F=0.50, p=0.80), race (F=2.23, p=0.09), education (F=1.61, p=0.17) and language (F=2.64, p=0.07).

Table 19:   HIV knowledge vs. demographic variables

Variables	F	P-value
Gender	12.2	0.00
Age	1.50	0.80
Education	1.61	0.17
Race	2.23	0.09
Language	2.64	0.07
Marital status	5.73	0.00
Religion	1.54	0.15

P-values in red are statistically significant

4.6.1.1   *HIV knowledge: Single people vs. married people*

Findings show that single people (mean score = 1.65) are more likely to display high level of knowledge about HIV when compared to married people (mean score 1.60). People who display high levels of knowledge about HIV are more likely to display lower levels of HIV related stigma (Herek, 1999, Mazorodze, 2012 & HSRC, 2014). While this finding confirms findings from previous studies above, it also confirms why married people in this study displayed higher levels of HIV related stigma. The finding is interesting in that it poses questions as to why married people may be reluctant to access information about HIV.

The link between HIV knowledge and marital status remains unclear, given that not much research has been done in the past to provide a clear explanation pertaining to how these variables may be linked. While a few previous studies confirmed the link between marital status and HIV knowledge, no explanation was provided as how these

variables may be linked. In an attempt to explain why single people may be knowledgeable about HIV, Mabaso (2018) highlighted that, because single people might be engaging in sex with various partners, they are likely to be more conscious about risk behaviours and therefore they are likely to seek information about preventing the contraction of HIV. While the study at hand shows that single people are likely to be knowledgeable about HIV, it is worrying to note that HIV prevalence remains high among young and single people in South Africa (HSRC, 2012).

4.6.1.2 HIV knowledge: Females vs. males.

Findings show that females (mean score=1.65) displayed higher levels of knowledge as compared to males (1.58). The fact that HIV knowledge vary according to gender (Maughan-Brown, 2006, Mazorodze, 2012, HSRC, 2012 & Coleman, Tate, Gaddist, White, 2016) provides evidence that more scientific research is required to establish what causes males to be less knowledgeable about HIV. In a similar and separate study conducted by Aylike *et al.* (2013), among secondary school students, girls displayed higher levels of knowledge about HIV than boys. In these studies (Bamise et al., 2011 & Ayke et al, 2013) it was found that girls had more knowledge of HIV prevention and cure than boys.

The link between HIV knowledge and gender, though not thoroughly investigated by in the South African context (Rohleder, 2012), provides evidence for the need for a gendered approach when tackling HIV. In a South African study conducted by HSRC (2012), the number of females that correctly answered HIV knowledge questions was slightly higher than males. The fact that HIV knowledge is a known, strong determinant for HIV related stigma, is also supported by previous studies that show that females are less stigmatising because they are more knowledgeable about HIV than males (Muaghun-Brown, 2006 & Mazorodze, 2012).

4.6.1.3 Christians are more knowledgeable about HIV than traditional Africans and other regions

Findings show that Christians are likely to be more knowledgeable about HIV than Traditional Africans. Previous studies have linked religiosity and HIV knowledge. In a study conducted by Noden, Gomes & Ferreira (2010), Christians displayed a high level

of knowledge about HIV when compared to other religions. An explanation to this finding was that, churches seem to be incorporating teachings about HIV, thereby creating awareness about HIV.

4.6.2 The UNAIDS (2012) HIV knowledge scale

HIV knowledge in the study is defined as the amount of correct information that a participant have with regards to aspects of HIV, namely HIV transmission, prevention and care (UNAIDS, 2012). High knowledge about HIV has been linked to low levels of HIV related stigma. The UNAIDS 5 item HIV knowledge scale was used to assess the levels of knowledge about HIV among the participants.

According to the developers of the scale, the knowledge score is measured according to the number of participants who answer all five items correctly. The answer options for all the knowledge items where either yes or no. All correct answers were coded as 1 and incorrect answers were coded as 0. A score of 5 per individual shows that the individual is knowledgeable about HIV.

4.6.3 Proportion of participants with higher level of knowledge about HIV

Findings show that regarding HIV, only 37% of the participants answered all the knowledge questions correctly and 62% gave wrong answers. 1% did not respond. Previous studies have linked low levels of knowledge about HIV among rural areas to various factors including a lack of information about HIV (Ada *et al.,* 2013), low literacy levels (Ada *et al.,* 2013) exacerbated by low levels of education (UNESCO (2010) and misconceptions about HIV transmission (HSRC, 2012 & HSRC, 2014). In that study, findings showed that HIV knowledge continued to decline despite various interventions focusing HIV knowledge in South Africa.

4.6.4 Possible explanation why HIV knowledge is low amongst rural participants

A study by Campbell *et al.* (2008), reveals that the majority of programmes that are aimed at addressing HIV, are mostly concentrated in urban areas. It therefore follows that people living in urban areas are likely to have access to health information about HIV, easier than their rural counterparts. Similarly, a study by Shisana *et al.* (2005),

showed that the majority of people living in rural areas have little or no access to radio, television or any sources of information about HIV & AIDS or how to avoid it.

Previous research shows that the majority of people living in rural areas have not been privy to an extensive education on issues such as HIV & AIDS, substance abuse, or other health issues (Semenya & Omole 2016). This is due to the fact that the majority of Health education programmes mainly focus on urban areas such as Port Elizabeth, leaving nearby farming areas with misconceptions, false beliefs, and misunderstandings about HIV & AIDS.

Figure 17:   HIV knowledge: Proportion of participants who gave correct and wrong answers
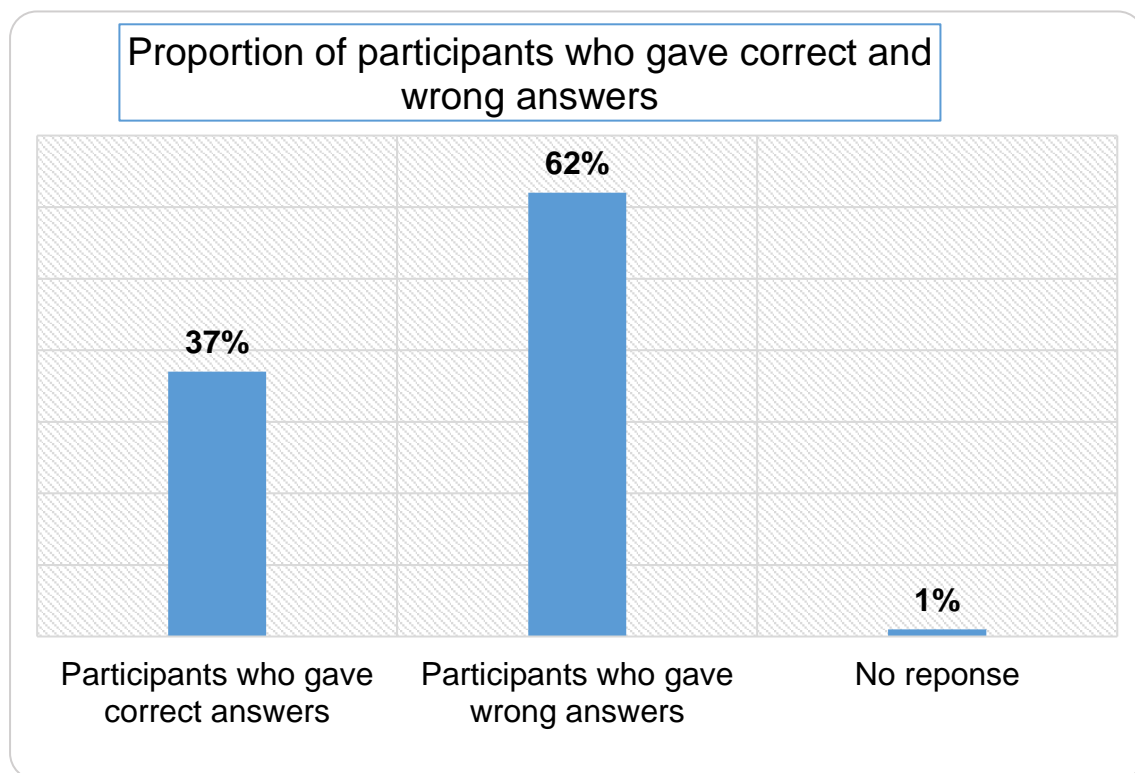
4.6.5 Item analysis

Table 20: HIV knowledge scale items

	Yes	No	No response
1. Can HIV and AIDS be taken out of your body (cured)?	10%	87%	3%
2. Can a person get HIV from mosquitoes?	23%	75%	2%
3. Can using condoms reduce the risk of HIV transmission	63%	35%	2%
4. Can a healthy-looking person have HIV?	69%	29%	2%
5. Can a person get HIV by sharing food with someone who is infected?	14%	84%	2%

According to the developers of the knowledge scale, it is important to consider two points that are addressed by the scale namely: HIV prevention and HIV transmission.

4.6.6 35% of the participant lack of knowledge about condom use

Findings have also revealed a lack of trust/ lack of knowledge/ lack of education about condom use. The fact that 35% of the participants still think that condoms cannot reduce the risk of HIV transmission is worrying, especially at a time when the South African government is investing millions in efforts to reduce new infections (SANAC, 2016). In a study conducted by HSRC (2012), condom use was significantly lower among people living in rural areas, females and married people. The lack of knowledge about condom use, gender inequality, violence between partners, lack of trust between sexual partners and inaccessibility of condoms has been linked to poor condom use in rural areas (Shai *et al.*, 2010 & Tiruneh *et al.,* 2015). A recent study conducted by

SANAC (2017) shows that, while condom distribution in South Africa has increased since 2008, the use of condoms seem to be declining.

4.6.7 Misconceptions about HIV

As confirmed by previous studies (Sithole, 2001), the study at hand also revealed some misconceptions around HIV that are common among rural participants. Such misconceptions were confirmed by the fact that 29% of the participants thought that a healthy-looking person cannot have HIV. Such a misconception if uncontrolled, can result in two implications: 1. People not wearing condoms when engaging sex with healthy-looking people, thereby increasing their risk of contracting HIV. 2. People who are slim may be mistaken for being living with HIV and therefore they maybe stigmatised.

While the analysis of HIV knowledge as a scale showed that HIV knowledge was relatively low, it is important to highlight the fact that in some items, participants displayed a high level of knowledge. Regarding to whether HIV can be cured, the majority of the participants (87%) disagreed with this statement. Yet 10% believe that HIV can be cured, which is a cause for concern. Previous research has shown that, some religious sections believe that traditional healers and prophets can cure HIV (Senjanje, 2012). The belief that HIV can cured, to some extent, is exacerbated by prophets and traditional sangomas who advertise their services using posters stating that they can cure HIV, thereby misleading people.

4.7 QUANTITATIVE RESEARCH QUESTION 4

"What are the forms and expressions of HIV related stigma amongst citrus farm worker in Addo, Eastern Cape?"

An understanding of the forms and expressions of HIV related stigma is of paramount importance to the policy makers focusing on addressing HIV related stigma, as well as the researchers, to develop interventions that are context specific. In this section, an analysis of the stigma items was conducted to unpack the nature of HIV related stigma amongst farm workers. The Kalichman *et al.* and Visser *et al.* stigma scales were combined for easy comparisons.

4.7.1 Personal stigma HIV related stigma: Kalichman et al., isiXhosa and Afrikaans version

Below is the table showing the proportion of participants who endorsed Kalichman *et al.*, personal stigma items (IsiXhosa and Afrikaans versions). Overall, findings below show that personal stigma is an issue amongst citrus farm workers. Some of the items that stood out in both scales (Xhosa and Afrikaans version), showed that a large proportion of participants think that people who are HIV positive are cursed (Xhosa version, 18% and Afrikaans version 23%) and dirty (Xhosa version, 22% and 15% Afrikaans version), therefore they must be ashamed (Xhosa version, 20% and Afrikaans version, 32%). Previous research also confirms that, some people who are HIV positive also feel ashamed (29%) and punished (11%). This raises questions as to whether there is a positive correlation between personal stigma and internalised stigma. Perhaps future studies can explore if such a relationship exists and the implication thereof.

Table 21: Proportion of participants who endorsed personal stigma scores

Statement	XHOSA VERSION	AFRIKAANS VERSION
1. People who have AIDS are dirty.	22%	15%
2. People who have AIDS are cursed.	18%	23%
3. People who have AIDS should be ashamed.	20%	32%
4. It is safe for people who have AIDS to work with children.	47%	10%
5. People with AIDS must expect some restrictions on their freedom.	22%	13%
6. A person with AIDS must have done something wrong and deserves to be punished.	10%	12%
7. People who have HIV should be isolated.	28%	13%
8. I do not want to be friends with someone who has AIDS.	14%	22%
9. People who have AIDS should not be allowed to work.	10%	10%

Kalichman *et al.* personal stigma items were further analysed into forms and expressions of HIV related stigma. It is important for researchers and policy makers to be aware of the forms and expressions of HIV related stigma amongst participants in order to tailor the interventions respectively. Findings show that the following forms and expressions of HIV related stigma were common among participants.

4.7.2 Symbolic stigma

Symbolic stigma involves the blaming of people who are thought to have contracted HIV through behaviors that are often regarded as immoral by the society such promiscuous activitiues (Maughan-Brown, 2006) The manifestation of symbolic stigma amongst participants is confirmed by the fact that 22% of the participants indicated that people who have AIDS are dirty, 18% think people who have AIDS are cursed and 20% think that people who have AIDS should be ashamed. The table below confirm the items measuring symbolic stigma

Table 22: Symbolic stigma

Statement	XHOSA VERSION	AFRIKAANS VERSION
1. People who have AIDS are dirty.	22%	15%
2. People who have AIDS are cursed.	18%	23%
3. People who have AIDS should be ashamed.	20%	32%

The attribution of blame towards people who are HIV positive (symbolic stigma) is, according to previous research, a product of negatively socially-constructed beliefs (common in rural areas), often results in people who are HIV positive & AIDS being isolated and shunned (Ogdane & Nyblabe, 2005).

A study by Sithole (2001), shows that farm workers' specific beliefs (cultural and religious) about HIV & AIDS are largely influenced by their context, culture, knowledge and experience. This is further exacerbated by the isolated life style, lack of education

and resources which is typical of rural areas like Sundays River Valley. A limited access to information about HIV & AIDS has been cited by researchers (Campbell *et al.,* 2005) as a contributing factor to low levels of knowledge about HIV among rural populations. Similarly, a study by Shisana *et al.* (2005), showed that the majority of people living in rural areas have little or no access to radio, television or any sources of information about HIV & AIDS or how to avoid it

4.7.3   Instrumental stigma

Findings also show that instrumental stigma (avoidance of people who are HIV positive due to fear of contracting HIV) is common among participants. The items below, show that a large number of participants displayed avoidance tendencies/behaviours towards people who are HIV positive. Almost half of the participants (47%), indicated that it is not safe for people who are HIV positive to work with children. This statement is based on the misinformed assumption that contact with a person living with HIV may result in HIV infection/ transmission. Furthermore, 22% of the participants are of the view that the freedom of people who are HIV positive must be restricted, hence they must be isolated (28%).

Table 23: Instrumental stigma

Statement	XHOSA VERSION	AFRIKAANS VERSION
4. It is **not** safe for people who have AIDS to work with children.	47%	10%
5. People with AIDS must expect some restrictions on their freedom.	22%	13%
7. People who have HIV should be isolated.	28%	13%

4.7.4   Attributed stigma

The majority of the participants viewed themselves as less stigmatising that the community they live in. A comparison of personal stigma and attributed stigma was conducted to establish the type of stigma that is common among the participants. Findings show that in all the items, attributed stigma scores were higher than personal scores.

**Table 24: Personal and attributed stigma scale (Visser *et al.)*

Statement	Personal stigma	Attributed stigma
1. (I / most people) think getting HIV & AIDS is a punishment for bad behaviour.	8%	23%
2. I / most people would not like to sit next to someone with HIV & AIDS in public or private transport.	9%	22%
3. I / most people think less of someone because they have HIV & AIDS.	10%	29%
4. I / most people would not like someone with HIV & AIDS to be living next door.	11%	32%
5. I / most people would not like to be friends with someone with HIV & AIDS.	14%	33%

6.I / most people feel afraid to be around people with HIV & AIDS.	15%	36%
7.People with HIV & AIDS have only themselves to blame.	19%	31%
8.I / most people would not employ someone with HIV & AIDS.	16%	27%
9.I / most people would not drink from a tap if a person with HIV & AIDS had just drunk from it.	13%	29%
10.If you have HIV & AIDS you must have done something wrong to deserve it.	13%	27%
11.People with HIV & AIDS should be ashamed of themselves.	14%	29%
12. I / most people feel uncomfortable around people with HIV & AIDS.	15%	30%

Further analysis (t-tests for independent variables) also confirmed the difference between attributed stigma scores and personal stigma scores were statistically significant (mean score= 1.61 and 1.47 respectively: t= 2.46, df=398, p=0.01). This implies that, whilst participants acknowledge that HIV related stigma exist and also the fact that they are aware that stigmatising people who are HIV positive is not socially desirable, they would rather attribute stigmatising attitudes to others, thereby resulting in an 'us and them' scenario (Visser *et al*., 2008).

4.7.4.1 HIV related stigma creates an 'us and them' situation at Addo community

Findings show that the majority of participants who took part in the study, viewed themselves as less stigmatising than others in the community. The above finding confirms the theoretical perspective provided by Tajfel and Turner (1986), which forms the basis of this study. The theory, as discussed earlier, argues that people tend to protect their identities as members of the 'non-deviant' or the in-group and shift the blame to the members who, by their definition, do not belong to their group (out groups). Othering is thought to serve as an identity-protective function by producing feelings of comfort and security and therefore most people find it convenient to attribute HIV related stigma to other people as way of protecting their identities. This therefore follows that attributed stigma may (indirectly) indicate the true picture of HIV related stigma in a given context. To confirm this assumption, a correlation analysis was conducted.

4.7.4.2 People who display high level of attributed stigma are more likely to be stigmatising towards people who are HIV positive

A correlation analysis was conducted to establish if attributed stigma correlates with personal stigma. Findings show that personal stigma and attributed stigma are positively correlated ($r = 0.479$ $p < 0.00$). Findings presented in the diagram below, shows that a higher score in personal stigma results in a higher score in attributed stigma. Put simply, this confirms the above assumption that, when people label others as stigmatising, they do it for convenience sake/to protect their identities (as suggested by the theoretical framework guiding this study) whilst in actual fact, the attributed stigma is a reflection of their personal attitudes towards people who are HIV positive. It is recommended therefore, that future studies need to focus more on attributed stigma than personal stigma.

Figure 18: Attributed stigma vs personal stigma scores

ATTRIBUTED STIGMA SCORE vs. PERSONAL STIGMA SCORE
PERSONAL STIGMA SCORE = .48595 + .61177 * ATTRIBUTED STIGMA SCORE
Correlation: r = .47925
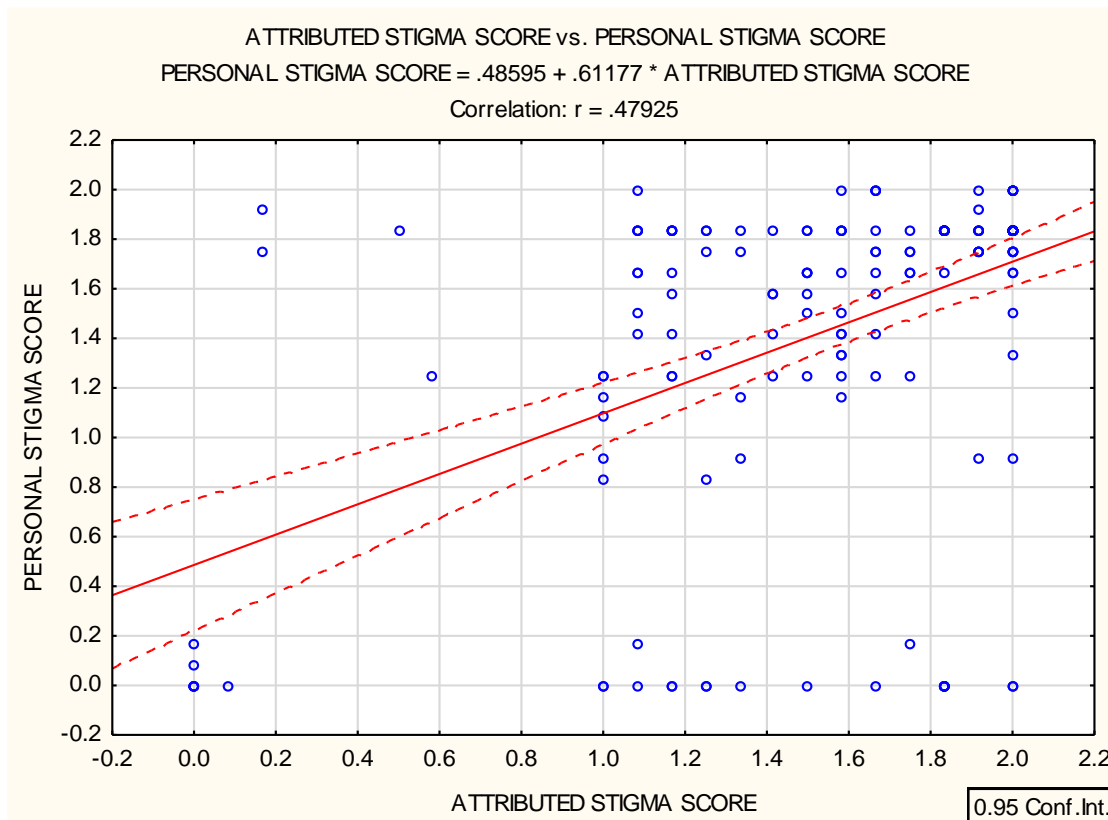
4.8 GENERAL FINDINGS: VISSER *ET AL.,* SUBSCALES

The Visser et al. is subdivided into two subscales, namely the blame and judgement scale and the interpersonal distancing scale. The blame and judgement scale assess how people blame and judge people who are HIV positive and the interpersonal distancing scale assesses how people distance themselves from people who are HIV positive, due to the fear of contracting the disease. While the relationship between blame and judgement and interpersonal distancing was not statistically significant (mean 1.56 vs. 1.60, p=0.59), the proportion of participants who endorsed blame and judgement items were slightly more (14% endorsed personal stigma items and 29% endorsed attributed stigma items) than people who endorsed personal distancing items (12% endorsed personal stigma items and 28% endorsed attributed stigma items) (see table below).

In a study conducted by Automotive Industry Development Centre (2012), which compared levels of HIV related stigma amongst rural and urban participants, it showed

that symbolic stigma was more common among rural participants. In this study, 19% of participants indicated that people with HIV must be blamed for having it. Various misconceptions around HIV (Maughan-Brown, 2006 & HSRC, 2014), were common in rural areas and often results in people who are HIV positive being blamed and judged because of their status (Apanga, 2014).

Table 25: Blame and judgement and interpersonal distancing scale

Statement	Personal stigma	Attributed stigma
Blame and judgement scale		
1. (I / most people) think getting HIV & AIDS is a punishment for bad behaviour.	8%	23%
6. I / most people feel afraid to be around people with HIV & AIDS.	15%	36%
7. People with HIV & AIDS have only themselves to blame.	19%	31%
10. If you have HIV & AIDS you must have done something wrong to deserve it.	13%	27%
11. People with HIV & AIDS should be ashamed of themselves.	14%	29%
12. I / most people feel uncomfortable around people with HIV & AIDS.	15%	30%

➤ *Average percentage for blame and judgement*	14%	29%
Interpersonal distancing scale		
2. I / most people would not like to sit next to someone with HIV & AIDS in public or private transport.	9%	22%
3. I / most people think less of someone because they have HIV & AIDS.	10%	29%
4. I / most people would not like someone with HIV & AIDS to be living next door.	11%	32%
5. I / most people would not like to be friends with someone with HIV & AIDS.	14%	33%
8. I / most people would not employ someone with HIV & AIDS.	16%	27%
9. I / most people would not drink from a tap if a person with HIV & AIDS had just drunk from it.	13%	29%
Average percentage for interpersonal distancing	12%	28%

4.9 QUANTITATIVE RESEARCH QUESTION: IS HIV RELATED STIGMA A BARRIER TO HIV DISCLOSURE AMONG CITRUS FARM WORKERS IN ADDO, EASTERN CAPE?"

In this section, t-tests were conducted to establish if indeed, as revealed by literature (Zunniga, 2010; Klopper *et al.,* 2014; Greef, 2013; Okello *et al.*, 2015 & Li *et al.,* 2017), HIV related stigma is a barrier to disclosure. The means scores

of -Kalichman *et al.* isiXhosa version (mean score= 0.63 versus 1.64; t=15.4 df=398, p=0.00), Afrikaans version (mean score= 0.17 versus 1.63; t= 26.4, df=398, p=0.00) and personal stigma scale (mean score= 1.47 versus 1.52; t=2.81, df=398, p=0.00) showed that participants who scored high in HIV related stigma, are unlikely to disclose their HIV status. While the quantitative findings confirmed previous literature that revealed that HIV related stigma is barrier to disclosure, the qualitative findings will explore the specific reasons on why the majority farm workers in the citrus sector are reluctant to disclose their status. The non-disclosure of an HIV status, affects the productivity of a citrus farm owner in several ways.

- People living with AIDS may not get the necessary support in the workplace, therefore they will become less productive (presentism).
- High absenteeism will negatively affect productivity and competitiveness.
- Hiding a sickness like HIV can be problematic as some common symptoms may become visible resulting in further stigmatisation of people who are HIV positive in the workplace.

Table 26: HIV related stigma vs. HIV disclosure

	HIV related stigma vs. HIV disclosure				
Scale	**Mean score**		**t**	**df**	**p**
Kalichman *et al.* (Xhosa version)	0.63	1.64	15.4	398	0.00
Kalichman *et al.* (Afrikaans version)	0.17	1.63	26.4	398	0.00
Visser *et al.* personal stigma scale	1.47	1.52	2.81	398	0.00

4.9.1 Hypothesis testing- HIV disclosure

While the fact that HIV related stigma discourages people to disclose an HIV positive status (Madiba and Mokgatle, 2016), this section assesses if indeed, these findings can be generalised to the rural population. This finding is of importance given that establishing the barriers to the fight against HIV, is one of the key steps in achieving the UNAIDS 90 90 90 target aimed at achieving an AIDS free generation by the year 2030. A hypothesis, as stated below, will help the researcher to establish if HIV related stigma is one of the determinants of non-disclosure of HIV among citrus farm workers.

H0: HIV related stigma is **not** barrier to HIV disclosure among citrus farm workers.

H1: HIV related stigma discourages HIV disclosure among citrus farm workers.

As confirmed by the findings above, people who display a high level of stigma towards people who are HIV positive are not likely to disclose their status if found HIV positive. The fact that the findings are statistically significant ($p<0.05$), provides evidence that HIV related stigma and HIV disclosure needs to be addressed among citrus farm workers at Addo. Based on the above findings, it is safe therefore to reject the null hypothesis and to conclude that HIV related stigma discourages people to disclose their HIV positive status.

4.9.2 Percentage of the participants who are likely not to disclose their HIV positive status

A large number of participants (41%) are likely to not disclose their status if they are found to be HIV positive and they regard disclosing an HIV status as 'risky'. This finding, tells a lot regarding the HIV related stigma in the Addo community. In a stigma free community, people are likely to disclose their HIV positive without the fear of being rejected or isolated. Previous research has shown that HIV stigma continues to be one of the major barriers to HIV disclosure in South Africa (Zunniga, 2010 & Klopper *et al.,* 2014).

Research also show that people with a high knowledge of HIV are more likely to disclose as compared to people with a lower level of knowledge about HIV. This is reasonable, given that if a person is aware of the benefits of disclosing an HIV positive status, then he/she is likely to disclose in order to get support from the community.

Further analysis was conducted to establish whether there is a correlation between HIV knowledge and HIV disclosure. Findings showed that HIV knowledge and disclosure are closely linked, thus the more knowledge about HIV a person has, the higher the likelihood is that he/she will disclose an HIV status ($r = 0.153$ $p < 0.03$).

Figure 19: People with high level of knowledge are likely to disclose an HIV positive status

Scatterplot: HIV DISCLOSURE MEAN SCORE vs. HIV KNOWLEDGE MEAN SCORE (Casewise MD deletion)
HIV KNOWLEDGE MEAN SCORE = 1,4467 + ,11034 * HIV DISCLOSURE MEAN SCORE
Correlation: r = ,15313
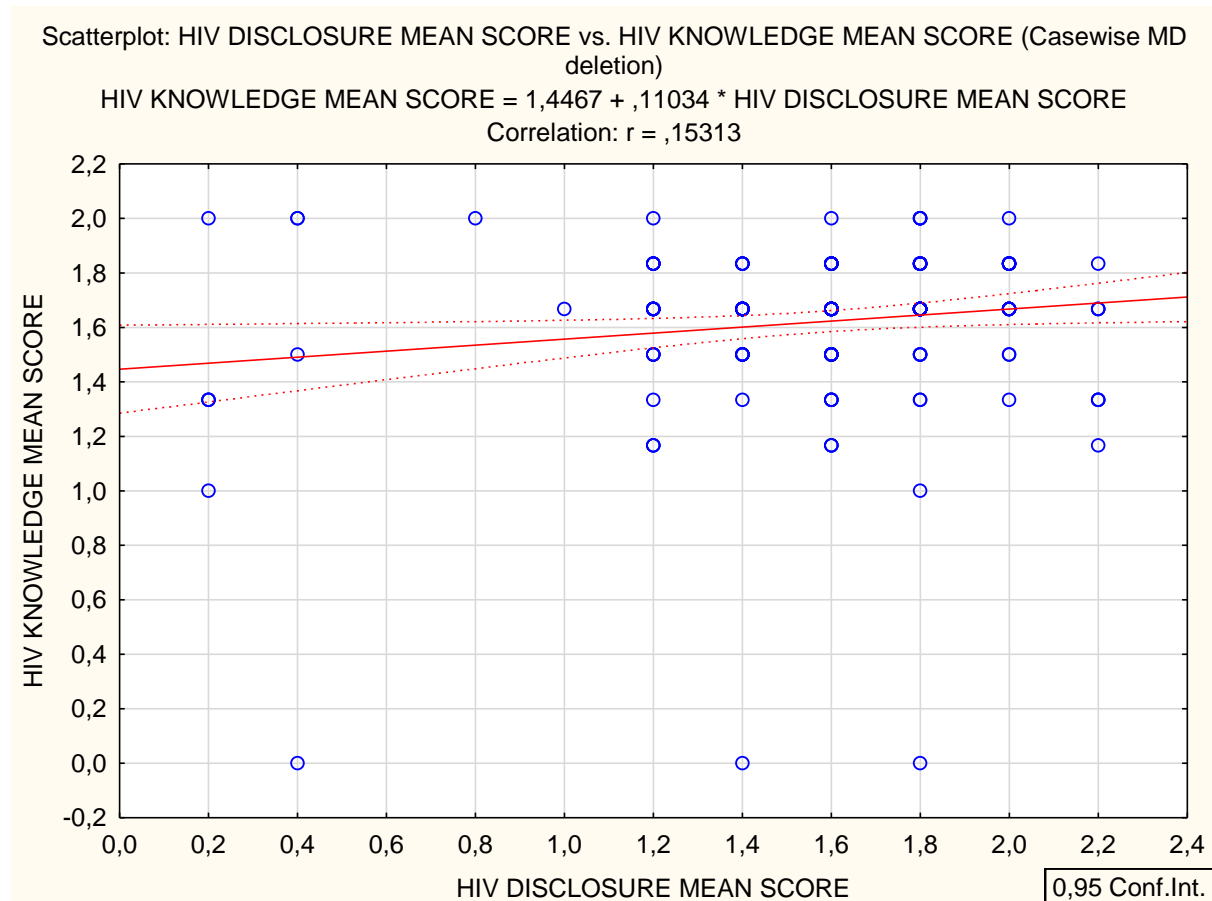
4.9.3 Percentage of participants who prefer keeping their HIV status secret

With 26% of the participants preferring to keep their HIV positive status as a secret if they test positive, these findings show that HIV disclosure requires attention. The fact that such a large number of participants would prefer to hide their HIV positive status, is an indication of the existence of HIV related stigma among participants. Previous research also show that many people find it difficult to disclose their HIV positive due to a fear of being stigmatised.

In a study conducted by Madiba and Mokgatle (2016), participants argued that, while self-disclosure enables them to get help from their families, it deprived them the opportunity to live a normal life like others who are not HIV positive and therefore keeping their status secret, was a good idea. The process of HIV disclosure -how to disclose, to who and when to disclose is, according to previous research (Hogwood, Campbell & Butler, 2016), a very difficult decision that one has to make given the stigma surrounding HIV. Deciding who to disclose to, according Mburu, Hodgson and Kalibala (2014), is also an important aspect that needs to be considered by people who are HIV positive to safe guard themselves from disclosing their statuses when they are not mentally ready to disclose it.

4.9.4 Percentage of participants who will only reveal their status when they are seriously ill

Findings show that 31% of the participants think that an HIV positive status must only be revealed when a person is seriously ill and have no choice but to disclose. This finding raises the debate as to when a person is supposed to disclose his/her status. The suggestion that one must disclose his/her status when seriously ill is likely to result in people disclosing their status when it is too late and therefore, support from family and friends may not be effective. Delays in disclosing an HIV positive status is also evidence that people are afraid of being stigmatised and therefore they prefer to hide their sickness until a time when they cannot hide it anymore

4.9.5 Percentage of participants want to know who has AIDS in the community so they can avoid them

A large number of participants (43%), prefer to know who has HIV & AIDS in their community so that they can be careful not to get infected. This finding confirms that the avoidance of people who are HIV positive is common among the participants. The avoidance of people who are HIV positive, also known as 'instrumental stigma', is caused by a fear of contraction due to personal contact. The avoidance of people who are HIV positive due to a fear of infection, is not new. Literature is replete with incidences whereby people who are HIV positive are isolated, rejected and avoided (Herek, 1999; Herek & Capitano, 2000; Kalichman et al, 2005; Maghaun-Brown, 2006; HSRC, 2014; Sassani, Naji, Abedi & Taheri, 2013 ; Etemad 2010 & Masoudnia, 2015).

Table 27: HIV disclosure

Statement	Agree	Disagree	No response
1. To tell someone that you have HIV is something very risky.	41%	55%	4%
2. If I test positive, I will make a big effort to make sure that my HIV is kept a secret.	26%	69%	5%
3. A person should only tell others that they have AIDS when they are sick and have no choice.	31%	64%	5%
4. It is better not to hide that you have AIDS so you can get support from friends or family.	64%	31%	5%
5. I prefer to know who has HIV & AIDS in my community so that I can be careful not to get infected by him/her?	43%	53%	6%

4.9.6   Marital status and religion are strong determinants of HIV disclosure amongst citrus farm workers

Using demographic variables as the categorical variables and the HIV disclosure scores as the dependant variable, the effect of marital status (F=7.94, p=0.00) and religion (F=2.09.17, p=0.04) on HIV disclosure was statistically significant. No statistically significant effect was found on attributed stigma regarding the following

categorical variables, `gender (F=0.99, p=0.37), age (F=1.63, p=0.140), race (F=0.96, p=0.40) and language (F=0.98, p=0.24).

4.9.7   HIV disclosure: Single people vs. married people

Further analysis showed that single (mean score=1.63) people are more likely to disclose their status than married people (mean score=1.44). Similar findings were also found in a study by Kadowa and Nuwaha, (2009), where married people were reluctant to disclose their status to their partners, due to fear of being accused of infidelity. In that study, it was found that, married people as compared to single people, were more likely to keep their HIV positive secret due to fear of being divorced by their spouses and therefore destroying their marriage.

4.9.8   HIV disclosure: Christians vs. traditional Africans

Findings also revealed that Christians were more likely to disclose their HIV positive results than traditional Africans. This is reasonable given that churches are often viewed as sources of support and encouragement and therefore people who are HIV positive often find it easy to disclose in church. The conservative nature of traditional Africans, were exacerbated by the misguided belief of getting HIV, is a curse from ancestors (Varas-Díaz, Neilands, Malavé Rivera, Betancourt, 2010).

4.10   CONCLUSION

Chapter 4 presented the first phase of data analysis and discussions. As per the explanatory mixed method, the quantitative approach data is first collected and analysed and the qualitative approach follows. Therefore, this chapter presented the findings as per the research questions and objectives of the study. Findings revealed the need to assess the reliability of tools of measurement before utilising them. The Kalichman *et al*. English version stigma scale was not considered in this study given that the reliability score was below the cut off mark.

The forms and expressions that are common amongst participants were also revealed, namely symbolic, instrumental, healthcare stigma, employment stigma and personal stigma as well as attributed stigma. The fact that demographic variables, namely race (F=20.1, p=0.00), marital status (F=3.58, p=0.00), religion (F=7.17, p=0.03) and

education (F=2.63, p=0.03) were strong determinants of HIV related stigma, provides evidence for the need for HIV related interventions. The findings from the quantitative approach were validated by the findings in the next chapter (qualitative approach). The next chapter presents the qualitative findings.

CHAPTER FIVE

QUALITATIVE DATA ANALYSIS AND DISCUSSION

5.1   INTRODUCTION

The chapter seeks to, in qualitative terms: provide a comprehensive validation of the quantitative findings provided in Chapter 4. By doing so, the qualitative findings will, in a way, validate the findings from the quantitative approach, thereby providing rich data that will go a long way in influencing the decisions of policy makers about the management of HIV related stigma in rural areas. While the quantitative approach consisted of closed ended questions where participants responded to structured questions, the qualitative approach provided an opportunity for the participants to speak freely about their views about HIV and HIV related stigma.

Asking questions like 'what do you think about HIV' made the participants respond freely without following a predetermined set of answers. Some of the questions were a surprise to the participants as they sounded too common to them yet it provoked their thoughts into thinking deeper about subjects that were deemed sensitive such as 'sexual habits'. The openness of the participants provided the researcher with the much-needed rich data on issues often regarded as sensitive.

This section provides the findings from the five focus group discussion sessions. Five focus groups (one focus group per each farm) were conducted. Each focus group consisted of 10 participants as shown below (also see table below). The focus group discussions were conducted by trained facilitators who were familiar to the culture, language and lifestyle of the participants and therefore this made the participants feel at home. The audio taped discussions were recorded, transcribed and analysed using the thematic approach (Braun & Clarke, 2006). A thematic analysis (the analysis and identification of the themes) was chosen as it allows the researcher to unpack complex, unique and sensitive topics such as HIV related stigma in a rural context where misconceptions about HIV still exist.

5.2   DATA ANALYSIS PROCESS

In order to identify the main themes, the researcher searched for repeated/recurring patterns across the data set so as to provide a thorough analysis of the forms and expressions of HIV related stigma among citrus farm workers. The identification of the themes was data driven, hence the researcher ensured that there was a link between the themes and the data through the use of open coding which allows for the identification of word repetition. Described as the 'ocular scan' by Benard (2000), the process of searching word repetition and key terms allows for the easy identification of important aspects of the study.

As explained earlier, no names of the participants were recorded. As is the case with any scientific study, confidentiality and anonymity was guaranteed. Below is a description of each focus group.

Focus group 1 (Farm A):[4] The first focus group was well balanced in terms of gender as it consisted of 5 (N=5) males and 5 (N=5) females. 8 (N=8) out the 10 (N=10) participants and 7 (N=7) out 10 (N=10) were blacks.

Focus group 2 (Farm B): the second group was also balanced in terms of gender with 5 (N=5) males and 5 (N=5) females. 9 (N=9) out of 10 (N=10) participants were blacks above 26 years of age 7(N=10).

Focus group 3 (Farm C): out of the 10 (N=10) participants, 3 (N=3) were males and 7 (N=7) were females. This was reasonable given that Farm C is a pack house. Women often prefer working in the pack house as compared to picking fruit form the fields. 6 of the participants were blacks and 4 were coloureds.

Focus group 4 (Farm D). Farm d is also a pack house. Out of the 10 (N=7) participants, 2 (N=2) were males 8 (N=8) were females. 8 (N=8) out of 10 (N=10) participants were where blacks and only 2 (N=2) were coloureds.

Focus group 5 (Farm E). The focus group was well balanced in terms of gender (5 males 5 (N=5) and 5 females 5 (N=5). This group consisted of young participants. 7

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[4] From now on, the word focus group discussion will be written as FGD, hence; Focus group discussion 1 (Farm A) =FGD 1. This will apply to all focus group discussions.

(N=7) out the 10 (N=10) participants were under the age of 26. Yet the group was not diverse according to race as all the participants were blacks.

5.3   DEMOGRAPHIC VARIABLES

Table 28: Focus group participants

Variable	Category	Farm A	Farm B	Farm C	Farm D	Farm E	Total	Percentage
Gender	Male	5	5	3	2	5	20	40%
	Female	5	5	7	8	5	30	60%
Age	Below 25	2	3	4	1	5	15	30%
	26-35	6	4	2	5	2	19	38%
	36+	2	3	4	4	3	16	32%
Race	Black	7	9	6	8	10	40	80%
	Coloured	3	1	4	2	0	10	20%

From the above table, it can be noted that:

- 60% of the participants were females. It made sense to have more women in participation in the focus group discussions, given that 54% men participated in the quantitative study.
- A large number of participants are youth (68%) and most probably sexually active, hence the topic of sex and sex related illnesses and misconceptions around sex are of interest to this group.

- The majority of the participants were blacks (80%) followed by coloured (20%)

5.4   A REVIEW OF THE MAJOR FINDINGS FROM THE QUANTITATIVE APPROACH

As mentioned earlier, the purpose of the qualitative approach, as per the explanatory mixed approach, is to validate the findings from the quantitative approach. It is of paramount importance therefore, to recall the major findings from the quantitative approach as they formed the basis of the study. In the chapter at hand, the following findings from the quantitative approach are validated through focus group discussions:

- The reliability scores of HIV related stigma scales (Kalichman *et al.* and Visser *et al.* scale) may vary according to language.
- HIV knowledge amongst citrus farm workers remains relatively low.
- HIV related stigma amongst citrus farms workers varies according to race, religion, marital status and education.
- The common forms and expression of HIV related stigma amongst citrus farm workers, include symbolic stigma, instrumental stigma and personal stigma as well as attributed stigma.
- There is a positive correlation between personal stigma and attributed stigma.
- A large proportion of employees will not disclose their HIV status if they test positive.

5.5   FINDINGS AND DISCUSSIONS

The findings at hand, as discussed in Chapter 5, seek to provide an in-depth analysis of the quantitative findings. The following themes were the major themes that emerged during data analysis: misconceptions about HIV, attributed stigma, isolation, rejection and loss of hope, blame and judgement and non-disclosure. The table below presents the major themes and the sub-themes that emerged from the findings.

Table 29: Major themes and sub-themes related to HIV stigma

Major Themes	Sub-theme(s)
• Misconceptions about HIV transmission and prevention	• Healthy looking people are safe • Avoidance of people with HIV symptoms creates a sense of safety • Fear of transmission through contact
• Isolation, rejection and lose of hope	• Fear of being isolated • Loss of hope about the future and fear of death • Blame and judgement
• Demographic variables are strong determinants of HIV related stigma	• Religious and HIV related stigma • Gender and HIV related stigma
• Citrus farms are characterised by specific forms and expressions of HIV related stigma	• Verbal stigma • Employment stigma • Health care stigma
• Attributed stigma	• Other people stigmatising
• HIV disclosure	• Non- disclosure of HIV status • Fear of the unknown • Attitudes of the community towards people who are HIV positive • HIV as punishment for bad behaviour

5.6   POSSIBLE EXPLANATION WHY ACCORDING TO THE QUANTITATIVE APPROACH, HIV KNOWLEDGE IS LOW AMONGST CITRUS AMONGST CITRUS FARM WORKERS

The quantitative approach revealed that HIV knowledge amongst the citrus farm workers is low. This was confirmed by the fact that only 37% of the participants answered the HIV knowledge questions correctly. Therefore, a follow up to that effect was conducted. During focus group discussions, various misconceptions that can be linked to the quantitative findings were revealed.

5.6.1 Misconceptions about HIV transmission and prevention

The focus group discussions revealed the existence of misconceptions around HIV prevention and transmission. According to Tenkorang (2013), misconceptions are views/ideas or concepts that people have regarding a specific subject that are not scientifically true. Despite massive HIV campaigns across the world, misconceptions about HIV prevention and transmission still presents a challenge in the fight against HIV in many parts of the world, including South Africa (HSRC, 2012) and Sub-Saharian Africa (Tenkorang (2013). While misconceptions about HIV are context specific (Smith, 2004), research shows that they are more pronounced in rural areas where information about HIV remains minimal (HSRC, 2014).

A lack of knowledge about HIV has been cited by previous researchers as the major cause of misconceptions about HIV (Herek, 1999, Kalichman *et al.*, 2005 & HSRC, 2014). In this study, findings from the quantitative study have revealed that 62% of the participants are still lacking knowledge about HIV as per the knowledge scale. This therefore confirms the misconceptions around HIV displayed during focus group discussions. The qualitative approach provided an explanation about the nature of the misconceptions that were displayed by the participants.

Participants were asked to share their views about what they know about HIV prevention and transmission. The following sub-themes emerged during the focus groups discussions, namely: the view that healthy-looking people are safe, hence they cannot transmit HIV and the avoidance of people who are HIV positive related symptoms as way of avoiding contracting the disease. The sub themes are discussed below.

5.6.1.1 *Healthy looking people are safe*

Findings show that healthy looking people were viewed as safe and HIV free. The misconception that healthy-looking people cannot have HIV is not new. In a study conducted by Bogart *et al.,* (2011), a large number of participants from rural areas indicated that they did not have a problem in having unprotected sex with a healthy-looking partner. Similar responses were found in this study.

One male participant indicated that he checks his sexual partner to see if she is healthy before they can engage in sex:

> *'I first check if my partner is healthy before I have sex, you know this disease (AIDS) has funny symptoms' (FGD 3, male participant).*

Another male participant form FGD 2 also expressed similar misconceptions:

> *'My girlfriend is healthy, I know I am safe, there is no need for me to use protection'. (FGD 2, male participant).*

The misconception that healthy-looking people do not have HIV was not only common among man. Females also expressed similar comments as follows:

> *'The good thing about this disease is that its symptoms are known, if your partner doesn't have one of the symptoms then you are safe you can enjoy your sex in peace' (FGD 5, female participant).*
> *'Me and my partner we eat health food, if my husband was here you were going to see him he is fit, we are not afraid of this disease' (FGD 1, female participant).*

In a study conducted by Bogart *et al.* (2011), females were more likely to display misconceptions about HIV than their male counterparts. In contrary, in this study there were no differences between females and males in terms of their response patterns regarding the misconceptions about HIV prevention and transmission.

The above findings can be linked to the quantitative findings where 29% of the participants were of the view that healthy looking people cannot have HIV. While the quantitative approach provided the proportion of participants who endorsed statements that confirmed HIV related misconceptions, the qualitative approach provided an in-depth explanation of the findings. As discussed above, some of the reasons why 29% endorsed the statement that healthy looking people cannot have HIV are according to the qualitative findings related to the view that people without visible symptoms are safe and that people who are deemed fit and who eat healthy food may not contract HIV.

5.6.1.2 Avoidance of people with HIV related symptoms creates a sense of safety

Findings revealed that a number of participants were of the view that avoiding people with HIV like symptoms is a way of preventing them from contracting HIV. Previous research also shows that people with HIV-like symptoms, continue to suffer from stigmatisation (Etemad 2010 & Masoudnia, 2015). Similar findings were also found in other countries such as Iran, where a correlation was found between having HIV related symptoms and the likelihood of being stigmatised (Sassani, Naji, Abedi & Taheri, 2013).

The misconceptions revealed by the participants are likely to result in the stigmatisation of people who are described as 'skinny'.

> *'I don't date skinny girls with pimples most of them have it (AIDS) that is why I am safe' (FGD1, male participant).*

It appeared that the participants were not aware of the fact that a person can only be declared HIV positive once tested. A follow up question was asked to establish whether the participants are aware of the importance or the need for HIV testing.

One male participant highlighted that he only considers testing when he is sick:

> *'I can remember the exact year when I was last tested, what I remember is that I had to be tested because I was seriously ill, hence I wanted to be sure what was going in in my body' (FGD 2, Male participant).*

Findings confirmed the stigmatisation of people based on the nature of their sickness. Some participants were confirmed to have denied their partners their sexual rights based on symptoms similar to those of HIV.

> *'I am no longer having sex with my boyfriend since I saw funny rashes on his genitals, I am afraid maybe he is positive, I don't want to die I am still young' (FGD5, female participant).*

A male participant also indicated that girls with red lips are likely to be HIV positive.

'I will not sleep with girls who have red lips, most of them have this disease better be safe than to regret' (FGD 3, male participant).

5.6.1.3   Fear of transmission through contact

Participants across the focus group discussions expressed a fear of contracting HIV through contacting people who are HIV positive. Despite massive campaigns aimed at raising HIV awareness, the diseases are still regarded as contagious by many sections of the society (Lyimo *et al.*, 2013). Misconceptions about HIV coupled with a lack of knowledge about the pandemic, results in people being afraid of getting in contact with people who are HIV positive in public places.

'This disease is infectious; I always make sure I don't sit near suspicious people in public places' (FGD5, 35 years old female participant)'.

Findings also show that participants were not comfortable with their body getting in contact with people who are HIV positive.

'No one really knows how this thing (AIDS) is transmitted but I rather not touch them (People who are HIV positive) or let my body in contact with them' (People who are HIV positive). (FGD 1, 25 years old female participant).

Some participants expressed a fear of contracting HIV from other family members. Family members often are a source of support for people who are HIV positive and therefore isolation from family members can result in psychological and emotional stress. A male explained how he avoids his uncle who is living with HIV.

'My uncle has it, I always make sure he is sitting far from me; I don't want to get into trouble'. (FGD2, 40 years old male participant).

The above responses from focus group discussions confirms the findings from the quantitative approach where participants displayed a fear of casual contact with people who are HIV positive. Similar findings were also found from the Visser *et al.* scale, where 30% of the participants confirmed that they were not comfortable to be around people who are HIV positive and 22% felt unsafe to sit next to a person who is HIV positive in public or private transport.

5.7 POSSIBLE CAUSES OF HIV RELATED STIGMA AS REVEALED BY THE QUANTITATIVE APPROACH

Findings from the Kalichman *et al.* Xhosa and Afrikaans versions and Visser *et al.* parallel scales, show that HIV related stigma remains an issue amongst citrus farm workers. Whilst the quantitative approach typically employed closed ended questions in establishing the levels of HIV related stigma amongst participants, the qualitative approach through open ended questions, explored the possible causes of HIV related stigma as discussed below.

5.7.1 Isolation, rejection and lose of hope

Participants expressed their worst fears when asked what they think would `happen if there were to be found HIV positive. Fear of the unknown, according previous research (Klopper *et al.*, 2014 & PLHIV Stigma Index, 2015), discourages people from disclosing their HIV status. The way through which the participants expressed the thought of being isolated, rejected and the fear of dying, confirmed the existence of external stigma - the negative perception of people towards people who are HIV positive which is often expressed through rejection, blame and judgement, avoidance and physical violence (Maughan-Brown, 2006; HSRC, 2014 & Apanga 2014).

5.7.1.1 Fear of being isolated

The majority of participants expressed their fear of losing friends and relatives after being found HIV positive.

> *'Once you test HIV positive you must know that you will lose your friends and family, people are afraid of getting it' (HIV) (FGD 1, Female participant).*
> *'I have heard many stories about people who are HIV positive being isolated and rejected because of this disease; I pray that I don't get it' (FGD 3, male participant).*
> *'Being HIV positive means one must be ready for a new life, you are likely to be rejected by your loved ones making it difficult to get support' (FGD 2, male participant).*

> *'There is nothing more painful in life than being rejected by your own'*
> *(FGD 4, female participant).*

The fear of isolation and rejection according to previous studies (Herek, 1999, Apanga 2014), not only discourages people who are HIV positive to disclose their status (Klopper *et al.*, (2014), but it also denies them the support and care from people close to them (Peltzer, 2012). Furthermore, the isolation and rejection of people who are HIV positive can result in serious implications on a person's self-esteem (Vlassoff*, et al.,* 2012), thereby reducing their identity from a whole to a tainted one (Goffman, 1963).

Fear of isolation due to HIV infection was also confirmed by the findings from the quantitative approach. According to the Kalichman *et al.* scale, 28% of the participants who completed the IsiXhosa version, endorsed the statement that people who have HIV should be isolated and 13% of the participants who completed the Afrikaans version endorsed the statement that people who have HIV should be isolated. 22% (Kalichman *et al.* scale) endorsed the restriction of people who are HIV positive. Quantitative and qualitative findings have revealed that people who are HIV positive related stigma in Addo, are likely to display various forms and expressions of stigma from their friends and relatives.

5.7.1.2 *Lose of hope about the future and fear of death*

The thought of being HIV positive and the feeling of lost hopes once tested positive, was also expressed by the participants. In a study conducted by Masoudnia (2015), participants also expressed feelings of hopelessness and despair once they found out that they were positive.

One female participant highlighted that having the disease means that all hope is lost.

> *'If I am to test positive, I don't know what will happen to my kids, I have two little kids who will take care of my kids when I die. (FGD1, female participant).*

A participant from FGD 2 stated:

> *'Once I test positive I will resign from work and disappear from this world, I can't wait to be ridiculed by my work colleagues and friends (FGD2, male participant).*
>
> *'I don't even want to think of dream about it, once the doctor says I have it I will die, that will be my end, I have seen people who are HIV positive suffer' (FGD 3, Female participant).*

A large number of participants were afraid of rejection once they are found to be positive*.*

While the fear of death has been, and, is still part of human history (Eshbaugh & Henninger, 2013), research shows that chronic illnesses such as HIV and cancer (Furer & Walker, 2008 & Iverach *et al.,* 2014) have the power to evoke death fears, which if untreated (Barrera & Spiegel, 2014), can trigger other illnesses such as Post-traumatic stress disorders (PTSD) (Maxfield; John, & Pyszczynski, 2014). In a study conducted by Krause *et al.* (2014), as quoted by (Iverach *et al.,* 2014), patients with chronic diseases such as HIV and cancer reported higher death anxieties than patients suffering with other short-term illnesses.

During the discussions, most of the participants likened being HIV positive to a death sentence. The misconception that HIV is a death sentence is not new. According to Gilbert (2016), this misconception is exacerbated by the lack of knowledge about HIV. In a study conducted by Iverach & Menzies (2014), being HIV positive was linked to imminent death. Niehaus (2007), also pointed that the main cause of the stigmatisation of HIV, is its association with HIV. This belief according to Dapaah & Senah (2016), is still common in the South African context. Dickinson (2013) highlighted the researchers' needs to understand such beliefs as they influence people's knowledge about HIV. Across the focus group discussions, the belief that HIV is equal to death was common across all the focus groups.

'Once you have it (HIV) then you must know you are dead, you must start preparing for death (FGD1, female participant)'

> *'I don't know who will look after my kids once I have this disease, I can't cope with the thought that I will be left with a few months to live'. (FGD 5, female participant).*

'People will feel pity for me once I have it. They will know that I will be a moving grave'. (FGD3, male participant).
'If I test positive, I may get sick the moment I find out about my status' (FGD 2, participant).

It appeared that most of the participants were not aware of the fact that HIV is now manageable and that people are now living longer if they take ARVs earlier after diagnosis. A follow-up question was asked to establish whether participants were aware of the fact that ARVS can help people live longer. During the discussions, a few participants (approximately 20%) highlighted that once they learn about their positive status, they will start taking ARVs (FGD, 1 female participant). Other participants highlighted that they would seek support from family and friends (FGD, 3 female participant), make their status known so that they can receive the necessary medication and support from people around them (FGD 4, Female participant).

Interestingly, only females were willing to seek support after being tested HIV positive. Male participants did not show an interest in seeking support or disclosing their status. Findings from the quantitative approach also showed that women are likely to display higher levels of knowledge about HIV than men. Similar findings were also found in a study conducted by Amuri, Mitchell, Cockcroft & Andersson (2011). In that study, women were more likely to disclose their status and to seek support from relatives and friends. Such findings have influenced other researchers and policy makers to develop a gendered approach when addressing HIV related stigma (Mazorodze, 2012 & Mohammad, 2016).

5.7.1.3   Blame and judgement

During the discussions, some participants linked an HIV positive status to risky sexual behaviours and people who are HIV positive were blamed for having it. The immoral perception of sex according to Allanise *et al*. (2010) and Apanga (2014), often results in the blame and judgement of people who are HIV positive.

5.7.1.4   HIV as punishment for bad behaviour

Participants were asked to share their views regarding the statement that:

'People with HIV & AIDS have only themselves to blame'.

While the majority of participants did not agree to this statement, they pointed out that people who are HIV positive are often blamed for contracting it within their communities. Yet there was consensus that people who get HIV through sex, have themselves to blame.

> *'Most people who get AIDS sleep around, sometimes I think these people get punished for sleeping with many people and dumping them' (FGD 1, female participant).*
> *'If you walk around with your zip open you deserve the punishment, I don't sympathise with such people they sleep with any woman and expect to be rewarded with a trophy. Their trophy is AIDS' (FGD 3, women participant).*

The linking of HIV and 'sleeping around' have also been highlighted by previous studies as one of the major reasons why Christians find it difficult to disclose their HIV status, despite them being sources for support (Varas-Díaz *et al.* 2010).

5.8 POSSIBLE EXPLANATION BEHIND THE QUANTITATIVE FINDING THAT SHOWED A POSITIVE CORRELATION BETWEEN PERSONAL STIGMA AND ATTRIBUTED STIGMA

5.8.1 Attributed stigma

The quantitative findings have revealed that HIV related stigma is prevalent among farm citrus workers. Findings show that personal stigma and attributed stigma were common among participants. A further interesting finding was that a positive correlation was found between these two types of stigma. Further t-tests revealed that the difference between personal stigma and attributed stigma were statistically significant. Attributed stigma was more pronounced amongst participants than personal stigma were found to be.

5.8.2   Other people are stigmatising

Findings from the discussions revealed that attributed stigma (the negative views of the society towards people who are HIV positive) was common among the participants. Both the quantitative and qualitative approach revealed that attributed stigma was more pronounced among the participants than personal stigma was. The attribution of HIV related stigma to the society, serves as a way of protecting people's identities by not wanting to be associated with stigma. According to the social identity theory by Tajfel & Turner (1986), group membership constitutes peoples' identities. This perception is coupled with the need for people to protect their identity as members of the 'non-deviant' or people who do not have stigmatising attitudes towards people who are HIV positive.

Participants were comfortable with discussing how people who are HIV positive are being stigmatised, but they were reluctant to share their views/attitudes towards people who are HIV positive. From the responses, it seemed easy or convenient for the participants to attribute stigma to the community rather than themselves. In the quantitative study, a correlation between personal stigma was found and it was concluded that attributed stigma is a true reflection of personal stigma and therefore people's tendency to attribute HIV related stigma to others, mirrors their attitude towards people who are HIV positive.

Participants also highlighted the fact that the fear of contracting the HIV often results in the avoidance of people who are HIV positive. This was exacerbated by the misguided belief that HIV can be transmitted through body contact with people who are HIV positive (Herek, 1999).

> *'Although personally, I don't have a problem with them, most people in our community are not comfortable being around them (People who are HIV positive), they think they get the disease by being in close contact with people who are HIV positive' (FGD 1, male participant).*

The implication of this finding is that people who are HIV positive in Addo, might find it difficult to socialise with others in public due to the avoidance of other community members. Similar findings were also found from the quantitative approach, where 30%

of the participants indicated that most people from their community feel uncomfortable around people with HIV & AIDS.

Other participants, indicated that members of the community may treat you differently once they learn about your status.

> *'Once people in my community know that you have it, they will start treating you differently, and you have to be prepared for anything'. (FGD 2, female participant).*
> *'Most people think that people who are HIV positive are just reaping what they sow' (FGD 3, male participants).*
> *'Most people in our community will not feel pity for you especially if they know that you have been sleeping around and you now have this disease'. (FG5, male participant)*

While a large number of participants appeared to be sympathetic towards people who are HIV positive, there was consensus that people who are HIV positive are being isolated, rejected and discriminated against, on a daily bases.

5.9 POSSIBLE EXPLANATION TO THE QUANTITATIVE FINDING THAT SHOWS THAT DEMOGRAPHIC VARIABLES ARE STRONG DETERMINANTS OF HIV RELATED STIGMA AMONG CITRUS FARMS WORKERS IN ADDO

5.9.1 Demographic variables are strong determinants of HIV related stigma

Quantitative findings showed that demographic variables are strong determinants of HIV related stigma amongst farm workers. During the focus group discussions, religion and gender were the only variables that were common among the participants. This therefore explains that, while other demographic variables (race, education and marital status) may be linked to HIV related stigma according the quantitative approach, religion and gender seem to be the main determinants of HIV related stigma amongst citrus farm workers at Addo community.

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5.9.1.1　Religion and HIV related stigma

Strong religious beliefs about morality and sin have been reported (in previous studies) to be linked to HIV related stigma (Reyes-Estrada, 2014). While the relationship between HIV related stigma is well documented (Dickinson, 2013 & Reyes-Estrada, 2014), there has been no consensus among researchers regarding the measurement of religiosity (White, 2010 & Haddad, 2011). For the purpose of this study, the researcher was interested in establishing how religion contributes to the stigmatisation of people who are HIV positive.

Similar to the quantitative findings, the majority of participants were Christians followed by traditional Africans. The majority of Christians were willing to share their views about HIV and HIV related stigma whereas only the traditional Africans were willing to share their views. Some religious teachings, according to Reyes-Estrada (2014), only serve to execrate the stigmatisation of people who are HIV positive. Christians highlighted some negative attitudes that other Christians have towards people who are HIV positive.

One participant quoted what their leader says the following about people living with AIDS:

> *'Some of you sleep around and get sick and when you see that you are seriously ill you come to church to seek prayers, who is going to pray for that skeleton'. (FGD 1, male participant).*

Above messages have a potential to fuel HIV related stigma in churches (Zou *et al.* (2005). The messages are likely to discourage HIV disclosure in churches, hence people who are HIV positive may not get the necessary support (Zou *et al.,* 2005 & Diknison, 2013). The Zou *et al.* (2009) study also revealed that 84% of the participants who were Christians, were not willing to disclose their HIV positive status to their church leaders. Similar findings were also found by Norder *et al.* (2015), where the majority of Christians were not comfortable disclosing their status in church.

Blame and judgement seem to be common among Christians. During the discussions, a large number of participants were of the view that having HIV is a punishment from God.

> *'If you sleep around, God will punish you, this disease was created for people who do not know how to control themselves'* (FGD 2, female participant).
>
> *'It is embarrassing to have this disease when you are a Christian, people will think that you have been sleeping around hence God is cursing you for your sins'* (FGD 3, male participant).

In a study conducted by Zou *et al.,* (2009), it was reported that some members of the Catholic, Lutheran and Pentecostal churches believed that having HIV was a punishment from God. This belief, according to previous research (Zou *et al.,* (2009), is more prevalent in churches that are based in rural areas (Norder *et al.* 2015). This is not surprising given the misconceptions about HIV that characterise rural areas.

While the role of churches in fighting HIV in South Africa has been commendable (Lindley, Coleman, Gaddist, White, 2010, Haddad, 2011), various research studies have confirmed their roles in fueling HIV related stigma (Varas-Díaz; Neilands;Malavé Rivera; Betancourt, 2010; Senzanje, 2011; Campbell; Skovdal, & Gibbs, 2011 & Coleman *et al.,* 2016).

Other participants highlighted that some church leaders think that having an HIV positive member is a disgrace to their church*:*

> *'If you get that disease you will ruin our church's image, what will people think, they will think we are supporting immorality in our church'* (FGD 4, male participant).

Participants also indicated that there are people they know that stopped going to church when they realised that they were HIV positive.

5.9.1.2 Gender and HIV related stigma

The role of women and men in taking care of people who are HIV positive, was assessed. During the discussions, the majority of women expressed sympathy towards people who are HIV positive as compared to men:

> *'In most cases, it's us (women) who take care of the sick, in our culture it is the role of women to provide home based care to the sick'. (FDG 1, female participant).*

Despite the fear of contracting the disease, a number of women expressed sympathy.

> *'I think we should take of our colleagues or relatives who have this disease but I think we should be careful not to contract the disease. It is not clear how this disease spreads' (FGD 3, Female participant).*

Women expressed less blame and judgement.

> *'Some of these people with this disease, it was not their faulty maybe they got it from their partners who were cheating' (FGD 5, Female participant).*

If indeed, high levels of knowledge is linked to lower levels of HIV related stigma as suggested by previous research (Muaghun-Brown, 2006; HSRC, 2012; Mazorodze, 2012, & Rohleder, 2012), then the lower levels of HIV related stigma among women can be linked to the quantitative findings that showed that females (mean score=1.65) are likely to display higher levels of knowledge as compared to males (mean score= 1.58). This finding implies that HIV awareness sessions in Addo needs to focus more on the men as compared to the women.

Blame and judgement was more common among men. A large number of men were less sympathetic to people who are HIV positive and were less likely to provide proper care especially to women whom they blame for transmitting HIV.

> *'Most of these women who get HIV like money, they sleep around in exchange for money. Some sleep with supervisors at work in exchange for money and favours at work. We see these things. When they get the disease who is to blame?' (FGD 5, male participant).*

The blame and judgement of women living with HIV is not new.

5.10 FORMS AND EXPRESSIONS OF STIGMA ACCORDING TO QUANTITATIVE FINDINGS AMONGST CITRUS FARMS WORKERS UNPACKED

5.10.1 Citrus farms are characterised by specific forms and expressions of HIV related stigma

Findings from the quantitative approach, revealed that personal stigma, attributed stigma, symbolic stigma and instrumental stigma are some of the forms of HIV related stigma amongst citrus farm workers. A follow up, qualitative review showed that, apart from the above-mentioned forms and expressions of stigma, other forms of stigma exists, namely health care stigma, employment stigma and verbal stigma.

5.10.1.1 *Healthcare HIV related stigma*

Participants also attributed HIV related stigma to health care workers in Addo. Nurses have been blamed as 'agents' of HIV related stigma in previous studies (Rithpho, Grimes, Grimes and Senaratana, 2009; Brown, BeLue & Airhihenbuwaa 2010; Churcher, 2016 & UNAIDS, 2017). According to Brown, BeLue, and Airhihenbuwaa (2010), health institutions continue to cause untold suffering among the poor and the rural population living with HIV. In a study conducted in Thailand, at least 80% of the nurses displayed negative attitudes towards people who are HIV positive whilst 20% were not willing to provide support to people who are HIV positive (discrimination) (Pudpong, 2014).

The code of conduct of health professionals in South Africa, obliges nurses to keep patient's personal information confidential. Any breach of this code of conduct may lead to dismissal. The South African constitution (Act 106 of 1996) states that health care professionals or any other party is obliged to maintain confidentiality regarding a patient's HIV status. Despite the enactment of such a law, HIV patients continue to experience various types of stigma from health care professionals.

According to previous studies, the forms and expressions of HIV related stigma by heath care staff in various clinics, include: avoiding contact with patients living with HIV, denying people who are HIV positive their right to treatment by isolating on the

basis of their status, e.g. asking them to stand in a queue only for people who are HIV positive, charging them more for extra services rendered, the involuntary sterilisation of women living with HIV and a violation of privacy and confidentiality (Churcher, 2016 & UNAIDS, 2017).

Nurses, according to a previous study, can be a barrier to health seeking behaviours (Gilbert and Walker as quoted by Apanga (2014). In a study conducted by Churcher (2016), HIV related stigma in government health systems was worrying. Similar findings were also found in a study conducted by Rithpho, Grimes, Grimes and Senaratana (2009), where the majority of participants indicated they will not disclose their status to the nurses due to their fear of being stigmatised.

During the discussions, findings show that the confidentiality of people who are HIV positive is being violated at the local clinics in Addo. This is against section 108 of 1996 of South African constitution that aims to protect against the stigmatisation and discrimination of HIV patients.

> *'When nurses test you for HIV, they say it is confidential but when it comes to collecting treatment they say people who want ARVS can you wait this side' (FGD 4, Female participant).*

The violation of HIV patients was also reportedly common in previous studies (Dapaah & Senah, 2016).

The isolation of HIV patients at local clinics seem to be common at Addo community.

> *'When I went to the clinic there were two separate queues, one for patients seeking treatment and the other one for ARV collection, I was disappointed, why are they doing this?' (FGD 3, Male participant).*

Participants expressed their shock regarding the negative treatment of HIV patients at local clinics.

Previous research has shown that health care stigma discourages patients from seeking medical assistance at local clinics (Gilbert and Walker (2009) & Churcher, 2016). This makes it difficult for people living in the Addo community as there are no private hospitals in this community.

> *'From the stories I hear about how people who are HIV positive are being treated in these clinics, I don't see myself getting tested for HIV at the clinic' (FGD 1, Male participant).*

This statement shows that the conduct of local nurses in Addo community may be making the community members lose trust in their services as they are failing to conduct themselves professionally.

Nurses were blamed for disclosing the HIV patients' HIV status.

> *'The gossip about who has this disease usually comes from the clinics. These nurses talk about it with their relatives after works. This is how the news travels and the news about HIV travels' (FGD 2 female participant).*

One participant revealed that, in some instances, nurses make decisions that result in patients involuntarily disclosing their HIV status.

> *'I didn't want my husband to know my status but the nurses insisted I must bring him for testing. I ended up disclosing my status to my husband before I could be embarrassed in front of the nurse (FGD 5, female participant)'.*

Assisted disclosures in a bid prevent further transmission have, in most cases (Dapaah & Senah (2016) & Churcher, 2016), resulted in some patients blaming the nurses for revealing their status to their partners.

5.10.1.2   Employment stigma

Participants expressed a fear of stigmatisation from co-workers and employers. HIV related stigma in the workplace according to Kanengoni, Mazorodze and Harunavamwe (2011) can result in untold, emotional and psychological suffering of people who are HIV positive. In a study conducted by Mazorodze (2012), the effect of the workplace on HIV related stigma was significant. In that study, it concluded that, due to the nature of the work, workplaces attract people with different personalities and demographics which in turn influence their attitudes towards people who are HIV positive. If indeed work occupation is a determinant of HIV related stigma as suggested by previous research (Kanengoni *et al.,* 2011 & Mazorodze, 2012), then

judging from the findings from the quantitative and qualitative approach, the citrus industry need to address HIV related stigma urgently.

During the discussions, participants shared what they thought would happen if their co-workers or employers knew about their HIV positive status. The fear of losing jobs because of an HIV positive status is a clear indication that HIV related stigma may be an issue at the Addo community.

> *'My job is to pick oranges. I don't think they will allow me to pick oranges once they find out about my status. I find out I have it I would rather hide it. I can't lose my job. I have a family to take care of' (FGD, 1 male participant).*

In a stigma index among people who are HIV positive, that was conducted by the International Labour Organisation (ILO) across 9 countries, it was found that about 8% of the participants from Estonia and 45% from Nigeria, had lost their jobs due their HIV positive status.

Perceived stigma amongst the participants, has the potential to discourage them from disclosing an HIV positive status in the workplace.

> *'If get this disease I wonder what will happen. I won't tell anyone. I can't trust anyone at work' (FGD, 2 male participant).*

In a study conducted by Arinze-Onyia, Modebe, and Aguwa (2015), 83% of the participants highlighted that they will not disclose their status in the workplace due to a fear of being fired from work. The fear of disclosing an HIV status was also confirmed by the quantitative findings, where 41% of the participants indicated that disclosing a positive HIV status is risky.

The fear of losing jobs due to sickness was exacerbated by the fact that there are known employees who lost their jobs due to sickness.

> *'Some already lost their jobs because of continuous sickness, I don't know what will happen if contract this deadly disease' (FGD, 2 Male participant).*

In a study conducted by Arinze-Onyia *et al.* (2015), 18% of the participants living with HIV were confirmed to have changed their jobs due to their status. Similar findings were also found in a study by Rai *et al.,* where 28% of the participants living with HIV were confirmed to have been forced to change their jobs due to their status.

Immigrants were blamed for bringing the disease from their place of origin.

> *'There are lot of things happening at the farm. There are some guys coming as far Mthatha working as seasonal workers. Some come here already sick and they spread this disease to us' (FGD 3, Female participant).*

The focus group discussions also revealed that a large number of farm workers are immigrants from areas such as Mthatha. Some of the migrants were from neighbouring countries such as Zimbabwe, Zambia and Malawi*.*

The link between the migration and HIV transmission is well documented (UNAIDS, 2011 & Rai *et al.,* 2014). The migrants, mostly men, who leave their wives in search of work, have been described as a 'bridge population' as they are likely to transmit HIV from areas of low prevalence to areas of high prevalence (Deane, Parkhurst & Johnston, 2010, Kevin *et al.,* 2010)

Some participants attributed the stigmatisation of people who are HIV positive to their living conditions at the farm*.*

> *'We stay at a farm compound because we do not have accommodation. Once they suspect you that you have it or If you have funny symptoms they will start avoiding you at home and work. It is tough to have this disease at the farm' (Female participant).*

Findings from the quantitative study showed that 10% of the participants suggested that people who are HIV positive must not be offered employment. The fear of HIV is also exacerbated by the symptoms of HIV that, in some instances, become visible or disfigure a person's body.

According to Baumgartner (2013), HIV can change one's work identity. Research shows that after HIV diagnostics, people who are HIV positive often find it difficult to

cope with the changed work identity and only those with a strong work vocational identity are resilient enough to withstand the stigma that is associated with the changed identity (Conyers, 2004 & Baumgartner (2013).

5.10.1.3 Verbal related stigma

Verbal stigma seems to be common among participants. Focus group discussions revealed that people who are living with HIV in Addo, experience various forms of insults, name calling and gossip.

> *'We call them ''abantu banemagama amathathu' in isiXhosa of (people with three letters' (FGD 1, male participant).*

In some sections of the Addo community, HIV is also known as amagama amathathu (three letters). Another participant jokingly stated that:

> *'We call them (people who are HIV positive) MTN because MTN airtime does not last…so if you here people in Addo saying you are connected to MTN it means you have AIDS therefore you will die soon' (Female participant, FGD 5).*
> *'There is too much gossiping at the farm compound, people who are HIV positive have been called names. If you have get sick people will gossip and say you have it' (FGD, 3).*

A large number of participants were of the view that having HIV is evidence of how nature deals with people who sleep around and contract HIV. *Abantu bane AIDS babetwe lilizwe (Xhosa language)* which means people who are HIV positive are being punished by nature. These people (people who are HIV positive) are sometimes labelled as ''amatambo ahambayo'' (moving skeleton) because people in the community think that once you have this diseased, you are good as dead (FGD3).

The majority of the participants agreed that people who are HIV positive at Addo community, continue to suffer all kinds of verbal abuse that are, in most cases, a result of the people's perception of HIV. Previous studies show that verbal stigma is one of the worst forms of stigma that people who are HIV positive experience. In separate studies that were conducted by HSRC (2014) and Wang (2017), the verbal

stigmatisation of people who are HIV positive have serious implications to people who are HIV positive, including high levels of stress, low self-esteem, feelings of shame and suicidal tendencies. In a study conducted by HSRC (2014), 17% of people who are HIV positive, were confirmed to have been verbally insulted.

5.11. POSSIBLE EXPLANATION OF THE QUANTITATIVE FINDING THAT SHOWED THAT A LARGE PROPORTION OF CITRUS FARM WORKERS ARE RELUCTANT TO DISCLOSE THEIR HIV POSITIVE STATUS

5.11.1 HIV disclosure

The quantitative approach revealed that HIV disclosure is one of the issues of concern amongst participants. While a large proportion of participants revealed that they were not comfortable disclosing an HIV positive status, no possible explanation was provided as the quantitative approach alone does not provide an opportunity for participants to explain their reasons for non-disclosure in detail. A follow up qualitative approach revealed the following possible reasons of non-disclosure among citrus farm workers at Addo.

5.11.1.1 Non- disclosure of HIV status

During the discussions, participants expressed a fear of disclosing their status once they are found to be HIV positive. The discussions revealed that negative perceptions amongst people living in the Addo community, makes it difficult for people who are HIV positive to disclose their status. The fear of the disclosure of an HIV positive status, automatically denies one's right to treatment and care (National Centre in HIV Social Research, 2012).

5.11.1.2 Fear of the unknown

Similar to the quantitative study where 41% of the participants indicated that it is risky to disclose an HIV positive status, qualitative findings show that disclosure is an issue among participants. Participants narrated how fear of the unknown have an implication on their likelihood to disclose their status. The majority of the participants expressed

the fear of being rejected and isolated by people close to them once they learn about their positive status.

One participant expressed a fear of the unknown and the likelihood of hiding from the community due to internalised stigma (the stigma experienced by people who are HIV positive Visser *et al.*, 2008, HSRC, 2014).

> *'I don't know what will happen the day I will find out I have it, I will stay in the house until I have gathered confidence to outside. I don't trust these nurses they like gossiping' (FGD 1, male participant).*

In a study conducted by France *et al.* (2015), the majority of people who are HIV positive, highlighted that they were afraid to disclose their status due to the fear of being talked about and ridiculed by their peers. In France *et al.,* study participants who scored high in self-stigma were not likely to disclose. The recent HIV related stigma index that were conducted in South Africa, also revealed that internalised stigma remains an issue as compared to other forms and expressions of HIV related stigma (HSRC, 2014).

As noted earlier, nurses have been identified as barriers to HIV disclosure.

> *'Some people do not take treatment because at the clinic they asked to stand in a queue for people collecting ARVS (forced disclosure)' (FGD, 5 male participant).*

Similar findings were found in a study conducted in India where 34% of the participants confirmed that nurses had breached confidentiality by disclosing their HIV positive status to their spouses and family members (WHO, 2008).

Another participant expressed the fear of being treated differently by family members. In a study by France *et al.* (2015), the majority of participants living with HIV were afraid to disclose to their family members as they feared to be rejected by their own.

> *'Once you have it, you must expect to be treated differently even by people close to you like family members, disclosing has its own consequences. They will think you were careless about life that is why you have it' (FGD 3, Female participant).*

Research shows that some families makes it difficult for members to disclose their status as they discourage them to seek treatment

5.11.1.3 Attitudes of the community towards people who are HIV positive

The understanding of the HIV discourse in a specific community, according to Kunda and Tomaselli (2010), must be the starting point for the health workers and researchers implementing HIV related interventions. Besides a fear of the unknown (not sure of what will happen when one finds out that he/she is HIV positive), participants also highlighted the fact that attributed stigma may result in them not disclosing their status. Previous research shows that community stigma can result in far reaching implications, including depression, low self-esteem and suicidal behaviours (The Well Project, 2016).

Findings revealed that attributed stigma may be resulting in people not taking treatment due to a fear of disclosure and the fact that many people now know how ARV's looks like. In a study conducted by Kunda and Tomaselli (2010), some people who are HIV positive were discouraged to disclose their HIV status by their family members.

> *'Nowadays when you are sick people want to know which treatment you are taking, hence people choose to hide their sickness and treatment' (FGD 3, female participant).*
>
> *'Many people now know how ARVS looks like, they even know the container, as well as their size, this makes it difficult for people who are HIV positive to disclose their take their medication in public places such workplaces' (FGD2, Male participant).*
>
> *'If am found to be HIV positive, I don't think I will tell anyone, I would rather keep it to myself, how will I tell them. I am a church goer; people from my church will think I have been sleeping around' (FGD 5, female participant).*
>
> *'People find it difficult disclose, it is difficult to disclose in Addo, people will gossip about you and avoid you' (FGD 1, female participant).*

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5.12   CONCLUSION

The above chapter was aimed at further unpacking quantitative findings as presented in chapter four. The chapter provided an in-depth and qualitative analysis of the quantitative findings. The chapter showed that a lack of knowledge about HIV as per the quantitative approach, strongly manifested itself through misconceptions about HIV transmission. The chapter also revealed other forms of HIV related stigma that were not revealed by the quantitative approach, namely employment stigma, health care stigma and verbal stigma. This provides evidence of the unique nature of HIV related stigma and therefore the need for mixed methodology (as is the case in this study). The stigmatisation of people who are HIV positive in rural areas according to the qualitative approach can be linked to lower levels of knowledge about HIV, a fear of contracting HIV as well as the blame and judgement of people who are HIV positive. The next chapter presents possible interventions that can be used to address HIV related stigma in rural areas.

CHAPTER SIX

RECOMMENDATIONS FOR ADRESSING HIV RELATED STIGMA IN RURAL AREAS

6.1   INTRODUCTION

This chapter aims to provide a detailed programme for addressing HIV related stigma in rural areas and in the citrus sector in particular. Given the dynamic and unique nature of HIV related stigma, the findings at hand provides an opportunity for the researcher to provide tailored HIV related stigma interventions for rural areas, that are likely to make significant contribution in the fight against HIV related stigma in South Africa, especially at a time when South Africa recently joined the rest of the world in the fight against HIV by adopting the UNAIDS ambitious strategy code named 90-90-90, which is aimed at achieving an AIDS free generation in 2030.

6.2   PURPOSE OF THE STUDY

The main purpose of this study is to provide an understanding of the nature of HIV related stigma in a rural context, particularly in a farming environment (citrus sector) where research on HIV related stigma remains scant. Despite the fact that HIV prevalence in South Africa remains the highest across the world (Statistics South Africa, 2017), HIV related stigma remain under-researched (Dickinson, 2013), especially in rural areas where HIV interventions are minimal (Linganiso and Gwegweni, 2016). In order to explore the nature if HIV related stigma in rural areas, an explanatory mixed method approach was used to answer the following research questions.

6.2.1   Research question 1

To establish if the local HIV related stigma scales (Visser et al. and Kalichman et al. scales) are reliable assessment tools that can be used to measure HIV related stigma amongst citrus farm workers working in the Addo community in Eastern Cape Quantitative research question: Are the Visser et al., and Kalichman et al. HIV related

stigma scales reliable assessment tools that can be used to measure HIV related stigma among farm workers at Addo, Eastern Cape?

6.2.2 Research question 2

Quantitative research question: Are the demographic variables, namely gender, age, race, marital status, education and religious beliefs, strong determinants of HIV-related stigma and HIV knowledge among farm workers in the citrus industry in the Eastern Cape?

Follow up qualitative research question: In you view, what are the factors that exacerbates the stigmatisation of people who are HIV positive in your community

6.2.3 Research question 3

Quantitative research question: Is the level of HIV knowledge related to HIV related stigma attitudes held among citrus farm workers in Addo, Eastern Cape

Follow up qualitative question: What is your understanding of HIV?

6.2.4 Research question 4

Quantitative research question: What are the forms of HIV related stigma amongst citrus farm workers in Addo, Eastern Cape?

6.2.5 Research question 5

Quantitative research question: Is HIV related stigma a barrier to HIV disclosure among citrus farm workers in Addo, Eastern Cape?

Qualitative research question: In your view, why are people afraid to disclose their HIV status in your community?

The following objectives, which are in line with the above-mentioned research questions, were considered. The objectives set out, in broad terms, the intended purpose of the study.

- To establish if the local HIV related stigma scales (Visser et al. and Kalichman et al. scales) are reliable assessment tools that can be used to assess HIV related stigma amongst citrus farm workers working in the Addo community in Eastern Cape.

- To establish if the local HIV related stigma scales (Visser et al. and Kalichman et al. scales) are reliable assessment tools that can be used to assess HIV related stigma amongst citrus farm workers working in the Addo community in Eastern Cape.

- To assess the levels of knowledge about HIV amongst farm workers who are working at the citrus farms in the Addo community in Eastern Cape.

- To establish if demographic variables, namely gender, age, race, marital status, education and religious beliefs, are strong determinants of HIV-related stigma and HIV knowledge among farm workers in the citrus industry in the Eastern Cape.

- To establish the forms of HIV related stigma amongst citrus farm workers in Addo, Eastern Cape.

- HIV related stigma discourages HIV disclosure among citrus farm workers

- To establish if HIV related stigma discourages HIV disclosure among citrus farm workers in Addo, Eastern Cape.

The study at hand was guided by the above-mentioned research questions and objectives. The findings revealed key areas that require attention from stakeholders who are working towards the reduction of HIV related stigma HIV management in rural areas. This section seeks to provide interventions that can be used in the future to address the following issues that have been unpacked by the study.

Rural areas are unique and therefore, all barriers that may hinder the quality of the research findings must be considered.

- The quantitative and qualitative assessment of HIV related stigma in the rural context is critical to the development of HIV related stigma interventions.

- Language affects the reliability of related stigma scales, therefore, careful consideration must be taken when selecting the right tools that can be used to assess HIV related stigma in rural areas.

- Knowledge about HIV in rural areas remains low and therefore, tailored interventions are required to increase HIV knowledge in rural areas

- HIV related stigma in rural areas in the form of health care stigma, attributed stigma, symbolic stigma, instrumental stigma, personal stigma, employment stigma and verbal stigma, remains high. Interventions for HIV related stigma in rural areas need to consider the forms and expressions of HIV related stigma in rural areas.

- Perceived stigma and health care stigma are the main causes of low HIV disclosure in rural areas and therefore interventions to address these forms of stigma need to be implemented.

Table 30: Proposed interventions

Numbers	Proposed interventions
1	**How to improve quality of HIV related stigma research in rural areas**
	Language
	Scale of measurement
	Poor infrastructure
	Cultural implications
	Challenges related to buy-in
	Safety of researchers
	Lack of trust from participants
2	**Interventions for increasing HIV knowledge in rural areas**

	Empowerment of support groups	
	The use of sports as form of entertainment and education.	
	The use of theatre as a form of entertainment and education.	
	The use of educational posters written in native language.	
	HIV education in academic institutions	
	Training of religious leaders about HIV	
	Condom use awareness	
	Key groups that require more attention	Males
		Married couples
		Traditional Africans
	Key areas to focus on in order to improve HIV knowledge among rural participants.	Elimination of misconceptions about HIV
		Education about modes of HIV transmission
3	**Interventions to reduce HIV related stigma in rural areas**	
	Establish causes of HIV related stigma in rural areas	Misconceptions about HIV.
		Lack of knowledge about HIV

		Fear
	Establish Types of HIV related stigma and develop interventions for HIV related stigma in rural areas	
	Key groups that require more attention	Married couples
		Coloureds
		Christians
		People with lower level education
4	**Interventions to encourage HIV disclosure in rural areas**	
	Expressive therapy	
	HIV related educational sessions, media campaigns and posters	
	Training of Nurses on how to maintain patients' confidentiality	
5	**Targeted interventions for key group of people who are reluctant to disclose their HIV status**	
	Married couples	
	Traditional Africans	

6.3　INTERVENTIONS FOR IMPROVING THE QUALITY OF RESEARCH IN RURAL AREAS

This section deals with fundamental issues that need to be considered by researchers when conducting health related research in rural areas. It should be noted that conducting health related research in rural areas has its own challenges, which if not

addressed, have the potential to affect the quality of the research findings and interventions thereof. The uniqueness of the participants, the geography of rural areas, strong cultural beliefs, low literacy levels and poor infrastructure e.g. poor roads, makes it difficult for researchers to access rural participants. Given the scarcity of health-related research in the rural areas of South Africa, previous research shows that the majority of rural participants are still unaccustomed to research (Casale, Lane, Sello, Kuo, & Cluvo 2013).

6.3.1   Language

- Researchers need to consider the native language spoken by the rural participants when developing research tools. In some instances, especially in farms, the sample may constitute local and international people and therefore, the researcher needs to use a language that is common to all participants.

- In instances where the research tools are developed in the English language, the researcher must ensure that the research tools/questionnaires are simplified as the level of education and the ability to read and understand English is often very low in rural areas.

- Focus group facilitators who are fluent in the participants' native language must be selected.

- Participants must be given an opportunity to choose to respond to survey questions or focus group discussions in a language of their choice.

6.3.2   Scale of measurement

- HIV related stigma scales must be tested for validity and reliability before use. A pilot study must be considered to assess the reliability and validity of the tools in a given context.

- The length of HIV related stigma scales must be considered. Short scales tend to score low in terms of reliability. It is therefore suggested that an HIV related stigma scale should be at least more than 9 items.

- The wording and language that is used, must be tailored according to the participants' literacy levels.

6.3.3 Poor infrastructure

Researchers intending to undertake research in rural areas, need to consider the following issues that may negatively impact the research process.

- Poor roads may delay the research process. Researchers need to plan in advance regarding the mode of transport that they intend to use. In this context, the facilitators had to use a 4x4 vehicle that could cope with the terrain.

- Lack of transport may also delay the research process. Participants may delay or fail to arrive at the intended venue due to the lack of transport. Researchers must plan in advance on how they will gain access to the participants.

- Due to a poor network signal, the use of text messages, whatsapp or calls to communicate with the participants or field workers in rural areas, may be a challenge. The researchers need to consider other forms of communication e.g. face to face communication and posters.

- Accessing a large number of people requires a big public hall, in case there is bad weather on the day when the researcher collects data. In-case a public hall is used, permission to use the hall must be sought.

- The lack of a quality education is the main cause of low literacy levels in rural areas and therefore, as mentioned above, the research tools used must be tailored for the intended population.

6.3.4 Cultural implications

- Researchers who intend to conduct research in rural area, must consider the fact that rural areas are characterised by strong cultural beliefs that may affect the research process and findings, hence, the research tools must be culturally sensitive.

- Field workers and focus group facilitators must be well versed about the culture of the participants to avoid any barriers associated with culture.

- In cases where the participants' cultural backgrounds are different, as is the case in this study, the researchers need to take note of any sensitive issues related to participants' culture.

6.3.5 Challenges related to buy-in

- Like any other setting, rural areas have authorities like councillors and chiefs. Permission to conduct research must be sought from the relevant authorities.

- Potential challenges associated with a lack of buy-in must be expected, given that people living in rural areas are not accustomed to research and therefore they may not trust the motive of the research.

6.3.6 Safety of researchers

Some rural areas are not safe as they are inhabited by snakes and other dangerous animals. Researchers needs to take note of all the safety concerns before conducting research in rural areas.

6.3.7 Lack of trust from participants

As mentioned previously, rural participants are not accustomed to research and therefore, researchers are likely to be faced with a huge task of gaining the trust of the participants. To gain the trust of the participants, the objectives and benefits of the research must be explained clearly and in simple terms.

Figure 20: **Interventions for improving the quality of HIV related research in rural areas**

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┌─────────────────────────────────────────────────┐
│      SELECT THE APPROPRIATE RESEARCH DESIGN FOR  │
│                 RURAL POPULATION                  │
└─────────────────────────────────────────────────┘
        ▲                              ▲

┌──────────────────────────┐   ┌──────────────────────────┐
│ • Poor infrastructure     │   │ • Culturally sensitive    │
│ • Buy-in                  │   │   research tools          │
│ • Culture                 │   │ • Validity and reliability│
│ • Low education levels    │   │   of scales of measurement│
│ • Native language         │   │ • Data collection tools   │
│ • Safety of researchers   │   │ • Lack of literature on   │
│ • Lack of trust from      │   │   HIV related stigma in   │
│   participants            │   │   rural areas.            │
└──────────────────────────┘   └──────────────────────────┘
        ▲                              ▲
┌──────────────────────────┐   ┌──────────────────────────┐
│ Research setting issues   │   │ Methodological issues     │
└──────────────────────────┘   └──────────────────────────┘
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6.4   INTERVENTIONS TO INCREASE HIV KNOWLEDGE IN RURAL AREAS

As shown in this study, HIV knowledge amongst rural participants remains low. In this section, the interventions to increase HIV knowledge will be listed as well as the key areas that needs to be addressed.

6.4.1   Empowerment of support groups

Community support groups are usually individuals who voluntarily choose or are selected to assist the community regarding pressing issues such as HIV. Community

support groups on HIV needs to be formed and they need to receive HIV related training regularly. The obvious advantage of support groups is that they are familiar with the cultural dynamics of the community and therefore they are likely to be trusted by the community.

6.4.2   The use of sports as form of entertainment and education

Sports such as football, netball and athletics attracts many people in rural areas. Non-governmental organisations (e.g Grassroots soccer) and the government institutions (e.g ECAC) often sponsor sports initiatives aimed at educating the communities about HIV.

6.4.3   Use of theatre as a form of entertainment and education

Theatre is one of the forms of education and entertainment that is appealing to the rural populations. The theme of the theatre is often guided by known issues such as the key areas of focus discussed in the next section.

6.4.4   Use of educational posters written in native language

Visual educational posters are also an effective method of sharing information. The posters can be mounted at strategic places where many people can see them e.g. shops, schools and churches.

6.4.4.1   HIV education in academic institutions

Academic institutions provide a captive audience for HIV education. The inclusion of the HIV curricula in Primary and tertiary institutions, will go a long way in empowering the youth with knowledge about HIV.

6.4.4.2   Training of religious leaders about HIV

As shown by the findings, some of religious leaders (pastors) display misconceptions about HIV, which have the potential to influence their followers. This therefore follows that religious leaders need to receive some form of education about HIV.

6.4.4.3 *Condom use awareness*

Condom use awareness sessions must be conducted. The main message that needs to be conveyed is that, when worn correctly, condoms can reduce the transmission of HIV.

6.5   KEY GROUPS THAT REQUIRE MORE ATTENTION

The above interventions, according to the findings, should be more focused on the following groups which displayed lower levels of HIV:

6.5.1   Males

HIV related Targeted interventions need to be considered. Organisations focusing on addressing HIV in rural areas, need to encourage males to take the lead in HIV initiatives. Males must be part of the HIV support groups that are aimed at sharing knowledge about HIV in rural areas.

6.5.2   Married couples

Couples must take the lead in HIV initiatives. Institutions managing HIV initiatives in rural areas need to consider couple-based HIV interventions e.g. couple HIV testing and counselling.

6.5.3   Traditional Africans

Belief sensitive approaches to HIV are recommended. HIV education must target misconceptions about HIV that are linked to religious beliefs

6.6   KEY AREAS TO FOCUS ON IN ORDER TO IMPROVE HIV KNOWLEDGE AMONG RURAL PARTICIPANTS

The findings at hand have explored several issues that are exacerbating the lack of knowledge about HIV among farm workers. Some of the misconceptions revealed by the study about HIV are listed below.

6.6.1 Elimination of misconceptions about HIV such as the following:

- HIV is curse from God or ancestors.
- You can see, using your judgement, if someone is HIV positive.
- Healthy-looking people cannot have HIV.
- HIV is a death sentence.
- HIV can be transmitted through body contact.
- Condoms cannot prevent HIV transmission.

6.6.2 Education about modes of HIV transmission

Interventions needs to focus on providing education regarding HIV transmission. The educational sessions need to clearly indicate that:

- HIV cannot be transmitted by mosquitoes.
- A person cannot get HIV by sharing food with someone who is infected.
- Condoms can reduce the risk of HIV transmission.

Figure 21: Issues to consider when tackling lack of education in rural areas
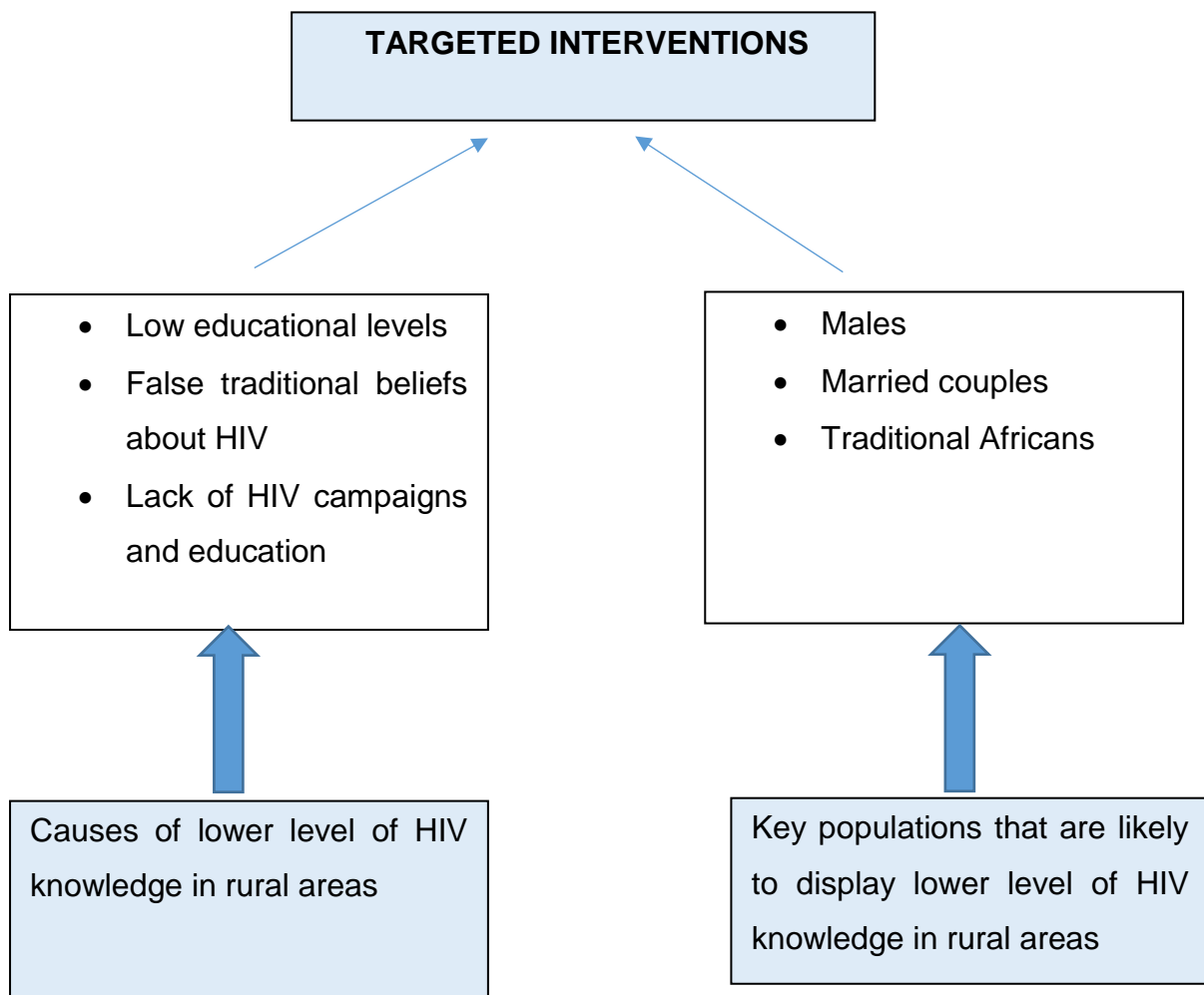
6.7 PROPOSED INTERVENTIONS FOR STIGMA REDUCTION IN RURAL AREAS

HIV related stigma remains a challenge across South Africa and in rural areas in particular. Stakeholders who are working on reducing HIV related stigma in rural areas, must consider the following three key, fundamental questions:

- What are the main causes of HIV related stigma in rural areas?
- What are the forms and expressions of HIV related stigma in rural areas?
- Which are the groups of people that display high HIV related stigma in rural areas?

An understating of the root causes of and the nature of HIV related stigma and key groups that are likely to display HIV related stigma is of paramount importance as it

provides stakeholders with a clear picture of the nature of HIV related stigma in rural areas.

6.8   CAUSES OF HIV RELATED STIGMA IN RURAL AREAS

Misconceptions about HIV such as:

- HIV is a punishment from God/ ancestors.
- HIV is punishment for bad behaviour.
- People who have AIDS are dirty.
- People with HIV & AIDS are promiscuous.
- A person with AIDS must have done something wrong and deserves to be punished.

6.8.1   Lack of knowledge about HIV

Efforts to create a stigma free environment should be centred on ways to improve HIV knowledge. Interventions that can be used to improve HIV knowledge have been highlighted above.

6.8.2   Fear

Interventions to address the fear of HIV must be implemented in rural areas. These fears include: fear of dying, fear of being stigmatised and fear of the unknown, fear of contracting HIV through casual conduct. Some of the positive messages that needs to be shared are that;

- HIV is not a death sentence
- People who are HIV positive can live longer
- One cannot get HIV through casual contact.

6.9   TYPES OF HIV RELATED STIGMA COMMON IN RURAL AREAS

Interventions that are aimed at addressing HIV related stigma, need to take into consideration the forms and expressions HIV related stigma in rural areas. The use of multiple interventions to address HIV related stigma is therefore recommended. The

interventions for the following types of HIV related stigma common rural participants are considered.

Table 31: Proposed HIV related stigma interventions in rural areas

Type of HIV related stigma common in rural areas	Nature of HIV related stigma	interventions
1. Personal stigma	Individuals' negative views toward people who are HIV positive	Interventions targeting the individual's negative attitudes towards people who are HIV positive must be implemented. 1. Encourage people to continuously seek knowledge about HIV. 2. Empowerment of people knowledge about HIV and related stigma. 3. Peer support groups must be initiated to promote open discussions about HIV related stigma. 4. Educational posters with messages denouncing the stigmatisation of people who are HIV positive, must be used. The messages must be tailored to the participants' literacy levels.
2. Attributed stigma	Negative views of the society towards people who are HIV positive	Interventions that increase the community's level of knowledge about HIV and the reduction of community HIV related stigma are recommended. Interventions can target public gatherings such as

		sporting events, workplaces, churches, academic institutions. Interventions can be in the form of: 1. HIV related stigma facilitated screenings. 2. HIV and HIV related stigma educational sessions. 3. Training of community leaders about HIV. 4. Educational posters. 5. Participatory education that stimulates debates around HIV and HIV related stigma. 6. Use of people who are HIV positive who volunteer to present their stories.
3. Healthcare HIV related stigma	Stigmatisation of people who are HIV positive by health care professionals	1. An assessment about HIV related stigma in among Health care workers in rural areas must be conducted. 2. Health care workers must be trained and sensitised about HIV management. 3. Health care workers must be empowered with knowledge about HIV.
4. Verbal stigma	Gossiping and labelling of people who are HIV positive	1. Posters denouncing the stigmatisation of people who are HIV positive. 2. Introduce behaviour change programmes that are aimed at changing the people's attitudes towards people who are HIV positive.
5. Symbolic stigma	The attribution of shame towards people who are HIV positive base on the notion that they contracted	HIV related stigma interventions mentioned above must emphasise the following statements:

	the diseases through engaging in acts that are 'deemed' to be immoral such as engaging in sexual activities with various partners.	1. People who have AIDS are just like us and they are not dirty. 2. Anyone can contract AIDS and therefore having AIDS is not a sign that you are cursed. 3. There is no need for people living with AIDS to be ashamed as anyone can contract the disease.
6. Instrumental stigma	The avoidance of contact with people who are HIV positive due to fear of infection	HIV education campaigns must focus on raising awareness about HIV transmission. The campaigns must also iron out misconceptions about HIV transmission by emphasising the following key points: 1. It is safe for people who have AIDS to work with children. 2. People with AIDS are just like everyone and they must enjoy their freedoms. 3. People who have HIV must not be isolated.
7.Employment stigma	Co-worker's and employer's negative attitudes towards people who are HIV positive.	1. Employers must develop an HIV policy that protect the stigmatisation of people who are HIV positive must be developed and implemented. The policy must be made known to the employees. 2. Educational sessions to sensitise employers about HIV are essential. 3. Employees and employers need to be educated about HIV.

6.10 TARGETED INTERVENTIONS FOR KEY GROUPS OF PEOPLE THAT ARE LIKELY TO DISPLAY STIGMATISING ATTITUDES TOWARDS PEOPLE WHO ARE HIV POSITIVE

6.10.1 Married people

Couple based interventions to address HIV related personal stigma must be implemented.

A couple-based HIV education programme must focus on the following issues:

- Assist the couples to realise that marriage does not mean that they are immune to HIV and therefore it is their responsibility to protect each other from infecting each other.
- Educational campaigns must be centred on increasing HIV knowledge among couples.

6.10.2 Coloureds

Race sensitive HIV related stigma interventions must be considered given the country's history of apartheid.

6.10.3 Christians

HIV campaigns must be introduced in churches to address HIV related stigma and the following messages needs to be emphasised:

- HIV does not discriminate people according to religion and therefore anyone can contract HIV.
- People who are HIV positive needs care and support from their colleagues and family.
- HIV is a manageable disease, people now live longer due to ARV uptake, and therefore, it is no longer a death sentence.
- HIV is an illness like any other disease and is not a curse from God or a disease associated with sin.

6.10.4 People with lower level of education

Reader friendly interventions must be utilised. HIV education material (posters and booklets) must be used in rural areas.

Figure 22: Proposed model for HIV related stigma reduction in rural areas

TARGETED INTERVENTIONS

- Lack of knowledge about HIV
- Misconceptions about HIV
- Fear of contracting HIV
- HIV association with death

- Personal stigma
- Attributed stigma
- Healthcare HIV related stigma
- Verbal stigma
- Symbolic stigma
- Instrumental stigma
- Attributed stigma
- Employment

- Married people (personal stigma)
- Coloureds (personal stigma)
- Christians (personal stigma)
- People with lower level of education(attributed stigma
- Single people (Attributed stigma)

Root cause of HIV related stigma in rural areas

Forms and expressions of HIV related stigma in rural areas

Groups of people who are likely to display high level of stigma in rural areas

6.11   HIV DISCLOSURE

Interventions that address HIV disclosure in rural areas needs to be centred on the causes of non-disclosure in rural areas. HIV disclosure interventions, if not well

implemented, may result in further stigmatisation of people who are HIV positive. The following interventions are therefore suggested to encourage HIV disclosure in rural areas.

- Expressive therapy in the form of voluntary public presentations by people who are living with HIV, must be used to encourage disclosure.
- HIV related educational sessions, media campaigns and posters must be used to increase HIV knowledge. More emphasis must be put on the advantages/benefits of disclosing a positive or negative HIV status. Developers of HIV disclosure interventions must also take into consideration, the context in which the interventions are being developed for.
- HIV related campaigns must be conducted to raise awareness around the voluntary nature of HIV disclosure.
- Nurses must be trained on how to maintain patients' confidentiality. The training sessions must categorically state that the patients' information must be treated with strictest confidence and may not be shared and, most importantly, under no circumstances can patients be forced to disclose their status.
- The rights of patients must be displayed by way of posters at every clinic in rural areas. One of the important issues that are to be addressed by the posters, is to encourage patients to report any forced disclosure by the healthcare staff.

6.11.1 Targeted interventions for key group of people that are likely not to disclose their status in rural areas

6.11.1.1 Married people

- Couples must be encouraged to take the lead in initiating HIV related educational campaigns.
- Couple based HIV awareness must focus on increasing awareness about the benefits of HIV disclosure.
- HIV Counselling and testing campaigns for couples, must be introduced in rural areas to encourage couples to know their status.

6.11.1.2 *Traditional Africans*

- HIV education and campaigns need to focus on the causes of HIV transmission
- HIV awareness needs to address traditional beliefs that are likely to mislead people e.g. that HIV is a curse from the ancestors and that sangomas can treat HIV.
- HIV awareness sessions must also focus on the positives of traditional beliefs that are likely to reduce the risk of HIV transmission e.g. most traditional Africans discourage the youth to engage in sexual activities outside marriage. Another example is the Zulu culture where abstinence is encouraged and virginity among young teenage girls is celebrated as an achievement.

Figure 23: Tackling HIV disclosure in rural areas
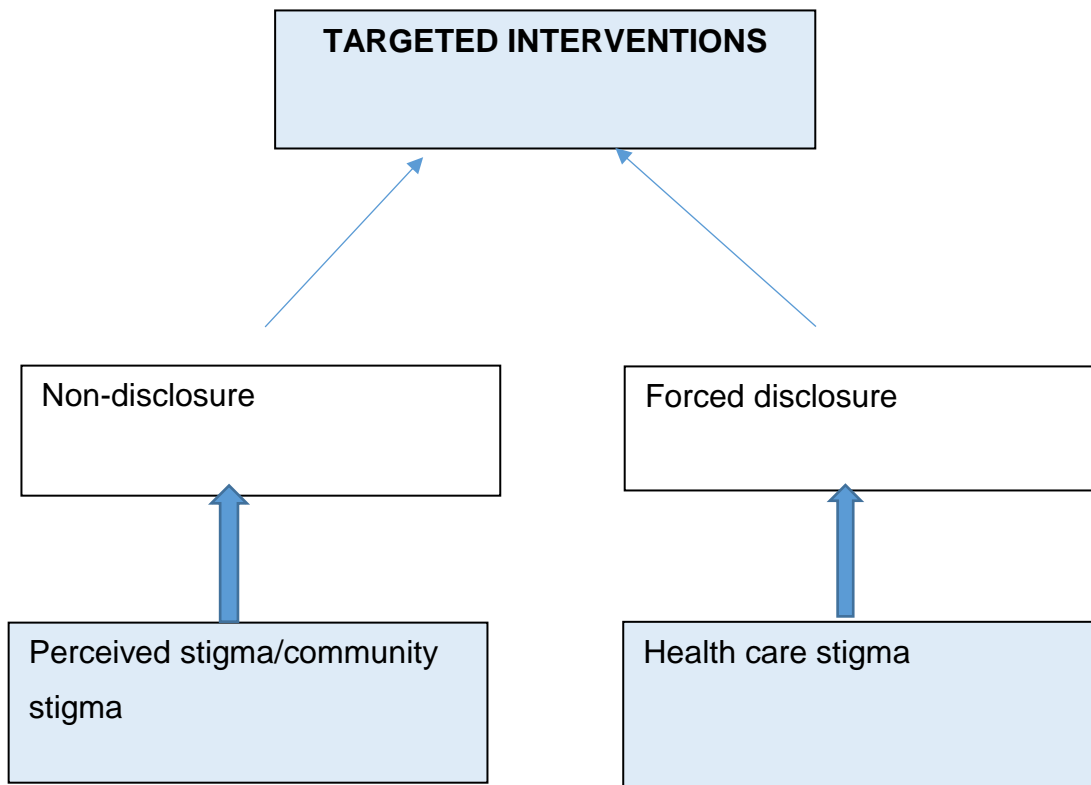
As shown above, interventions to encourage voluntary HIV related disclosure in rural areas should focus on the following:

- Interventions, such as HIV related theatre and HIV campaigns, can be used to address Perceived stigma/community stigma to encourage people to disclose voluntarily.

- Health care stigma: nurses need to be trained and educated about how to maintain the confidentiality of patients, particularly the rights of HIV patients. Furthermore, health professional working in rural areas must be receive a form of education regarding the cultural implication on HIV & AIDS and HIV related stigma.

- The community must report any cases of forced disclosure to clinic management or police.

6.12 CONCLUSION

In this chapter, possible interventions to address HIV related stigma in the rural context, were considered. The interventions are informed by the findings from the study at hand and therefore this provided an opportunity to develop a tailored intervention aimed at addressing HIV related stigma in the rural context. It is hoped that the proposed interventions will make a significant contribution to the fight against the stigmatisation of people who are HIV positive. The next chapter is a summary of specific recommendations and major findings of this study.

CHAPTER SEVEN

CONCLUSIONS AND RECOMMENDATIONS

7.1   CHAPTER REVIEW

This chapter presents the conclusion of the study. Based on these conclusions, the researcher provides recommendations that can be utilised by various stakeholders that are interested in HIV related stigma in rural areas. The value of the study, limitations and future research opportunities will be also discussed in this study.

7.2   SYNOPSIS OF THE STUDY

In this section, each section is summarised. The link between the chapters is also explored to provide the reader with a clear understanding of the relevance and purpose of the study. The chapter are presented as follows:

7.2.1   Chapter one

This chapter presented the background of this study in relation to the identified 'research gap'. The chapter has shown that HIV related stigma research in rural context in South Africa, is still scant. The research questions and objectives of the study are also presented in this chapter to provide the reader with a clear understanding of the purpose of the study. The research questions have been linked to objectives and the methodology of the study. Given that the study at hand is guided by the explanatory mixed research method, each quantitative research question was validated by a qualitative research question.

The motivation of the study was also discussed in this chapter. This section answers the "why" of the study. The researcher explained, in detail, why research on HIV related stigma in rural areas must be prioritised. The research comes at a time when South Africa has recently adopted the UNAIDS strategy code named 90-90-90, which is aimed at achieving an

AIDS free generation by year 2030. The chapter provides evidence that, while massive efforts to combat HIV & AIDS in South Africa are commendable, the hope to achieve an AIDS free generation by 2030 will remain a utopian dream if HIV related stigma, especially in rural areas, is not addressed.

The chapter also provided the theoretical foundation of this study. A theory contextualises the research study by providing the structure or foundation of the study. Furthermore, the first chapter also provided the reader with a clear understanding of the significance of the study as well as the rationale for the study and the methodology of the study.

7.2.2   Chapter two

Chapter two enabled the researcher to contextualise the study taking, by reviewing previous studies that have been conducted so far regarding HIV related stigma in the rural context. By exploring previous studies, the researcher unpacked the research gap that the current study seeks to explore. Literature revealed that, while South Africa is investing heavily in the fight against HIV more needs to be done to address HIV related stigma.

A review of literature review has shown that the study at hand adds value to the body of knowledge in that it is the first of its kind to assess HIV related stigma among farm workers. Secondly, literature has shown that most of the previous studies utilised only one approach or methodology, which might not be ideal when researching a complex phenomenon like HIV related stigma. To eliminate the weakness of one approach, the study at hand utilised the mixed methodology to get in-depth information in order to unpack the forms and expressions of HIV related stigma in the rural context

This chapter also unpacked the various forms and expressions of HIV related stigma which were also revealed in the findings of the current study. An understanding of the forms and expressions of HIV related stigma, provided the researcher with clear understanding of the complex and unique nature of HIV related stigma. The determinants of HIV related stigma were also unpacked with the view of understanding the causes of HIV related stigma in different contexts.

7.2.3   Chapter three

The chapter at hand provides in detail, the methodology that was used to collect and analyse the findings. In this chapter, the researcher explored the various methodologies in order to put into context, the need for a methodologically sound approach that can be used to assess a complex, unique and sensitive topic such as HIV related stigma. Given the sensitive nature of the study, the explanatory mixed method was chosen so as to provide a sound, in-depth and comprehensive analysis of HIV related stigma in the rural context. This methodology also allowed the researcher to validate the findings from the quantitative approach using focus group discussions (qualitative approach).

This explanatory mixed method provided a framework in terms of the data collection process. Quantitative data was collected first and analysed so as to unpack key areas of concern related to HIV among citrus farm workers. A follow up qualitative study was then conducted to provide an in-depth analysis of the major findings as highlighted by the quantitative approach. The benefits of using this approach were also explained in detail in this chapter.

The sampling method and sample size was also explained in this chapter. To collect quantitative data, a random sampling method was used as it allowed all participants an equal chance of being selected for the study. This eliminated all biases associated with sampling thereby reducing the margin of sampling error. Judgmental sampling (also known as purposive sampling) was used to select participants for the qualitative study.

7.2.4   Chapter four

Guided by the explanatory mixed methodology, this chapter presented the first phase of quantitative data analysis and discussions. In this chapter, data was presented in the form of tables and graphs. Visual presentations simplified complex data in situations where the reader may struggle to grasp some complex statistical analysis.

The tools of measurement (questionnaires) were all tested for reliability and validity. It is common research practice to do so as it allows the researcher to assess the psychometric soundness of the research tools. The Kalichman *et al.*, English version

scale scored low reliability scores and therefore was not considered in this study. Validity was also assessed to establish if the tools of measurement were measuring what they intended to measure.

Quantitative findings from this chapter provided the answers to the research questions posed in chapter 1. Furthermore, the researcher conducted various statistical analysis to assess if the objectives of the study were met. Research objectives enabled the researcher to operate within the scope of the study.

7.2.5   Chapter five

This is the second phase of the data collection phase. This chapter sought to provide an in-depth explanation of the quantitative findings in chapter four. The validation of the findings as per the explanatory mixed method, increases the validity of the study as quantitative findings are further investigated. Using thematic analysis, the qualitative responses from the participants were grouped into themes in order to understand the response pattern from the participants and link them to the quantitative findings.

The following were the major themes found in this study:

- Misconceptions about HIV transmission and prevention
- Isolation, rejection and loss of hope
- Demographic variables are strong determinants of HIV related stigma
- Citrus farms are characterised by specific forms and expressions of HIV related stigma
- Attributed stigma
- HIV disclosure

Similar findings from previous studies where referred to were necessary, in order to contextualise the study.

7.3   SUMMARY OF THE RESEARCH FINDINGS

This section presents a detailed summary of the findings from this study. Similar to the previous chapter, the summary is centred on the objectives of the study to confirm the

link between the objectives and the findings from this study. A review of the objectives of the study and the findings of the study enables the researcher to assess if the objectives have been achieved. The objectives of the study can be presented as follows:

- To establish if the local HIV related stigma scales (Visser et al. and Kalichman et al. scales) are reliable assessment tools that can be used to assess HIV related stigma amongst citrus farm workers working in the Addo community in Eastern Cape
- To establish if the local HIV related stigma scales (Visser *et al.* and Kalichman *et al.* scales) are reliable assessment tools that can be used to assess HIV related stigma amongst citrus farm workers working in the Addo community in Eastern Cape.
- To establish if demographic variables namely gender, age, race, marital status, education and religious beliefs are strong determinants of HIV-related stigma and HIV knowledge among farm workers in the citrus industry in the Eastern Cape.
- To assess the levels of knowledge about HIV amongst farm workers working at the citrus farms in the Addo community in Eastern Cape.
- To establish the forms of HIV related stigma amongst citrus farm workers in Addo, Eastern Cape.
- HIV related stigma discourages HIV disclosure among citrus farm workers• To establish if HIV related stigma discourages HIV disclosure among citrus farm workers in Addo, Eastern Cape

7.3.1   Objective one

To establish if the local HIV related stigma scales (Visser et al. and Kalichman et al. scales) are reliable assessment tools that can be used to assess HIV related stigma amongst citrus farm workers working in the Addo community in Eastern Cape. To establish if the local HIV related stigma scales (Visser et al. and Kalichman et al. scales) are reliable assessment tools that can be used to assess HIV related stigma amongst citrus farm workers working in the Addo community in Eastern Cape.

Findings have confirmed that HIV related stigma scales developed for the South African context, namely Kalichman *et al.* personal stigma scales (Xhosa and Afrikaans version) and Visser *et al.* parallel stigma scales (personal and attributed stigma scales), can be used to assess HIV related stigma in a rural context. The above scales reported an acceptable amount of internal consistency (Kalichman *et al.* Xhosa version alpha=0.99, Kalichman *et al.* Afrikaans version *et al.* alpha=0.97, Visser *et al.* personal stigma scale alpha=0.98 and Visser et al attributed stigma scale alpha =0.97) which is above the commonly used cut of 0.70 except the Kalichman *et al.* English version scale (alpha=0.58), which scored below the cutoff. It was therefore suggested that the Kalichman *et al.* stigma scale English version scale may not be suitable for use among rural participants. While reasons for a lower internal consistency has been speculated in previous studies, in this context, it was argued that language and number of items might have affected the reliability of the Kalichman *et al.* English version scale. It was concluded that the reliability of HIV related stigma scales vary according to context and therefore the Kalichman *et al.* English version HIV related stigma scale may not be used in a rural context as it scored a weaker reliability score (alpha=0.58

7.3.2   Objective two

To establish if demographic variables namely gender, age, race, marital status, education and religious beliefs are strong determinants of HIV-related stigma among farm workers in the citrus industry in the Eastern Cape

The relationship between demographic variables and HIV related stigma is well documented (Maughan-Brown, 2006; Mazorodze, 2012 & HSRC, 2014). The objective to explore this relationship is based on dynamic and unique nature of HIV related stigma which warrants the development of interventions that are tailored to specific demographics. Quantitative findings showed that some demographic variables are strong determinants of HIV related stigma as shown below:

- *Marital status* - Married people are likely to be stigmatising towards people who are HIV positive as compared to single people (Visser *et al.,* personal stigma scale and attributed stigma scale).

- *Race* - Coloureds are more likely to be stigmatising towards people who are HIV positive as compared to other races (Kalichman *et al.,* Afrikaans version stigma scale).
- *Religion* - Christians are more likely to be stigmatising towards people who are HIV positive than other religions (Visser *et al.*, personal stigma scale).
- *Education* - People with lower levels of education are likely to be stigmatising towards people who are HIV positive than people with high levels of education (Visser *et al.,* attributed stigma scale).

Qualitative findings further confirmed the fact that religion and gender are strong determinants of HIV related stigma. According to the findings, church leaders and members are exacerbating the stigmatisation of people who are HIV positive through their teachings in church. On the other hand, female participants felt that they often carry the blame when their husbands are infected by the disease.

Using the Kalichman et al and Visser *et al*, the null hypothesis was tested and the following conclusions were made:

- Using the Kalichman *et.al.* personal stigma scale (Afrikaans version), the null hypothesis is retained only for variables namely gender, age, education, marital status, language and religion except for race.
- Using the Visser *et al.* personal stigma scale, the null hypothesis be retained only for the variables namely gender, age, education, language and race except for marital status and religion.
- Using the Visser *et al.* attributed stigma scale, the null hypothesis be retained only for the variables namely gender, age, language, religion and race except for marital status and education.

Figure 23:   Demographic variables vs. HIV related stigma
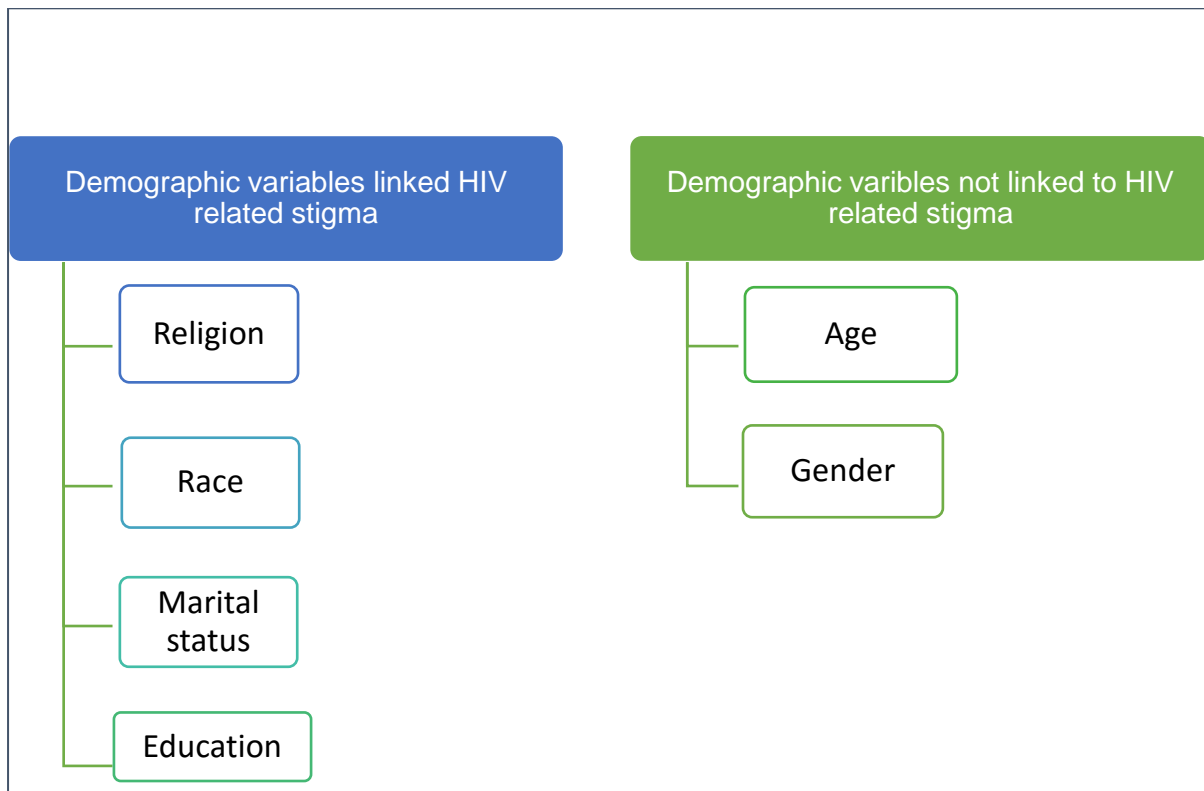
7.3.3   Objective three

To assess the levels of knowledge about HIV amongst farm workers working at the citrus farms in the Addo community in Eastern Cape.

Quantitative findings revealed that only 37% of the participants displayed a high level of knowledge about HIV. The fact that 62% of the participants displayed a low level of knowledge about HIV is worrying, given that the South African government is investing millions of Rands to promote HIV awareness campaigns. A lack of knowledge about HIV among participants was also confirmed by the fact that a large proportion of participants lack knowledge about condom use. A large proportion of participants believed that people who look physically fit and health cannot be HIV positive. Furthermore, results also showed that some demographic variables are good determinants of HIV knowledge amongst citrus farm workers. In this study it was predicted that:

- Single people are likely to be knowledgeable about HIV than married people.
- Females are likely to be knowledgeable about HIV than males.

- Christians are more likely to be knowledgeable about HIV than other religions.

The qualitative approach was conducted to explore the possible causes of a lack of knowledge about HIV amongst the participants and as established by the quantitative approach. According to the qualitative findings, lower levels of knowledge about HIV among citrus farmworkers is exacerbated by misconceptions about HIV transmission and prevention. Such misconceptions according to the findings often result in:

- The avoidance of people with HIV related symptoms.
- The belief that Healthy-looking people are safe.

7.3.4 Objective four

To establish the forms and expressions of HIV related stigma amongst citrus farm worker in Addo, Eastern Cape.

Quantitative findings show that the following types of HIV related stigma were common among participants:

- Symbolic stigma
- Instrumental stigma
- Personal stigma
- Attributed stigma

Qualitative findings revealed more forms of HIV related stigma that were not common in the quantitative findings namely:

- Healthcare stigma
- Employment stigma
- Verbal stigma.

7.3.5 Objective five

To establish if HIV related stigma a barrier to HIV disclosure among citrus farm workers in Addo, Eastern Cape

Findings from the quantitative study confirmed that HIV related stigma discourages people from disclosing their HIV positive status as confirmed by previous studies

(Zunniga, 2010; Klopper *et al.,* 2014; Greef, 2013 & Okello *et al.,* 2015). In this study, the means scores of -Kalichman *et al.* isiXhosa version (mean score= 0.63 versus 1.64; t=15.4 df=398, p=0.00), Afrikaans version (mean score= 0.17 versus 1.63; t= 26.4, df=398, p=0.00) and personal stigma scale (mean score= 1.47 versus 1.52; t=2.81, df=398, p=0.00) showed that participants who scored high in HIV related stigma are unlikely to disclose their HIV status. Quantitative findings also confirmed the existence of a positive correlation between HIV knowledge and HIV disclosure. The findings revealed that participants who scored lower HIV knowledge scores were not likely to disclose their status.

Findings from the quantitative study further explored the possible reasons on why participants were reluctant to disclose their HIV status if found to be HIV positive. Two reasons for non-disclosure of HIV were common among participants, namely:

- Fear of the unknown
- Attitudes of the community towards people who are HIV positive

7.4   VALUE OF THIS STUDY

To the researcher's knowledge, the study at hand is the first of its kind to utilise a mixed method approach to quantitatively and qualitatively assess/measure and explore HIV related stigma in a farming/rural context in South Africa. It has been widely accepted within the scientific community that HIV related stigma is a unique and complex phenomenon and therefore a comprehensive analysis that is employed in this study, will provide the scientific community and policy makers with the right tools to measure and reduce HIV related stigma in the rural context. By so doing, the study provides evidence that a sensitive and unique phenomenon such as HIV related stigma, requires a psychometrically sound and holistic methodology that adequately provides a comprehensive and in-depth understanding of HIV related stigma.

As confirmed by literature chapter, research on HIV related stigma in rural areas in South Africa is still in infancy stage and therefore this study provides baseline information on the understanding of HIV related stigma in the rural context. The findings provides the much needed data to develop tailored interventions that can be used to address HIV related stigma.

More importantly, this study comes at a time when South Africa recently adopted the ambitious UNAIDS strategy code named 90-90-90, that is aimed at significantly reducing the impact of HIV by 2030. The study provided evidence that HIV related stigma it is still under-researched especially in rural areas, achieving the ambitious UNAIDS goal remains a utopian dream as it is largely dependent on the success in fighting against HIV related stigma.

It is important to highlight the fact that the Agriculture sector is set to benefit from the findings as the study is, to the researcher's knowledge, the first of its kind to be conducted in the citrus industry. It is envisaged that the findings will go a long way in the development of tailored interventions that will reduce HIV related stigma and other stigmas around illnesses that have symptoms similar to HIV. The management of HIV and other illnesses in the workplace is good for business given the numerous benefits of a healthy workforce. An effective disease management system in the citrus sector will go a long way in ensuring that the sector remains globally competitive and a big contributor to the country's GDP.

7.5   LIMITATIONS

The fact that more males (54%) than females (45%) participated in the survey, might have had an impact on the findings. While the difference was not statistically significant, it was necessary to counter this difference by having more females than males in focus group discussions.

Another limitation worth noting was the sample size. Although a sample of 30% (200/600 participants) is considered sufficient by researchers (Altunışık, Coşkun, Bayraktaroğlu, & Yıldırım (2004), it is hoped that a bigger sample could have increased the current reliability scores.

Only two scales (personal stigma and attributed stigma scales) of the Visser *et al*. HIV related parallel stigma scale were considered in this study. While the researcher could not include the Visser *et al's* (2008) internalised stigma stigma scale due to confidentiality issues in rural communities, the scale could have contributed to the recent body of literature that suggests that internalised stigma is on the rise in South Africa (HSRC, 2014).

It is important to highlight the fact that data was collected from citrus workers in Addo and even though migrant workers are highly mobile findings may not be generalizable to migrant workers in other rural areas of South Africa.

7.6 RECOMMENDATIONS

This section provides recommendations based on the findings from the study. It is hoped that the recommendations of this study will go a long way in addressing HIV related stigma in rural areas. The recommendations will be provided to the following stakeholders:

- The citrus sector.
- The South African National AIDS Council (SANAC).
- The research community.

7.6.1 Recommendation to the Addo citrus farmers

The findings are of importance to the citrus sector as the improvement of the health of the employees will ultimately make the sector more globally competitive. The reduction of HIV related stigma will be a major step in managing the implications of HIV in the sector. As confirmed by the findings at hand, HIV related stigma remains an issue in the citrus sector. It is therefore recommended that interventions that are aimed at reducing the impact of HIV related stigma in the citrus industry, focus on the following issues:

Table 32: Recommendations for the Addo citrus farmers

Finding	Recommendation
Low HIV knowledge results in misconceptions about HIV transmission, thereby exacerbating the stigmatisation of people who are HIV positive	Interventions aimed at increasing HIV knowledge are recommended. Examples of interventions that can be used to increase HIV knowledge in the workplace includes: • HIV & AIDS awareness campaigns • HIV & AIDS training and education • Theatre on HIV & AIDS in the workplace

	• Peer educator training • Educational posters on HIV The interventions need to be tailored according to the following demographic factors as suggested the study: • **Gender vs. HIV knowledge** Gender based interventions must be considered. Males displayed low levels of knowledge about HIV, therefore interventions need to focus more on males. Sport as a tool for entertainment and education, is one example of an intervention that can be encouraged among men e.g. introduce soccer teams where men can meet and discuss about HIV. • **Marital status vs. HIV knowledge** Married people displayed more of a lack of knowledge about HIV than single people and therefore interventions need to focus more on married people. As discussed in Chapter 6, couple-based interventions are recommended e.g. HIV testing and counselling and HIV education must be prioritised among couples. • **Religion vs. HIV knowledge** Interventions to focus more on traditional Africans as they displayed a lack of knowledge about HIV. In rural areas, chiefs are regarded as the custodians of norms and values that guide people. While HIV education interventions such as theatre, facilitated screenings and HIV testing and counselling may target everyone, focus chiefs must play an important role in dispelling some misconceptions about HIV that are linked to specific traditional beliefs.
HIV related stigma	Interventions to address HIV related stigma are recommended. Examples of such interventions include:

- Information based strategy- the spread of anti-stigma messages using posters and brochures.
- Skills building sessions- sessions that are aimed at increasing people's knowledge about HIV.
- The provision of counseling and support- Counseling empowers an individual with knowledge about how to live a normal life after testing positive.
- The involvement of people who are HIV positive- people who are HIV positive voluntarily engage with the general public to discuss how they manage HIV.

The interventions need to be tailored according to the following demographic factors as suggested the study:

- **Race vs. HIV related stigma**

Race sensitive interventions to focus more on coloureds, since findings show that they are more likely to display stigmatising attitudes towards people who are HIV positive. Culturally sensitive interventions need to be considered, given the specific cultural beliefs among coloureds that may serve to exacerbate the stigmatisation of people who are HIV positive. Interventions need to consider the fact that most coloured people are able to read, write and speak Afrikaans and therefore interventions must consider Afrikaans. Interventions may include:

- HIV related stigma interventions, including: educational posters, theatre and facilitated screenings must be in English and Afrikaans.

- **Religion vs. HIV related stigma**

Interventions needs to focus more on Christians as they are more likely to display stigmatising behaviours than traditional Africans. Pastors often take a teacher role in their churches. Hence, while interventions may target churches in general, pastors must be encouraged to undergo HIV training and education

	and to participate in HIV test drives. By doing so, it is hoped that pastors will be able to educate their followers about issues around HIV.
	• **Marital status vs. HIV related stigma**
	HIV related stigma interventions needs to focus more on married people, as they are, according to the study at hand, more likely to display stigmatising behaviours towards people who are HIV positive. Couple based interventions must be put in place so as to encourage couples to;
	• Be part of HIV education initiatives. • Take part in couple-based HIV testing and counselling.
	• **Education vs. HIV related stigma**
	HIV related interventions need to focus more on participants with how levels of education. Examples of interventions that can implemented among people with lower levels of education or who are illiterate, include, theatre in HIV related stigma, pictorial posters on HIV related stigma, support groups who embark on a door to door campaign on HIV related stigma and facilitated screenings focusing on HIV related stigma.
HIV disclosure	Intervention addressing HIV disclosure needs to emphasise the importance of HIV disclosure. Interventions may include:
	• HIV & AIDS awareness campaigns • HIV & AIDS training and education • Theatre on HIV & AIDS in the workplace
	Interventions to increase HIV disclosure needs to consider the following demographic variables:
	• **Marital status vs. HIV disclosure**
	Interventions to increase HIV disclosure need to consider the fact that married people are reluctant to

	disclose their status. Couple based interventions must be put in place so as to encourage couples to: • Be part of HIV education initiatives. • Take part in couple-based HIV testing and counselling. • Disclose their HIV status to each other. • **Religion vs. HIV disclosure** HIV disclosure interventions need to consider the fact that traditional Africans are not likely to disclose their HIV status. Chiefs and councillors, as cultural custodians in rural areas, must take the lead and be part of the following interventions: • HIV education • Educational theatre on the importance of HIV disclosure • Facilitated screenings on importance of HIV disclosure.

7.6.2 Recommendations to South African AIDS Council

The findings at hand are relevant to the South African AIDS Council, as it is the association of institutions working towards achieving an AIDS free South Africa by 2030. In its five-year National Strategic Plan (NSP) for HIV (2017-2022), SANAC has prioritised the reduction of HIV related stigma through the protection of human rights by introducing programmes that are aimed at raising awareness about people's rights, investing on social and behavior change programmes that address the root causes of HIV related stigma and raising awareness about HIV among healthcare workers. Below is an extract of the SANAC sub-objectives that are linked to the study at hand.

Table 33: SANAC recommendations

SANAC sub –objectives	Recommendations from the study
Education programmes aimed reducing HIV related stigma in communities.	Educational programmes need to take into consideration the unique nature of HIV related stigma in rural areas. The study at hand has revealed that HIV related stigma in the rural areas of Addo is exacerbated by the following factors: 1. Lack of information about HIV 2. Religious beliefs 3. Misconceptions/ myths about HIV transmission.
Training of health workers on how to deal with HIV and people affected and infected with HIV or TB.	The training of health workers in rural areas needs to focus on the following issues as revealed by Focus groups discussions: 1. Nurses are forcing people to disclose their status to their partners. 2. Confidentiality is being compromised. Nurses are asking people who are HIV positive to stand in one queue when collecting medication. 3. Nurses disclosing people's status without their consent.

7.6.3 Recommendations for future research

The findings at hand have unpacked some areas that needs further investigation or which has an impact on future studies that focuses on HIV related stigma. The following recommendations are therefore provided.

Table 34: Recommendations for future research

Sample size	It is recommended that similar studies can be conducted with large samples to provide findings that are more reliable and generalisable to rural areas across the country. While such a project can be costly, it is worthwhile, given that HIV related stigma in rural areas is a serious issue that needs to be addressed urgently if the fight against HIV is to be won.
HIV related stigma measures	The fact that the Kalichman *et al.* English version personal stigma scale had a weaker internal consistency (reliability score), puts the need to revisit the current stigma measures into perspective. The need to translate the stigma measures into the participants' first language in rural areas, is therefore recommended.
The link between personal stigma and attributed stigma	Findings have shown the tendency of the participants to provide socially desirable answers, which leads to lower personal stigma scores as compared to attributed stigma. Yet findings have shown that there is a positive correlation between personal stigma and attributed stigma. Further research needs to validate this link to establish the relationship between personal stigma and attributed stigma.
Religious beliefs and HIV related stigma	Research has shown that HIV related stigma in rural areas is, to a large extent, exacerbated by specific religious beliefs and norms and therefore it is important for future research to explore more on the link between religion and HIV related stigma in rural areas.
HIV related stigma research in rural areas	The literature review has revealed that HIV related stigma research in South Africa is still in its infancy stage. It is therefore recommended that future

	research be directed at exploring the nature of HIV related stigma in rural areas.

7.7   CONCLUSION

This chapter provides a detailed summary of all the chapters as well as the findings of the study.   The relevance of the study to the scientific community and policy makers was explored in this chapter. Like any study, the study had its limitations, which were provided and discussed in this chapter. Lastly, the chapter discussed the recommendations from the findings that can be used by the broader community to develop interventions that are aimed at addressing HIV related stigma in the rural context.

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APPENDIX 1:   SURVEY QUESTIONNAIRE

SECTION A: DEMOGRAPHIC PROFILE OF EMPLOYEES

Kindly respond by means of a tick (□).

1.   Gender

Male		Female	

2.   Age range

18-24		25-34	
35-44		45-54	
55-60		61-65	

3.   Marital status

Single	
Married	
Other	

4.   Educational background

Primary School	
High School	
Matric	

Post-Matric Diploma or Degree	

5. Race

Black	
Coloured	
White	

6. Language

I am able to ………………..	Read	Write
isiXhosa		
Afrikaans		
English		
Other		

7. Religion

Christianity	
Buddhism	
Hinduism	
Islam	
Judaism	

| traditional African | |
| Other | |

SECTION B: HIV KNOWLEDGE SCALE

8.   HIV knowledge

7.1	Can HIV and AIDS be taken out of your body (cured)?	Yes	No
7.2	Can a person get HIV from mosquitoes	Yes	No
7.3	Can using condoms reduce the risk of HIV transmission	Yes	No
7.4	Can a healthy-looking person have HIV?	Yes	No
7.5	Can a person get HIV from mosquito bites?	Yes	No
7.6	Can a person get HIV by sharing food with someone who is infected?	Yes	No

SECTION C: KALICHMAN HIV RELATED SCALE

1. If English is your first language, then complete B1 only before completing Section C, D and E.
2. Ukuba IsiXhosa lulwimi lwakho lwase khaya phendula uB2 phambi kophendula isekshini yesithathu, yesine neyesihlanu.
3. As Afrikaans U moedertong is, voltooi B1 voordat U C, D, en E voltooi.

C1   ENGLISH VERSION OF THE AIDS-RELATED STIGMA SCALE

Please answer whether you agree or disagree with the following statements

Statement	Agree	Disagree
1. People who have AIDS are dirty'		
2. People who have AIDS are cursed		
3. People who have AIDS should be ashamed		
4. It is safe for people who have AIDS to work with children		
5. People with AIDS must expect some restrictions on their freedom		
6. A person with AIDS must have done something wrong and deserves to be punished		

7. People who have HIV should be isolated		
8. I do not want to be friends with someone who has AIDS		
9. People who have AIDS should not be allowed to work		

C2 XHOSA VERSION OF THE AIDS-RELATED STIGMA SCALE

Nceda phendula uba uyavumelana okanye awuvumelani nezi ngcaciso zilandelayo

	Ndiyavumelana	Andivumelani
1. Abantu abane AIDS bamdaka		
2. Abantu abane AIDS baqalekisiwe		
3. Abantu abaneAIDS bafanele ukuba neentloni		
4. Kukhuselekile kubantu abaneAIDS ukuba basebenze nabantwana		
5. Abantu abane AIDS kufanele balindele imiqathango ethile kwinkululeko yabo		
6. Umntu oneAIDS makube kukhona into engeyiyo awayenzayo yaye ufanele ukohlwaywa		
7. Abantu abaneAIDS kufanele ukuba bangahoywa		
8. Andifuni ukuba ngumhlobo womntu oneAIDS		
9. Abantu bane AIDS akufanelanga ukuba bavunyelwe basebenze		

C3   AFRIKAANS VERSION OF THE AIDS-RELATED STIGMA SCALE

Antwoord asseblief of u met die volgende stellings saamstem of verskil

	Ek Stem Saam	Ek Verskil
1. Mense wat VIGS het, is vuil		
2. Mense wat VIGS het, is vervloek		
3. Mense wat VIGS het, behoort hulle te skaam		
4. Dit is veilig vir mense wat VIGS het om met kinders te werk		
5. Mense wat VIGS het, moet sommige beperkings op hulle vryheid verwag		
6. n Persoon wat VIGS het, moes iets verkeerd gedoen het		
7. Mense wat MIV het, behoort afgesonder te word		
8. Ek wil nie met iemand wat VIGS het vriende wees nie		
9. Mense wat VIGS het, behoort nie toegelaat te word om te werk nie		

SECTION D: PERSONAL STIGMA

Please complete all remaining questions in English even if your first language is not English

Please mark the appropriate column with a tick (☐), which represents you response

Note that there are no right or wrong answers.

Statement	Agree	Disagree
1. I think getting HIV & AIDS is a punishment for bad behavior		
2. I would not like to sit next to someone with HIV & AIDS in public or private transport.		
3. I think less of someone because they have HIV & AIDS		
4. I would not like someone with HIV & AIDS to be living next door		
5. I would not like to be friends with someone with HIV & AIDS		
6. I feel afraid to be around people with HIV & AIDS		
7. People with HIV & AIDS have only themselves to Blame		
8. I would not employ someone with HIV & AIDS		

9.I would not drink from a tap if a person with HIV & AIDS had just drunk from it		
10.If you have HIV & AIDS you must have done something wrong to deserve it		
11.People with HIV & AIDS should be ashamed of themselves		
12. I feel uncomfortable around people with HIV & AIDS		

SECTION D.1: ATTRIBUTED STIGMA

Please complete all remaining questions in English even if your first language is not English

Please mark the appropriate column with a tick (□), which represents you response

Statement	Agree	Disagree
1. Most people think getting HIV & AIDS is a punishment for bad behavior		
2. Most people would not like to sit next to someone with HIV & AIDS in public or private transport		
3. Most people think less of someone because they have HIV & AIDS		
4. Most people would not like someone with HIV & AIDS to be living next door		
5. Most people would not like to be friends with someone with HIV & AIDS		
6. Most people feel afraid to be around people with HIV & AIDS		
7. Most people think people with HIV & AIDS have only themselves to blame		

8. Most people would not employ someone with HIV & AIDS		
9. Most people would not drink from a tap if a person with HIV & AIDS had just drunk from it		
10. Most people think if you have HIV & AIDS you must have done something wrong to deserve it		
11. Most People think people with HIV & AIDS should be ashamed of themselves		
12. Most people feel uncomfortable around people with HIV & AIDS		

SECTION E. DISCLOSURE

Statement	Agree	Disagree
1. To tell someone that you have HIV is something very risky.		
2. If I test positive I will make a big effort to make sure that my HIV is kept a secret.		
3. A person should only tell others that they have AIDS when they are sick and have no choice.		
4. It is better not to hide that you have AIDS so you can get support from friends or family.		
5. I prefer to know who has HIV & AIDS in my community so that I can be careful not to get infected by him/her?		

………..***Thank you for taking part in this survey***…..

NELSON MANDELA

UNIVERSITY

ORAL INFORMATION: FOCUS GROUP DISCUSSIONS

Welcome

My name is Celiwe Falten. I will be facilitating the focus group discussions. I would like to thank you for volunteering to participate in the discussions around HIV. I understand that you have other important commitments and I appreciate your commitment and eager to make your views known.

Introduction

As you are aware that HIV has become a challenge in every community and household, It is important for people to come together and find ways to reduce the impact of the pandemic. Many people view HIV a sensitive subject that cannot be discussed in public places. Talking about the pandemic is the starting point of finding solutions about how to manage/control it. This focus group is aimed at unpacking 'what being HIV positive' means to you and how you view people who are HIV positive. The discussion will also unpack how people in your community view people who are HIV positive. The focus discussion will take no more than 45 minutes.

Anonymity

With your permission I would like to record the discussions. Although the discussions will be recorded, it will remain confidential and anonymous. The recording will be kept in a safe and lockable facility until they are transcribed, and they will be destroyed thereafter. The transcribed notes will not contain information that link individuals to the statements that they make during the discussions. You therefore asked to provide honest and truthful responses that will help the researcher to compile a useful report

that will be of benefit to you and management. If there any questions that you are ot willing to answer, you are not forced, however I would appreciate it if you can be answer all the questions.

Ground rules

- Only one person will be allowed to speak at a time without interruptions.

- No answer is right or wrong.

- If you have different view you are free to share with others

- You must raise your hand to indicate that you want to say something

- You can only talk when the facilitator gives you an opportunity to do so.

Does anyone have any questions so far?

Introductory question

I am going to give you 5 minutes to think about you think about being HIV positive in your community. Is there any who would like to share his/her views?

Guiding questions

1.1 What does HIV and AIDS stands for?

1.2 Who can get HIV?

1.3 How can one get HIV?

1.4 What do you think about the following statements?

- ✓ You can easily tell when someone is HIV

- ✓ You can prevent getting HIV by avoiding people who are positive

- ✓ Some people deserve to get HIV

1.5 What do people in your community think about HIV?

Section 2. HIV related stigma

The section assesses the level of HIV related stigma amongst members of the community. The facilitator is expected to establish the community understanding of 'being HIV positive"

2.1 What is the perception of your community about people who are HIV positive?

2.2 How do you think community members would feel if you tell them that you are HIV positive?

2.3 Do you think the views of community towards people who are HIV positive is somehow influence / linked to the following demographic factors?

- Religion

- Marital status

- Race

- Level of education

2.4 Name calling. What are the names/labels that people who are HIV positive are often called in your community?

2.5 Expressions of HIV related stigma. How do people in community react when they

meet someone with HIV?

Section 3. Personal stigma

The section assesses the level of HIV related stigma among participants.

What do you think about the following statements?

3.1 People who have AIDS are dirty

3.2 People who have AIDS are cursed

3.3 People who have AIDS should be ashamed

3. 4 It is safe for people who have AIDS to work with children

3. 5 People with AIDS must expect some restrictions on their freedom

3. 6 A person with AIDS must have done something wrong and deserves to be

   punished

3. 7 People who have HIV should be isolated

3. 8 People who have AIDS should not be allowed to work

3.9 People who get HIV through sex have only themselves to blame

3.10 People with HIV & AIDS are promiscuous.

Section 4. HIV Disclosure

4.1 Is it easy to disclose an HIV positive status in your community?

4.2 What are some of the reasons why people may not disclose their HIV positive

   status in your community?

4.3 If you test HIV positive, what may stop you from disclosing your status?

Concluding question

Are there any other burning issues around this discussion that you think were not
thoroughly discussed?

Conclusion

I would like to thank you for participating in this discussion. I hope you found the
discussion useful and interesting

APPENDIX 3:   CONSENT FORM FOR THE FOCUS GROUP DISCUSSIONS

NELS●N M▲NDELA

UNIVERSITY

CONSENT FORM FOR THE FOCUS GROUP DISCUSSIONS

My name is Tasara Mazorodze and I am pursing my Doctorate in Development studies at NMMU. I embarking on a study titled, 'HIV related stigma in rural areas: A case of citrus farm workers based in Addo community in Eastern Cape'. The study is aimed at establishing the forms and expressions of HIV related stigma in rural areas. The study will provide the necessary information required to improve and develop interventions that are aimed at achieving an AIDS free generation. To ensure the success of this study, your participation will be highly appreciated. Participation in this study is voluntary and your responses will be treated with strictest confidence.

You have the right to query concerns regarding the study at any time without any negative consequences related to your employment. Immediately report any new problems during the study, to the researcher as well as the decision not to participate. You can call the researcher under the following phone number: Tasara Mazorodze (Principal investigator) - 0713401346 or email   s216389895@nmmu.ac.za or mazorodze.tasara@gmail.com.

Please be aware of the fact that the ethical integrity of the study has been approved by the Research Ethics Committee (Human) of the Nelson Mandela Metropolitan University. Queries with regard to your rights as a research subject can be directed to the Research Ethics Committee (Human), Department of Research Capacity Development, PO Box 77000, Nelson Mandela University, Port Elizabeth, 6031 or email Dr Kalenga at rosemary.kalenga@nmmu.ac.za.

The facilitator will ask various questions about HIV related stigma. Feel free to discuss with your peers. Your honest discussion will provide the researcher with accurate and reliable answers to the research questions of the study at hand.

My signature on this document provides my informed and voluntary consent.

Signature of participant: ………………………………………………………….

I would like to participate in the lucky draw:

Clock number:

!!!PLEASE SUBMIT THIS PAGE TO THE RESEARCHER!!!

APPENDIX 4:　　**CONSENT FORM FOR THE SURVEY**

NELSON MANDELA

UNIVERSITY

CONSENT FORM FOR THE SURVEY

My name is Tasara Mazorodze and I am pursing my Doctorate in Development studies at NMMU. I embarking on a study titled, 'HIV related stigma in rural areas: A case of citrus farm workers based in Addo community in Eastern Cape'. The study is aimed at establishing the forms and expressions of HIV related stigma in rural areas. The study will provide the necessary information required to improve and develop interventions that are aimed at achieving an AIDS free generation. To ensure the success of this study, your participation will be highly appreciated. Participation in this study is voluntary and your responses will be treated with strictest confidence.

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The form will take about 15 minutes to complete. Please return it and put it into the sealed box provided for that purpose.

☐	Box 1 is provided for the questionnaires.

☐	Box 2 box is provided for the consent forms. Please provide us with your clock number below to be able to include you in the lucky draw.

My signature on this document provides my informed and voluntary consent.

Signature of participant...

I would like to participate in the lucky draw:

Clock number:

!!!PLEASE SUBMIT THIS PAGE SEPARATELY FROM THE QUESTIONNAIRE!!!

NELS●N M▲NDELA

U N I V E R S I T Y

INTERVIEW SCHEDULE

Research Title: HIV related stigma in rural areas: A case of citrus farm workers based in Addo community in Eastern Cape.

Opening

The facilitator will start by introducing himself/herself. During introductions, the facilitator is expected to set the tone of the interview by explaining the purpose of the study as well as assuring the participants that the study is voluntary and confidential.

INTERVIEW QUESTIONS

Section 1: Knowledge about HIV

The section assesses the level of knowledge about HIV among participants. The facilitator is expected to probe if there are any misconceptions about HIV that can result in stigmatisation of people who are HIV positive

1.1 What does HIV and AIDS stands for?

1.2 Who can get HIV?

1.3 How can one get HIV?

1.4 What do you think about the following statements?

✓ You can easily tell when someone is HIV

✓ You can prevent getting HIV by avoiding people who are positive

✓ Some people deserve to get HIV

1.5 What do people in your community think about HIV?

Section 2. HIV related stigma

The section assesses the level of HIV related stigma amongst members of the community. The facilitator is expected to establish the community understanding of 'being HIV positive"

2.1 What is the perception of your community about people who are HIV positive?

2.2 How do you think community members would feel if you tell them that you are HIV positive?

2.3 Do you think the views of community towards people who are HIV positive is somehow influenced / exacerbated by the following demographic factors?

- Religion
- Marital status
- Race
- Level of education

2.4 Name calling. What are the names/labels that people who are HIV positive are often called in your community.

2.5 Expressions of HIV related stigma. How do people in community react when they see someone with HIV?

Section 3. Personal stigma

The section assesses the level of HIV related stigma among participants.

What do you think about the following statements?

3.1 People who have AIDS are dirty

3.2 People who have AIDS are cursed

3.3 People who have AIDS should be ashamed

3.4 It is safe for people who have AIDS to work with children

3.5 People with AIDS must expect some restrictions on their freedom

3.6 A person with AIDS must have done something wrong and deserves to be punished

3.7 People who have HIV should be isolated

3.8 People who have AIDS should not be allowed to work

3.9 People who get HIV through sex have only themselves to blame

3.10 People with HIV & AIDS are promiscuous.

Section 4. HIV Disclosure

4.1 Is it easy to disclose an HIV positive status in your community?

4.2 What are some of the reasons why people may not disclose their HIV positive status in your community?

4.3 If you test HIV positive, what may stop you from disclosing your status?

APPENDIX 6: LETTER OF SUPPORT

+27 (0) 43 701 3400

/UthandoLweneneTrueLove

www.ecac.org.za

EASTERN CAPE AIDS COUNCIL

Multi-sectoral response to HIV/AIDS, TB & STIs

28 June 2017

Dr Rosemary Kalenga

Director: HIV and AIDS Research Unit

Nelson Mandela Metropolitan University

Port Elizabeth

Dear Dr Kalenga

The Eastern Cape AIDS Council (ECAC) acknowledges and supports the study entitled: HIV- Related stigma in rural areas: A case of citrus farm workers based in Addo community in eastern cape, that will be conducted by Mr Tasara Mazorodze in pursuit of his PhD in Development Studies at NMMU.

Stigma and discrimination of people living with HIV has been identified as one of the factors that prevents eligible clients from accessing the necessary health services. The adoption of the UNAIDS 90-90-90 strategy necessitates that all factors that may impede the realization of an HIV-free generation be well researched, 'so that appropriate programmes can be developed to address such obstacles. This study will provide deeper insight on the stigmatization and discrimination of PLHIV in rural areas, communities that often receive few or inadequate public services.

We look forward to supporting this greatly needed project.

Sincerely

Pelisa Dana (Dr)
Senior Researcher (ECAC)

12 Gloucester Road, Vincent, East London, Postnet Vincent, P/Bag X9063   Suite No 3025246, Vincent, 5247

PERMISSION TO CONDUCT RESEARCH AT YOUR FARM

NELS●N M▲NDELA

UNIVERSITY

RE: <u>PERMISSION TO CONDUCT RESEARCH AT YOUR FARM</u>

Good day sir/madam

My name is Tasara Mazorodze. I am pursing my Doctorate in Development studies at NMU. I embarking on a study titled, 'HIV related stigma in rural areas: A case of citrus farm workers based in ADDO and Kirkwood in Eastern Cape Province'. The proposal to conduct the study has already been accepted by the faculty of Business and Economics at NMU.

The study is aimed at establishing the forms and expressions of HIV related stigma in rural areas. With the slow response to HIV & AIDS related stigma in South Africa and particularly in rural areas, the target to achieve an AIDS free generation by year 2030 appears to be a utopian dream. The study emphasises the need to address HIV related stigma, a known barrier to HIV prevention, treatment and care amongst the rural population that is often disadvantaged in terms of access to health facilities and information.

The researcher is also employed at the AIDC EC which partnered with your farm in past, hence the current research project has, to a large extent, been influenced by the findings from the AIDC EC's surveys and interactions with farm workers. It is hoped that the current study, which has already gained support from the NMMU research unit and Eastern Cape AIDS Council (ECAC), will motivate the relevant stakeholders to invest more as far as the management of HIV and HIV related stigma is concerned.

Against this background, I therefore request for permission to conduct the study at your farm. The study is for academic purposes; hence all the ethical procedures will be followed (e.g anonymity and confidentiality). The findings of the study will be shared with the farm management. The study will not in any way affect the day to day activities at your farm. The research assistants will distribute the questionnaires during lunch time and the workers will complete the questionnaires during their own time.

It is a research practice and University requirement for the student researcher to seek permission from the relevant authority to conduct the study. The University also require the relevant authority to provide a letter of acknowledgement to show that they support and are aware of the purpose and benefits of the study.

Relevant documents regarding the study are attached

You support in this regard will be greatly appreciated.

Regards,

Tasara Mazorodze (NMMU PHD student)

Student Number: s216389895

Contact Number: 0713401346

APPENDIX 8:   PERMISSION TO CONDUCT THE STUDY

Sikhula Sonke Enterprises Pty Ltd

Reg No 2014/016688/07

VAT no: 4270268446

PO Box 222, Addo, 6105 Email srftadmin@srcc.co.za

Telephone +27 87 700 4462 Fax +27 042 233 0601

Dear Mr Mazorodze

This letter serves to confirm that I received your requeuest to conduct a study entitled,

HIV related stigma in rural areas: A case of citrus farm workers based in ADDO and

Kirkwood in Eastern Cape Province'. Permission is hereby granted to you to conduct

the study on condition that the findings will be shared with the management.

Kind regards

Buyiswa Ndyenga

General Manager

APPENDIX 9: **APPROVAL OF PROPOSAL BY THE FACULTY**

NELSON MANDELA
UNIVERSITY

RPS16.31.13

Student Name: T Mazorodze [Registered]

Student Number: 216389895

Degree: PhD (Development Studies)

Supervisor: Co-Supervisor Dr R Chimbala-Kalenga

Title: HIV –RELATED STIGMA IN RURAL AREAS: A CASE OF CITRUS FARM WORKERS BASED IN ADDO COMMUNITY IN EASTERN CAPE

RESOLUTION

Recommended that:

The proposal be Accepted

APPENDIX 10:   APPROVAL OF PROPOSAL BY ETHICS COMMITEE

NELS N M NDELA
UNIVERSITY

Chairperson: Research Ethics Committee (Human)

Tel: +27 (0)41 504 2235

charmain.cilliers@mandela.ac.za

Ref: [H17-BES-DEV-032 / Approval]

29 March 2018

Dr R Kalenga

Director: HIV & AIDS Unit

South Campus

Dear Dr Kalenga

HIV-RELATED STIGMA IN RURAL AREAS: A CASE OF CITRUS FARM WORKERS BASED IN ADDO COMMUNITY IN THE EASTERN CAPE

PRP: Dr R Kalenga

PI: Mr T Mazorodze

Your above-entitled application served at the Research Ethics Committee (Human) for approval.

The ethics clearance reference number is **H17-BES-DEV-032** and is valid for three years. Please inform the REC-H, via your faculty representative, if any changes (particularly in the methodology) occur during this time. An annual affirmation to the

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effect that the protocols in use are still those for which approval was granted, will be required from you. You will be reminded timeously of this responsibility, and will receive the necessary documentation well in advance of any deadline.

We wish you well with the project.

Yours sincerely

Prof C Cilliers

Chairperson: Research Ethics Committee (Human)

Cc: Department of Research Capacity Development

Faculty Officer: BES

APPENDIX 11: TURN IT IN REPORT

HIV-RELATED STIGMA IN RURAL AREAS A CASE OF
CITRUS FARM WORKERS BASED IN ADDO COMMUNITY IN
EASTERN CAPE by Tasara Mazorodze s216389895

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APPENDIX 12:   LETTER FROM GRAMMAR EDITOR

S. Ferreira

Westmead Drive
Theescombe
Port Elizabeth
6001

PO Box 15439
Emerald Hill
Port Elizabeth
6011

Cell: 074 457 5336

To whom it may concern

This document serves to confirm that the following thesis paper has been checked:

NAME: Tasara Mazorodze

Student Number: (Not provided)

This paper has been checked for:

1. Grammar
2. Spelling
3. Punctuation
4. Other formatting errors

I have left my comments in the review section of the document.

Should you have any further enquiries, please do not hesitate to contact me.

(Cell: 0744575336)

Kind regards

Simoné Ferreira