

https://dspace.org/

The mental health needs of female inmates in Durban, South Africa

Naidoo, Samantha

2022

https://hdl.handle.net/10539/35673

Naidoo, Samantha. (2022). The mental health needs of female inmates in Durban, South Africa. [PhD thesis, University of the Witwatersrand, Johannesburg]. WIReDSpace. https://hdl.handle.net/10539/35673

Downloaded from a DSpace repository. https://dspace.org/

THE MENTAL HEALTH NEEDS OF FEMALE INMATES IN DURBAN, SOUTH AFRICA

Samantha Naidoo

A thesis submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in fulfilment of the requirements for the degree of Doctor of Philosophy.

Johannesburg, 2022

This thesis is being submitted for the degree of Doctor of Philosophy at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other university.

Signed



22nd day of September 2022 in Johannesburg, South Africa

Declaration

I, Samantha Naidoo, student number 1792160, declare that this thesis is my own work and that I contributed adequately towards the research findings published in the articles stated below which are included in my thesis.

Signature of student.....Date.28/02/2022

Name of Primary supervisor.Ugasvaree Subramaney

Signature of Primary Supervisor.....Date.28/2/22

Agreement by co-authors: By signing this declaration, the co-authors listed below agree to the use of the article by the student as part of her thesis.

Article 1: Mental illness and HIV amongst female inmates in Durban, South Africa

South African Journal of Psychiatry. 2022. DOI: https://doi.org/10.4102/sajpsychiatry.v28i0.1628

Name	Contribution	Signature	Date
Samantha Naidoo	1st author		28/02/22
Ugasvaree Subramaney	2nd author		28/2/22
Saeeda Paruk	3rd author		25 Feb 2022
Liezel Ferreira	4th author		25 Feb 2022

Article 2: An HIV narrative of female inmates with a lifetime history of mental illness in Durban, South Africa.

Frontiers in Psychiatry. 2021. DOI: 10.3389/fpsyt.2021.637387

Name	Contribution	Signature	Date
Samantha Naidoo	1st author		28/02/22
Liezel Ferreira	2nd author		25 Feb 2022
Ugasvaree Subramaney	3rd author		28/2/22
Saeeda Paruk	4th author		25 feb 2022

Dedication

I dedicate this labour of love to my life partner and husband, Yuvin Harbhajan. You are truly “the wind beneath my wings” and have enabled me to soar higher than I ever thought possible. To my darling sons, Yuvir and Saiyuv, I’m sorry for all the time I spent working on my PhD during the past five years. Mummy is finally done! I hope that one day you will be inspired by my sacrifices and perseverance, to be the best that you can be, and to make a difference in the world. To my brilliant mother, Veera, who herself never got the opportunity to complete even a primary school level of education, thank you for inculcating in me the values of hard work and determination, and for encouraging me constantly during this challenging journey. To my dad, Dayalan, who worked as a truck driver to put me through medical school, thank you for your sacrifices. I hope that I have done you both proud in my pursuit of academic excellence by achieving this milestone. Finally, and most importantly, to my Lord and Creator, Bhagawan Shri Sathya Sai Baba, all glory to You always, for without Your love and grace, nothing is possible.

Publications arising from this study

1. Naidoo S, Ferreira L, Subramaney U, Paruk S. An HIV narrative of female inmates with a lifetime history of mental illness in Durban, South Africa. Frontiers in Psychiatry. 2021. DOI: 10.3389/fpsyt.2021.637387

2. Naidoo S, Subramaney U, Paruk S, Ferreira L. Mental illness and HIV among female inmates in Durban, South Africa. South African Journal of Psychiatry. In press.

Presentations arising from this study

1. 08/2019- The National Forensic Psychiatry Conference. Cape Town. Presented "The mental health needs of female offenders in Durban, South Africa".

2. 09/2021- University of the Witwatersrand, Faculty of Health Sciences Biennial Research Day 2021. Johannesburg. Presented the first qualitative paper entitled "An HIV Narrative of female inmates with a lifetime history of mental illness in Durban, South Africa".

3. 10/2021- South African Society of Psychiatrists Congress 2021. Drakensberg, KwaZulu-Natal. Presented "Mental illness and HIV among female inmates in Durban, South Africa" and the first qualitative paper entitled "An HIV Narrative of female inmates with a lifetime history of mental illness in Durban, South Africa".

4. 08/2022- World Psychiatric Association. World Psychiatric Congress 2022. Bangkok, Thailand. Presented "Beaten, broken and behind bars: a story of female inmates with a lifetime history of trauma and mental illness in Durban, South Africa".

5. 09/22- University of the Witwatersrand, Faculty of Health Sciences Biennial Research Day 2022. Johannesburg, South Africa. Presented "Beaten, broken and behind bars: a story of female inmates with a lifetime history of trauma and mental illness in Durban, South Africa".

6. 09/22- Biological Psychiatric Congress 2022. Cape Town, South Africa. Presented "Beaten, broken and behind bars: a story of female inmates with a lifetime history of trauma and mental illness in Durban, South Africa".

Abstract

There is a dearth of literature on the mental health needs of female inmates in low- and middle-income countries, particularly from Africa and South Africa. South Africa has the largest HIV epidemic in the world and has very high rates of violent crime and trauma, including gender-based violence. HIV and trauma have established associations with mental illness. In addition, culture plays an important role in the lives of African people. In light of the above, this study aimed to provide a holistic picture of the mental health needs of female inmates in Durban, South Africa, in a culturally relevant setting. This was achieved through a mixed methods, sequential, explanatory design study which was conducted in two phases. In phase one, the prevalence of mental illness, HIV and trauma was measured among 126 randomly recruited female inmates. This was followed by a qualitative phase which explored the lived experiences of mental illness, trauma and HIV in a diverse cultural setting, among a sub-sample of purposively chosen female inmates from the first phase.

Findings revealed a high prevalence of lifetime mental illnesses including major depressive disorder, post-traumatic stress disorder, alcohol and substance use disorders, borderline personality disorder, and suicidal ideation and attempts, as compared to the general population in South Africa, and compared to international incarcerated populations. A significant treatment gap was also inferred from the findings.

HIV was very prevalent among female inmates, in keeping with studies of women in the general population in some parts of rural KwaZulu-Natal, however, it was much higher than other inmate populations internationally. The lifetime prevalence of trauma was also elevated. Associations were found between mental illness and trauma, as well as mental illness and HIV.

A qualitative exploration of their lived experiences of HIV found that inmates reported feeling supported and accepted in the correctional environment, which contrasted to their experiences of being stigmatised and discriminated against while living in their home communities. Negative community experiences were largely due to the prevalent lack of knowledge and misconceptions. The lived experiences of trauma and mental illness among female inmates highlighted the contribution trauma had on

the development of their mental illness and their trajectories into crime. Understanding their cultural backgrounds was crucial in understanding the inmates' narratives.

The mental health needs of female inmates at this correctional centre in Durban, South Africa are concerning and should be considered in the context of their high prevalence of HIV, trauma and cultural backgrounds. Thus, integrated mental health rehabilitation programmes, which are culturally-informed, should be implemented at this correctional centre. Incarceration presents an opportunity to conduct vital rehabilitation, prevention and promotion work in this hard-to-reach and vulnerable population, in order to optimise their mental health and to decrease recidivism. The outcomes can also be transferred to their communities of origin upon release to help curb the epidemics of HIV and gender-based violence in South Africa.

Acknowledgements

I would like to acknowledge the contributions of my supervisors, Professor Ugasvaree Subramaney, Dr Saeeda Paruk and Dr Liezel Ferreira, whose mentoring and supervision has been inspiring, motivating and invaluable.

I humbly acknowledge Professor Mohamed Nagdee, my mentor who inspired me to embark upon this journey in forensic psychiatry.

I would also like to acknowledge the late Professor D. L. Mkize, former Head of Department of Psychiatry at the University of KwaZulu-Natal. Professor Mkize kindly agreed to be available to provide emergency assistance to participants who decompensated during the data collection phase of the study. He tragically passed away in January 2021, which was after completion of the data collection phase of the study. I wish to extend my sincere gratitude to his surviving family, not only for his contribution to this Doctoral degree but also for his mentorship during my Master's degree and his overall influence on my trajectory in the field of psychiatry.

Finally, I would like to acknowledge the Department of Correctional Services for permission granted to conduct this study, and the female inmates who had the courage to share their stories with me. Finally, I would like to acknowledge the Nedgroup Trust for awarding me an independent bursary that partially sponsored the data collection phase of the study. However, the content of this thesis does not represent the official views of this sponsor.

This thesis follows the format of a “thesis by published works” with the three empirical manuscripts (two of which have already been published) comprising chapters 3, 4, and 5 of the thesis. In addition, two other manuscripts presenting the results form chapters 6 and 7. Although I include a full literature review (chapter 1), the relevant literature is also covered in each of the results chapters. Tables in the results chapters are numbered from Table 1 onwards, as in the manuscripts, and in each case referencing follows the specific journal style. References included in the bibliography at the end of the thesis are for works cited in chapters 1,2 and 8.

TABLE OF CONTENTS

Declaration ii

Dedication iv

Publications arising from this study v

Presentations arising from this study v

Abstract vi

Acknowledgements viii

List of Abbreviations xvi

List of Tables xviii

List of Figures xix

1. Chapter One: Introduction, Literature Analysis and Critique 1

1.1. Introduction 1

1.2. Literature Analysis and Critique 6

1.2.1. Definitions. 6

1.2.2. Women's pathways into criminality 7

1.2.3. South African correctional centres and inmates 9

1.2.4. Prevalence of mental disorders among prison populations 12

1.2.5. HIV/AIDS 16

1.2.6. Violence and trauma 19

1.2.7. The South African cultural setting 23

1.2.8. Conclusion 26

2. Chapter Two: Methodology 27
2.1. Introduction 27
2.2. Research paradigm 27
2.2.1 Research design 28
2.2.1.1. Mixed Methods Research design 28
2.2.1.2. Philosophical assumptions behind mixed methods design 30
2.2.1.3. Sequential explanatory mixed methods design 30
2.2.1.4. Philosophical assumptions of the sequential explanatory design 33
2.2.1.5. Quantitative phase design 33
2.2.1.6. Qualitative phase design 33
2.2.2. Challenges in mixed methods research 36
2.2.3. Validity of Qualitative research 36
2.2.4. Transformative framework 40
2.3. Aim 44
2.4. Objectives 44
2.5. Study setting 45
2.6. Sampling method and sample size calculation 46
2.6.1. Phase one (Quantitative Data) 46
2.6.2. Phase two (Qualitative Data) 47
2.6.3. Inclusion criteria for phase one 48
2.6.4. Exclusion criteria for phase one 48
2.6.5. Inclusion criteria for phase two (purposive sampling) 49
2.7. Instruments 49
2.7.1. Timeline 49
2.7.2. Socio-demographic clinical and forensic questionnaire 50
2.7.3. Structured clinical interview for the Diagnostics and Statistical Manual 5-Research Version (SCID 5-RV) 50
2.7.4. Adverse Childhood Experiences International Questionnaire (ACE-IQ) 52
2.7.5. Semi-structured interview guide for in-depth interviews 52
2.8. Data management 53
2.9. Data collection and collation 53

2.9.1. Data collection procedure 53
2.9.2. Data collation 57

2.10. Data analysis 58
2.10.1. Quantitative data analysis 58
2.10.2. Qualitative data analysis 60

2.11. Limitations 64

2.12. Ethical considerations 65

2.13. Timeframes 67

3. Chapter Three: Results: Manuscript 1 (published)– Mental illness and HIV among female inmates in Durban, South Africa 68

Abstract 68

Introduction 69

Method 73

Results 77

Discussion 86

Conclusion 90

References 91

4. Chapter Four: Results: Manuscript 2 (published)– An HIV narrative of female inmates with a lifetime history of mental illness in Durban, South Africa 98

Abstract 98

Introduction 99

Materials and Methods 101

Results 103

Discussion 117

Conclusion 121

References 122

5. Chapter Five: Results: Manuscript 3 – The association of cumulative adverse childhood experiences with mental illness, violent offending and HIV among female inmates in Durban, South Africa 126

Abstract..... 126

Introduction 127

Methods 129

Results 132

Discussion 136

Conclusion..... 139

References..... 140

6. Chapter Six: Results: Manuscript 4 – Beaten, broken and behind bars: a story of female inmates with a lifetime history of trauma and mental illness in Durban, SA 147

Abstract..... 147

Introduction 148

Methods 149

Results 151

Discussion 173

Conclusion..... 177

References..... 178

7. Chapter Seven: Results: Manuscript 5- What women want: Addressing the unmet mental health needs of female inmates in Durban, South Africa **183**

Abstract..... 183

Introduction 184

Methods 186

Results **188**

Discussion **200**

Conclusion **206**

References **207**

8. Chapter Eight: Discussion and Conclusion **212**

8.1. Introduction **212**

8.2. Discussion **213**

8.3. Conclusion and recommendations **219**

8.3.1. Implications for future research 219

8.3.2. Implications for policy and practice in the DCS 220

8.3.3. What can society do to improve the status quo of female inmates? 224

8.4. Reflections on my PhD journey **227**

REFERENCES **228**

APPENDICES **257**

A - Ethics clearance certificate **258**

B - Permission from the Department of Correctional Services (DCS) **259**

C - Participant Information Sheet **260**

D - Consent form for phase one **264**

E - Consent form for phase two **266**

F - Letter of support to provide emergency psychological services **268**

G - Referral for emergency psychological services **270**

H - Non-disclosure agreement **271**

I - Timeline **272**

J - Socio-demographic, clinical and forensic questionnaire **273**

K - World Health Organisation Adverse Childhood Experiences Questionnaire 284

L - Semi-structured Qualitative Interview Guide 293

M - Turnitin report and Plagiarism declaration 295

Abbreviations

ACE- adverse childhood experience

AIDS- acquired immune-deficiency syndrome

ART-anti-retroviral therapy

ASPD- antisocial personality disorder

AUD- alcohol use disorder

BMD- bipolar mood disorder

BPD- borderline personality disorder

CI- confidence interval

CSA- Correctional Services Act 111 of 1998

DCS- Department of Correctional Services

DSM- Diagnostics and Statistical Manual

GBV- gender-based violence

HIV- human immuno-deficiency virus

KZN- KwaZulu- Natal

MDD- major depressive disorder

OR-odds ratio

PI- principal investigator

PIN- participant identification number

PLWHA- people living with HIV/AIDS

PTSD- Post-traumatic stress disorder

RD- remand detainee

SA- South Africa

SCID- Structured Clinical Interview for the Diagnostics and Statistics Manual

SMI- severe mental illness

SO- sentenced offender

SUD- substance use disorder

WCC- Westville Correctional Centre

WHO- World Health Organisation

WLWH- women living with HIV

List of Tables

Chapter 3

Table 1: Socio-demographic profile of 126 participants

Table 2: Prevalence of DSM-5 disorders

Table 3: Association between HIV and mental illnesses

Table 4: Associations between offending and mental illnesses and personality disorders

Chapter 4

Table 1: Summary of main themes and sub-themes

Chapter 5

Table 1: ACE binary and frequency scores

Table 2: Association of ACEs with DSM-5 disorders and HIV using binary and frequency scores

Chapter 6

Table1: Summary of main themes and sub-themes

Chapter 7

Table 1: Summary of main themes and sub-themes

List of Figures

Chapter 2

Figure 1: Visual model for mixed methods sequential, explanatory design procedure

Chapter 3

Figure 1: Categories of current offences

Figure 2: Prevalence of AUDs and SUDs among SOs and RDs

Chapter 5

Figure 1: Prevalence of the cumulative ACE binary and frequency scores

CHAPTER ONE: INTRODUCTION, LITERATURE ANALYSIS AND CRITIQUE

1.1. INTRODUCTION

Health and mental health

The World Health Organisation (WHO) defines health as "a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity".[1] The WHO further conceptualises mental health as "a state of wellbeing in which the individual realises his or her own abilities, can cope with the normal stressors of life, can work productively and fruitfully, and is able to make a contribution to his or her community".[1] Hence, mental health includes cognitive, behavioural, emotional and social wellbeing, and affects the way in which an individual thinks, feels and acts.[2] Mental health is an important aspect of health as it influences an individual's overall level of functioning by impacting on activities of daily living, relationships and physical health.[3]

Mental health of prisoners

There is an over-representation of mental illness among prisoners.[4,5] Incarcerated individuals frequently come from low socio-economic backgrounds, and have histories of childhood victimisation and substance use disorders (SUDs), which place them at risk of developing psychiatric disorders.[6-8] In addition, during incarceration poor living conditions,[9] physical assault[10] and psychological abuse[11] can further contribute to the development of, or relapse in, mental health disorders.

Prisoners, like all other citizens, are entitled to medical treatment, which is a fundamental human right. Mental health care forms part of this basic right to healthcare. This right is enshrined in South African law that is, in sections 27 and 35 of the Bill of Rights, which is Chapter 2 of the Constitution of South Africa (SA).[12] It is also guaranteed under international law in Article 25 of the United Nations Declaration of Human Rights.[13] Furthermore, international prison charters such as the United

Nations Standard Minimum Rules for the Treatment of Prisoners, more commonly referred to as the Nelson Mandela Rules, set out what is generally accepted as good principles and practice in the treatment of prisoners and in prison management.[14]

Female prisoners: Mental health, trauma and HIV

Female prisoners carry a higher burden of mental illness compared to their male counterparts.[4,5] However, historically, there has been a paucity of research on the mental health of female prisoners. This may largely be due to females constituting a minority of the global prison population (6.9%),[15] and approximately only 2-3% of prisoners in SA.[16] Although women make up a minority of the prison population, the number of female prisoners internationally has been increasing in recent years.[17]

In the past few decades there has been a burgeoning interest in female prisoners' mental and physical health needs since there has been increased recognition that they have gender-specific vulnerabilities, unique pathways into crime, and mental health needs.[17,18] Women's rights to gender-specific care is recognised in the United Nations Rules for the Treatment of Women Prisoners and Non-custodial Measures for Women Offenders" also known as the Bangkok Rules, to which SA is a signatory.[19] This a set of 70 rules focused specifically on the treatment of female offenders and prisoners, and was adopted by the United Nations in 2010.[19] It is intended to complement the United Nations Standard Minimum Rules for the Treatment of Prisoners. It aims to guide decision-makers such as legislators, policy-makers, sentencing authorities and prison staff to limit the imprisonment of women offenders as far as possible, and to address the specific needs of women in cases where they are incarcerated.[19] Women have a higher prevalence of mental illnesses such as post-traumatic stress disorder (PTSD), SUDs or alcohol use disorders (AUDs); suicide and self-harming behaviours; extensive histories of physical and sexual victimisation; medical needs such as reproductive health needs; and further concerns related to the women's responsibilities for their offspring and families compared to males.[17,20]

Many countries have fewer facilities for women due to the smaller number of female prisoners compared to males.[21] Women are therefore often imprisoned far from home which makes maintaining contact with their children and families more challenging.[21]

The restricted visitation with children produces emotional stress and psychological despair in incarcerated mothers.[22] Separation from their children is reported as the most difficult aspect to cope with during incarceration, causing distress and grief, which may have a negative effect on their mental wellbeing.[22]

Internationally, studies have reported a high prevalence of traumatic experiences among female prisoners. This has been cited as a contributing factor in many women's trajectories into crime.[23-28] Trauma is also associated with mental illness, as was borne out in the Adverse Childhood Experiences (ACE) study, a seminal study in the United States of America (USA) in 1998.[29] This study found a graded relationship between adverse childhood experiences and health outcomes, including mental illness.[29]

Although there has been a recent shift internationally and locally in research focusing on the mental health of female inmates, South African studies have focused predominantly on qualitative work, examining the lived experiences of trauma in the context of female offending.[30,31] There remains a paucity of quantitative studies which measure childhood and adult trauma, as well as relationships between trauma and mental illness among female prisoners.[30-32] This is particularly relevant in view of the high prevalence of gender-based violence (GBV) in SA, which includes sexual violence.[33] It is challenging to measure accurate prevalence rates of rapes across countries due to under-reporting for a number of reasons, including embarrassment, victim shaming, fear of retribution from the perpetrator and fear regarding the victim's family's reaction. In addition, the definition of rape differs from one country to another.[34] Notwithstanding, South Africa has been labelled the rape capital of the world with 132.4 reported rapes per 100 000 of the population.[34] In recent years, the South African government has recognised this rampant societal ill, and has prioritised steps to curb the scourge of GBV. The most recent development is the passing of three GBV bills by the South African National Assembly in June 2021.[35]

In addition, various prison operational procedures such as invasive searches and privacy violations, overt power imbalances between prisoners and staff, and verbal or physical belittlement, typify many female correctional facilities.[36] These processes are perceived by female prisoners as extremely stressful and psychologically damaging since they are evocative of victimisation experiences prior to incarceration, and may

exacerbate female prisoners' mental health.[36] Hence, trauma and its relationship to mental illness and violent offending, was chosen as another area of focus in this study.

Human immunodeficiency virus (HIV) or acquired immunodeficiency syndrome (AIDS) is an international challenge, with most people living with HIV/AIDS (PLWHA) residing in sub-Saharan Africa.[37] South Africa has the largest number of PLWHA worldwide (approximately 8.2 million).[38] In SA, women are disproportionately affected by HIV with more than 60% of PLWHA being women.[39] The prevalence of HIV among prisoners is higher than that of the general population in most countries.[40] In some countries in West and Central Africa, female prisoners have a higher prevalence of HIV than that of their male counterparts.[40] HIV and mental illness share a complex bidirectional relationship, in that mental illnesses may predispose an individual to contracting HIV, and mental illnesses can also be a consequence of being infected with HIV.[41-43] Thus, this study sought to determine the burden of HIV among female inmates in KwaZulu-Natal (KZN), the province with the highest prevalence of HIV in SA,[44] and one of the highest prevalence rates in the world.[45] It also aimed to examine the relationship between HIV and mental illness in female inmates.

South Africa is made up of people of diverse cultures and ethnicities, with the majority being indigenous African people. Traditional beliefs are deeply engrained in the lives of most African people.[46,47] African traditional beliefs are highly diverse and may include beliefs such as ancestral worship and the consultation of traditional healers. Ancestors are worshipped at major events for example weddings, births and deaths.[47] Ancestors are also called upon to communicate through when Black African people pray to God.[47] Findings of studies from high income countries (HICs) and other non-African lower and middle-income countries (LMICs) cannot directly be extrapolated to the South African inmate population, partly because of the socio-economic and cultural differences. Thus, in this study, we explored female inmates' experiences of HIV, trauma and mental illness within a culturally relevant context. The majority of the world's prisoners come from non-western countries however, there remains a dearth of literature on inmates from these countries, which are culturally distinct from western countries.[4,5] This further supports the need for a study of this nature.

In addition, quantitative studies on their own, fail to fully capture the impact that HIV, trauma and mental illness have on the lives of female inmates. Thus, this study also

aimed to qualitatively explore female inmates' lived experiences to provide a holistic understanding of their gendered mental health needs, in a diverse cultural setting.

Historically, most correctional facilities, nationally and globally, were designed for males.[17,48] Subsequently, most prisons do not cater for the gendered needs of women such as medical, reproductive and mental health needs, and are unable to protect the rights of women such as preventing sexual abuse.[17,48] It has been argued that a general lack of programming targeted at women's gender specific needs contributes to the recidivism rates of previously incarcerated women.[18]

In addition, a strong body of evidence exists which indicates that prisoners with mental illnesses have an increased risk of re-offending.[49] Mental illnesses, particularly when comorbid with substance use, may precipitate criminal behaviour.[48] Assessment tools and rehabilitation programmes need to take cognisance of this, if the Department of Correctional Services (DCS) is to instill meaningful change among female inmates, in an overall attempt to improve mental health outcomes and decrease recidivism.

Most extant research on South African female inmates has been the domain of criminologists, psychologists and social workers who have conducted criminal profiling, qualitatively explored female inmates' lived experiences of trauma, and their unique vulnerabilities and pathways into crime; and to a limited extent, quantitatively investigated their mental health challenges.[30,31,50-52] Research from a psychiatric perspective has been virtually absent, and the wealth of information that derives from this stance is needed to increase the understanding of, and improve insight into, the mental health care needs of female inmates. This will assist in creating an evidence base for further policy development and intervention strategies for this marginalised subset of the inmate population. Such intervention strategies should include the formulation of assessment tools and rehabilitation programmes geared at addressing female inmates' mental health needs.

1.2. LITERATURE ANALYSIS AND CRITIQUE

The literature review begins with the relevant definitions, followed by a summary of the literature on women's pathways into offending, the current state of South African correctional facilities and the profile of female offenders. It then seeks to provide a rationale for the topics of interest selected for the study, by examining the prevalence of mental illness and HIV, in both the general and inmate populations. It also reviews the bidirectional relationship between HIV and mental illness. The literature review proceeds to describe the effects of violence and trauma in SA with a focus on GBV, and examines the relationships between trauma and mental illness, as well as trauma and offending. Finally, it discusses the relevance of culture in the context of mental illness, trauma and HIV among female inmates. This review endeavours to demonstrate the hiatus in the extant literature, thereby justifying a critical need for such research.

1.2.1. Definitions

1.2.1.1. Inmate: "any person, whether convicted or not, who is being detained in custody in any correctional centre or remand detention facility".[53] The term "prisoner" is more commonly used in international studies.[4-11,14-28] Both terms are used interchangeably in this thesis.

1.2.1.2. Remand detainee (RD): "a person detained in a remand detention facility, awaiting the finalisation of his/her trial, whether by acquittal or sentence, if such a person has not commenced serving a sentence, or is not already serving a prior sentence".[53] Remand detainees are also referred to as awaiting trial detainees in the literature.[4,5]

1.2.1.3. Sentenced offender (SO): "a convicted person sentenced to incarceration or correctional supervision".[53]

1.2.1.4. Correctional facility: "any place established under the Correctional Services Act 111 of 1998 of South Africa (CSA) as a place for the reception, detention, confinement, training or treatment of persons liable to detention in custody, or to placement under protective custody".[53] The term "prison" is used more frequently in international literature.[4-11,14-28] Both terms are used interchangeably in this thesis.

1.2.1.5. Recidivism: “the tendency of a convicted criminal to re-offend”.[54] For the purposes of this study, recidivism was calculated as the number of participants (SOs and RDs) who had previously been convicted of an offence.

1.2.1.6. Violent offences: offences against a person who was threatened or harmed, or where physical force was used during the commission of the offence.[55,56] For the purposes of this study, it includes murder, attempted murder, robbery, robbery with aggravating circumstances, assault, assault with intent to do grievous bodily harm, rape, conspiracy to murder, human trafficking and kidnapping.

1.2.1.7. Non-violent offences: offences in which no injury or physical force, or threat of force were used against a person.[55,56] For the purposes of this study, it includes theft, fraud, housebreaking, racketeering, corruption, money laundering, dealing in drugs, possession of drugs, forgery and uttering, contravening the Medicines and Related Substances Act, breaking parole, possession of stolen property and unlawful possession of a firearm.

1.2.2. Women’s pathways into criminality

The literature suggests that women have distinct pathways into criminality which are different from that of their male counterparts.[18] Pioneering work conducted by Daly in the early 1990s contributed significantly to the understanding of women’s trajectories into crime.[57] Based on the records of 40 felony-convicted women, Daly constructed their “life stories” highlighting their socio-economic circumstances during childhood, their employment, household and financial situation at the time of the offence, their trauma histories, substance use, previous forensic history, and psychiatric history.[57] She identified five predominant pathways that led to female offending:

- harmed and harming women, who were neglected, sexually or physically abused as children and subsequently exhibited behavioural problems. They were exposed to chaotic and dysfunctional environments while growing up, including parental substance abuse. They became violent when under the influence of alcohol or drug addiction. They experienced emotional and psychological problems with poor coping mechanisms which eventually resulted in aggressive crimes;

- battered women, who were in relationships with, or recently terminated relationships with, abusive partners and committed crimes such as assault or manslaughter of their partners;
- street women, who experienced psychological distress while growing up, or in their relationships at the time of the offence. They escaped traumatic domestic circumstances, and are distinguished from harmed or harming women since they lived on the street, and subsequently became involved in minor crime and sex work to subsidise their drug habits. They had extensive histories of arrests and convictions;
- drug-connected women, who used or sold drugs as a result of their relationships with boyfriends or other family members, and they mainly engaged in dealing in drugs; and
- other women, who committed offences due to financial circumstances or greed; they did not use substances, or have a history of childhood abuse, and their main reason for offending was the desire for more money.

Daly's findings are not directly comparable to the current study population for many reasons, including that her study was conducted in a high-income country (HIC) and that her work was conducted using pre-sentencing reports rather than first-hand accounts from the women themselves. Notwithstanding, this seminal work by Daly ignited further research into women's trajectories into offending and several authors have made significant contributions since, the detailed description of which is beyond the scope of this review. In SA, research by Artz and colleagues who interviewed 55 female inmates in the Western Cape, identified a multitude of factors that contributed to female offending including poverty, economic marginalisation, trauma, abuse, domestic violence and loss.[31] Artz emphasised that there are no fixed factors that causally create criminal behaviour. Similarly, Dastile who studied 56 female offenders in Gauteng (SA), concluded that one cannot make generalisations on women's pathways into offending, and that the complex life histories and social realities of incarcerated women must be understood in order to understand their nuanced pathways into criminality.[30]

1.2.3. South African correctional facilities and inmates

1.2.3.1. State of South African Correctional Services

In 2020, there were over 11 million prisoners worldwide, and the prison population is rapidly increasing.[58] More than seven million prisoners, comprising 70% of the world's prisoners, come from LMICs.[59]

Over the past few decades in SA, the correctional system has evolved from a racially divided and militarised penal system, to a system that is aligned with the philosophy of the new democratic dispensation. The principal mandate of the DCS is to protect the fundamental rights of all citizens, as enshrined in the Constitution of the country.[12] Currently, South Africa is ranked 12th highest among the world's total prison population, and 42nd in terms of prisoner rate per 100 000 of the population.[16] South Africa's correctional facilities are the most overcrowded in Africa.[60] The total South African inmate population, including awaiting trial and sentenced inmates, as at June 2020 was 147 922, with a prisoner-to-population rate of 248 per 100 000 of the national population.[16] Females constituted 2.6% of the total inmate population and 35.7% were remand detainees.[16] Inmates were accommodated in 235 correctional centres around the country.[16] There are currently only nine correctional facilities for females nationally, hence, many female inmates are incarcerated far from home.[61] Correctional centres have a total capacity of 118 572 and thus, have an occupancy rate of 124.8%. This reflects the current state of gross overcrowding in South African correctional facilities.[16]

Currently there are a myriad of challenges facing correctional centres in SA, as is the case in other LMICs. These include, inter alia: overcrowding;[60] human rights violations, for example torture and assault (including sexual assault);[62] the scourge of infectious diseases such as tuberculosis and HIV/AIDS;[63] ailing correctional facility infrastructure; inadequate staffing, with a resultant inability to offer adequate rehabilitation services; illicit drug addiction; gangsterism and corruption.[64,65]

With respect to demographic distribution, the majority of inmates in South African correctional facilities are the Black African population (79.6%), followed by the Coloured population (18.2%) White population (1.6%) and Asian/Indian population (0.6%).[63] South African correctional facilities house a disproportionately high number

of Coloured inmates and a disproportionately low number of White inmates (9% of the national population each).[63]

Although there are no official statistics for recidivism from the DCS in SA, research by academics and civil society suggest recidivism rates ranging from 24% to 95%.[66] This huge disparity underscores the urgent need for the compilation of national recidivism statistics by the DCS.

1.2.3.2. Profile of South African female inmates

Women and girls are the most rapidly increasing prison population worldwide. Globally, the number of female prisoners has grown by 53% since 2000.[15] However, the number of female inmates in SA has remained relatively stable in the past five years.[16]

The majority of sentenced female offenders in SA are incarcerated for economic crimes.[50] Possible reasons to account for the high rate of economic crimes include social inequality and the high levels of poverty, with an unemployment rate of 32.5%.[38] Many female offenders who commit economic crimes have a low education status.[30] In some African cultures, the education of female children is often compromised if there are financial difficulties, or any care-taking needs in the family.[30] Hence, many African females are unskilled and have high unemployment rates.[30] Many South African females are also the sole breadwinners in their families, with mothers having the financial burden of raising their children and supporting their families.[30] Female-headed households, which account for 37.5% of South African households, are more likely to be extended and non-nuclear.[67] In addition, they are more likely to experience poverty and hunger compared to male-headed households.[67] More than a third of female-headed households receive income from pensions and grants, which creates severe economic pressure.[67] This likely results in women's greater involvement in economic crimes.[52] In addition, by incarcerating women, many of whom are mothers and the main financial providers, they can no longer support their families. This has devastating effects on their children's welfare during their incarceration, and has dire consequences for their children's future. These include a deterioration in their children's behaviour, physical and mental health, social and financial circumstances, housing and care arrangements, schooling, vulnerability to victimisation (including

sexual abuse), abuse of substances and future criminality.[68,69] This perpetuates the vicious cycle of offending from one generation to the next.

Notably, internationally, women commit a relatively small proportion of violent crimes.[70] However, 38% of South African female sentenced offenders are incarcerated for violent offences.[50] International literature reports that physically aggressive behaviour in females frequently results in the assault or demise of an individual who is close to them, rather than that of strangers or acquaintances.[71] Therefore, violent behaviour in females is often the result of interpersonal conflict, which results in assault or death of the victim, and is not only a consequence of antisocial personality traits.[71] According to a study in the USA, the majority of violent crimes perpetrated by females occurs within the context of an intimate relationship.[72] In fact, many women who are incarcerated for murder, have been convicted of murdering their intimate partners, following long-standing abuse by their partners.[72] International literature has reported that factors associated with violent offences among female perpetrators include younger age, unemployment, low socio-economic status, lack of social support and poverty.[72]

Approximately 10% of South African female offenders are sentenced for drug-related crimes.[50] Overall, the proportion of drug-related offences among female offenders in SA is much lower than internationally. In the USA, 30% of female offenders are arrested for drug-related crimes, and an additional 33% report they were under the influence of, or attempting to secure drugs when they were arrested.[25]

1.2.3.3. Current rehabilitation services offered at DCS

The primary goal of the DCS is the successful rehabilitation of offenders and the prevention of recidivism.[64] It thus supports a needs-based approach to rehabilitation, which supports interventions that balance criminogenic factors with the individualised offence profile of inmates.[64] According to the CSA, offenders serving sentences of less than 24 months are not compelled, and hence, they are usually not prioritised, to attend rehabilitation programmes.[53] Correctional programmes currently offered by the DCS include, inter alia, new beginnings (which aims to assist newly incarcerated offenders to adjust to being imprisoned); anger management; crossroads (which is aimed at equipping inmates with the information and skills they need to transform into

law-abiding individuals upon release); restorative justice (which helps offenders to prepare for the restorative processes they will engage in); substance abuse; economic crimes; life skills and pre-release programmes (which helps to equip offenders with the knowledge and skills they will need to successfully reintegrate into their communities,).[73,74] Accredited skills programmes offered to sentenced offenders include carpentry, plumbing, welding, upholstery, building and plastering, painting, electrical courses, motor mechanics, spray painting, hairdressing, chef assistants course, computer skills, agricultural-related training, plant production and entrepreneurship programmes.[75] Educational programmes offered include adult education and training (AET) which is equivalent to a grade 9 level of education, grades 10-12, and distance tertiary education.[75] Although there are multiple national correctional programmes, currently none of these programmes focus on the specific needs of female inmates, such as the psychological management of trauma and its consequences. This notion has been supported by international literature.[76]

1.2.4. Prevalence of mental disorders among prison populations

1.2.4.1. Internationally

Psychotic and depressive disorders

Minimal change was found in the prevalence of severe mental illness (SMI) among prisoners in the past decade according to an updated systematic review on 33 588 prisoners in 24 countries worldwide from 1966 to 2010.[5] In the first systematic review of 62 studies in 23 000 prisoners, Fazel and Danesh found that 4% of females had a six-month prevalence of psychotic disorders and 12% had depression.[4] In Fazel and Seewald's most recent meta-analysis, the pooled prevalence of psychotic disorders among female prisoners was 3.9% (3.6% for males).[5] There was a high level of heterogeneity in results from the different studies, some of which was explained by studies in LMIC settings reporting a higher prevalence of psychotic illnesses (up to 5.5%). The one-year pooled prevalence for psychosis in a systematic review and meta-analysis on 14 527 prisoners from 13 LMICs by Baranyi and colleagues, was 6.2%.[59] Fazel and Seewald's updated review reported a pooled prevalence of 14.1% for depressive disorders in females (10.2% in males),[5] while in the systematic review

and meta-analysis in LMICs, the one-year pooled prevalence for major depressive disorder was 16%.[59]

Post-traumatic stress disorder (PTSD)

Earlier studies found very high prevalence rates of PTSD among incarcerated females, ranging from 17%[77] to 48%.[78] PTSD prevalence rates ranging from 4% to 21% were reported in a systematic review among sentenced prisoners in 2007, with females being disproportionately more affected than males.[79] A more recent systematic review found the pooled point-prevalence of PTSD in female prison populations to be 21.1%.[6]

Alcohol use disorders (AUDs) and substance use disorders (SUDs)

AUDs and SUDs are among the most common disorders diagnosed among prisoners, with males having higher rates of addiction than females for alcohol, but lower rates for illicit substances.[80] Commonly abused illicit substances among prisoners include opiates, for example, heroin; stimulants, for example, cocaine and amphetamines; and cannabis.[81] Intravenous drug use is considered most dangerous as it carries the highest risk of transmitting diseases like HIV and hepatitis.[40] The one-year pooled prevalence for SUDs in LMICs was 5.1%, and for AUDs it was 3.8%.[59] In contrast to these relatively low prevalence rates in LMICs, a study of 150 female offenders in Berlin, Germany in 2015 found that 62% had SUDs on admission to prison, with the most common substance of abuse being opiates (35%).[82] It also found that addictions were highly comorbid with affective, anxiety and personality disorders.[82] This underscores the need to screen women with AUDs and SUDs for underlying psychiatric illnesses which, if not addressed together with the substance use disorders, results in inadequate rehabilitation.

Attention Deficit and Hyperactivity Disorder (ADHD)

For the majority of children and adolescents with ADHD, their symptoms will continue into adulthood,[83] having a significant impact on relationships, careers and even the

personal safety of these individuals, if untreated.[84] A meta-analysis of ADHD among young adults in the general population found a prevalence of 5%.[85] However, studies consistently demonstrate that ADHD is disproportionately higher among individuals in the criminal justice system compared to the general population.[86] Most of these individuals are seldom treated and seem to have more frequent contact with, and pose a greater risk, within the criminal justice system.[87] Offenders with ADHD present with a younger age at initial contact, a higher rate of recidivism as well as problematic institutional behaviour compared to offenders without ADHD.[87] The prevalence of ADHD among imprisoned populations was found to be 25.5%, with no significant difference between males and females, in a recent meta-analysis of 42 studies conducted in 15 countries.[86] Notably, some personality disorders like borderline personality disorder (BPD) and antisocial personality disorder (ASPD) are found more commonly in patients with ADHD.[88]

Personality disorders

In the initial systematic review by Fazel and Danesh, 21% of female prisoners had an ASPD and 25% had a BPD.[4] There is a strong association between prisoners and ASPD. However, the prevalence of ASPD among female prisoners is generally lower than that of their male counterparts.[4] There is a preponderance of BPD among female offenders.[4,89,90] In the previously cited German study, 49% of female prisoners who had SUDs on admission to prison, had comorbid ASPD and BPD.[82]

While international findings are important, it is noteworthy that contextual realities in SA are vastly different. It is thus crucial to examine African and South African literature on the topic.

1.2.4.2. African continent

A substantial burden of psychiatric illnesses exists among forensic populations in Africa, however, research is limited.[10,11,91] Extant international systematic reviews on inmate populations have either included only one African country, for example, Nigeria,[5] or none at all.[92-94] In addition, the systematic review on the psychiatric morbidity among forensic populations in Africa found that there is a dearth of

qualitative data on forensic populations, and that there is a need to include the voices of inmates in future forensic research.[91] The same systematic review also concluded that there has been inadequate development, or testing of, interventions to address the substantial psychiatric needs in African forensic populations.[91]

1.2.4.3. South Africa

More than two thirds of the world's prison population come from LMICs, however, the burden of mental illness among prisoners in these countries is not known.[4,5,59] In keeping with this, there is limited data on mental illness among inmates in SA. A study by Naidoo and Mkize (2012), at the same correctional centre as the current study, was the first study to measure the prevalence of mental illnesses among inmates in SA.[95] The major limitation of this study was the significant male gender bias, with only three of the 193 participants interviewed, being females. Thus, the findings were not generalisable to female inmates. The study by Naidoo and Mkize, which used the mini neuro-psychiatric interview, found that 55.4% of offenders had a DSM-IV axis 1 disorder, the most prevalent being AUDs and SUDs (42%).[95] Twenty-three percent of inmates were diagnosed with current psychotic, bipolar, depressive and anxiety disorders and 46.1% had an ASPD. Notably, the majority of inmates who had mental illnesses were not detected previously, nor were they being treated by correctional mental health services at the time.[95]

A later study on 91 offenders in a South African correctional facility found that 33% were being treated for schizophrenia, 27.5% for major depressive disorder (MDD), 12.1% for bipolar mood disorder (BMD), 11% for psychotic disorder, 8.8% for ASPD and 8.8% for PTSD.[96] Notably, this was a purposive sample of inmates already being treated for mental illness by the DCS, and was thus, not an accurate reflection of the psychiatric morbidity of the entire incarcerated population at that correctional centre.

In a more recent study by Steyn and Booyens among 120 female inmates in Gauteng province in SA, 77.5% were neither diagnosed by, nor receiving treatment from a psychologist.[97] Of the minority who were being treated, the majority had depression (81.5%).[97] In addition, more short-term offenders (less than 24-month sentence) had suicidal ideation compared to medium-term offenders (48.5% versus 31.4%) and short-term offenders were significantly more likely to have attempted suicide than

medium-term offenders.[97] This high prevalence of previous suicidal ideation and attempts is alarming, and should be an area of treatment focus, since South Africa's suicide rate (11.15 per 100 000) is more than the global average of 10 per 100 000.[98] Suicide is also the leading cause of death in custody globally, and is preventable.[99] Hence, it needs to be targeted in this high-risk population.

Steyn and Hall who surveyed 64 female offenders in a Gauteng correctional centre, using the depression, anxiety and stress scale, found that the majority of inmates reported normal to moderate levels of depression (69.8%), anxiety (68.3%) and stress (74.2%).[51] Severe to extremely severe levels of depression were reported in 30.2% while 31.8% had severe to extremely severe levels of anxiety.[51] This underscores the potentially high prevalence of depression and anxiety among South African female inmates, and warrants further investigation in correctional centres in under-researched provinces, such as KZN.

Although these studies have made a significant contribution to the existing literature on female inmates, none of them have comprehensively measured SMIs, SUDs, AUDs, personality disorders, and suicide among female inmates. They also have not examined the associations between mental illness and HIV. In addition, contextualising findings among the diverse cultures in SA is also paramount to understanding female inmates' lived experiences.

1.2.5. HIV/AIDS

1.2.5.1. HIV/AIDS in the general population

By 2020, over 38 million people worldwide were infected with HIV, with 25.4 million receiving anti-retroviral treatment (ART).[100] Globally, there were 690 000 AIDS-related deaths in 2019 and 1.7 million new infections.[100]

Of the total population of 60 142 978 in South Africa as at 2021 mid-year, approximately 8.2 million (13.7%) were PLWHA.[38] South Africa has the largest HIV epidemic in the world.[45] The epicenter of the HIV epidemic is KZN.[45] It is here that a 15 year old girl has an 80% chance of contracting HIV during her lifetime.[101] In some communities in KZN, 60% of women are living with HIV.[45] According to the South

African National Survey on HIV, Black African women were disproportionately affected by HIV/AIDS, and they were closely followed by Coloured women.[102]

Notably, GBV and power inequalities in relationships also contribute significantly to the HIV epidemic in SA, and are associated with higher risks of HIV infection in women.[103] The majority of new infections in HIV dense areas are in women.[103] Young women and adolescent girls accounted for 25% of new infections in 2019, despite making up about 10% of the total population in sub-Saharan Africa.[100] Internationally, it is estimated that 243 million females (aged 15-49 years) have been violated physically and/or sexually by an intimate partner in the past year.[100] Women who suffer intimate partner violence are 1.5 times more likely to contract HIV than women who have not.[100] A higher prevalence of violence is also associated with increased rates of HIV infection among marginalised populations in society, including female sex workers, who have a 30-times higher risk of contracting HIV than the general population.[100]

Furthermore, the stigma and discrimination associated with living with HIV persists in society.[104] HIV-related stigma and discrimination refers to “prejudice, negative attitudes and abuse directed at PLWHA”.[105] In 25 out of 36 countries with recent data on HIV discrimination, in excess of 50% of people between the ages of 15 to 49 years reported having discriminatory attitudes towards PLWHA.[106] According to surveys, not only do PLWHA have to contend with stigma and discrimination from society at large, but they are also confronted with negative attitudes from staff at treatment facilities. This may manifest in refusal of treatment, dismissive attitudes, coerced procedures or violations of confidentiality.[104] Such discriminatory practices deter PLWHA from testing for HIV and from seeking treatment. Such negative attitudes from medical staff create barriers for PLWHA such that they are unable to comply with treatment, achieve desirable viral loads, and ultimately, are unable to decrease the risk of transmitting HIV to others.[104,105]

1.2.5.2. HIV/AIDS in prisoners

The prevalence of HIV in prisons is greater than that of HIV in the general population in many countries.[40] Prisons are considered excellent breeding grounds for HIV.[40] Some of the main reasons for this, apart from the fact that prisons are closed

environments, is the detention of people who use illicit drugs (especially intravenous drugs), sex among inmates (including rape) without condoms, in an HIV prevalent setting, and tattooing with contaminated needles or other implements.[40] This is compounded by overcrowding, corruption and poor access to condoms. Prisons are therefore high-risk environments which allow these infections to be further concentrated and amplified.[107] Prisons however, do not only pose a risk to incarcerated populations, but also confer a significant risk to prison officials and to the general population, since prisoners are not a static population, with constant movement into and out of the prison environment, due to the revolving door effect.[40,108]

HIV prevalence rates in prisons in many countries is high, with one review reporting prevalence rates in excess of 10% in 20 LMICs.[109] In 2014, approximately 10.2 million people worldwide were imprisoned at any point in time and it was estimated that 38 900 (3.8%) were living with HIV.[40] The prevalence of HIV/AIDS among prisoners in sub-Saharan Africa ranges from 2.3% to 34.9%.[107] In a recent review of HIV prevalence among prisoners, it was reported that in some countries, women had a higher prevalence of HIV than males.[40] In West and Central Africa, the prevalence of HIV in women was almost double than that of men.[40] Women are also at greater risk of being admitted to prison with sexually transmitted infections and HIV/AIDS than men because of their greater participation in prostitution.[40] In earlier studies, HIV prevalence rates among prisoners in South Africa were as high as 40-45%.[110] This was more than twice the prevalence amongst adults aged 15-49 in the general population.[110] A more recent study in SA, in Gauteng's largest correctional facility, found that 25.3% of their sample tested HIV positive.[111] Notably, the total number of people who move from prison to the community each year is three times the total prison population at any given point in time, that is, approximately 30 million worldwide.[40] This is a hazardous point of interface since these prisoners can act as vehicles for transmission of HIV from one population to the other.[40]

1.2.5.3. HIV/AIDS and mental illness

Psychiatric disorders are very common among PLWHA.[41] HIV and psychiatric illnesses share a complex bidirectional relationship.[42,43] People with psychiatric illnesses are predisposed to contracting HIV due to a myriad of factors including their

heightened social susceptibility; their impulsivity which results in high-risk behaviours such as sexual indiscretions; and their elevated prevalence of comorbid AUDs and SUDs. However, psychiatric illnesses may also be caused by direct HIV neuro-invasion, psychosocial consequences of living with a chronic illness, side effects of ART, stigma and discrimination.[42,43] A study by Freeman and colleagues found that 43.7% of PLWHA in SA had a mental disorder, which is more than two and a half times the prevalence of mental disorders in the general population.[112]

1.2.6. Violence and trauma

1.2.6.1. Societal violence

The persistence of violence in SA is a perturbing aspect of the transition to democracy.[113,114] Crime is deeply ingrained in the social fabric of SA, with an unacceptably high level of violent crime.[75,114] The total number of crimes for the 2019/2020 period was 1 909 892.[115,116] South Africa has one of the highest murder rates in the world, with 21 325 reported murders for the period 2019/2020, which is a rate of 35.8 people per 100 000 of the population.[115,116] This translates to an unacceptably high number of 58 murders per day. These statistics include the murder of 2 695 women during this period, which is equivalent to one woman being murdered every three hours. In addition, there were 18 635 attempted murders. A disturbingly increasing trend with regards to sexual offences during the period 2019/2020, was also noted.[115,116] Thus, many South Africans are at risk of exposure to extremely high levels of crime, including violent crime. This manifests in the normalisation and social acceptability of violence as a means of communication and conflict resolution within communities in SA.[113]

1.2.6.2. Gender-based violence (GBV)

According to the United Nations High Commissioner for Refugees (UNHCR), GBV refers to harmful acts directed at an individual based on their gender.[117] GBV disproportionately affects women and girls.[117] Hence, for the purposes of this study it will be used to describe acts against females. It is rooted in gender inequality, the abuse of power and harmful norms. GBV includes sexual, physical, mental/emotional

and economic/financial harm, which may occur in public or in private.[117] This can manifest in acts of intimate partner violence, sexual violence, child marriage and female genital mutilation amongst others.[117]

Diverse forms of violence continue to plague South Africa which contributes to the overall social acceptance and tolerance of GBV.[118,119] A study from the European Union found that widespread attitudes, such as victim blaming, which condone domestic violence against women, contribute towards the social acceptability of GBV.[120] This underscores the universality of the dominant attitudes towards GBV.

Over the past few decades South African researchers have reported that the prevalence of GBV, which includes abuse, sexual assaults, and murder of both children and women, is markedly high.[121-123] South Africa was labelled the "rape capital" of the world by Human Rights Watch in 2010,[124] and continues to report the highest number of rapes internationally.[34] In the 2019/2020 crime statistics, 53 295 sexual offences were reported, the majority of which were rapes (42 289).[115] However, there is major under-reporting of sexual assaults including rape in SA, with an estimated one in thirty-six cases of rape actually being reported.[124]

In SA, owning a legal firearm is the main risk factor for murder of intimate partners.[125] The rate of homicide of women by intimate partners in SA is six times the global average.[125] With respect to South Africa's burden of disease, interpersonal violence, particularly intimate partner violence, is second only to HIV/AIDS.[126]

Among prison populations, it is well documented that female prisoners are far more likely than males to have a history of physical, sexual and emotional abuse;[23-25] with most female prisoners having extensive histories of trauma, abuse and victimisation.[26] International studies, predominantly from HICs, demonstrate the disproportionate burden of trauma experienced by female prisoners compared to their male counterparts.[127-129] One study found that more than 50% of women in jail have suffered physical or sexual abuse, in contrast to less than one in five men in jail.[130] Thus, trauma may be a key risk factor in their offending and re-offending behaviour.[131]

Locally Dastile's and Artz's work among female offenders in Gauteng and Western Cape Correctional centres respectively, underscore the extensive trauma South African women experience, often prior to their incarceration.[30,31] In Artz's study in the Western Cape (SA), 38% of women admitted to having experienced physical abuse

in childhood, and 29% admitted to sexual abuse. Dastile's sample of female offenders also revealed high levels of emotional, physical, and sexual abuse.[30] Agboola, in her qualitative exploration with female inmates about their experiences before, during and after incarceration, reported similar findings of victimisation.[132] An earlier study in Gauteng correctional centres by Haffejee and colleagues in 2005, found that 78% of women reported some form of abuse in their last relationship before prison.[133]

1.2.6.3. Trauma and mental illness

Adverse childhood experiences (ACEs) are defined as "traumatic occurrences before the age of 18 years, that are experienced as physically or emotionally harmful or threatening".[134] These include various forms of neglect, abuse, other kinds of serious household dysfunction such as alcohol and substance abuse, violence between parents or caregivers, peer, community and collective violence.[134] There is sufficient evidence to show that substantial and protracted periods of stress in childhood have a lasting impact on an individual's physical and psychological health.[135]

The Adverse Childhood Experiences (ACE) study, conducted by the Centres for Disease Control and Prevention (CDC) and Kaiser Permanente in the USA, resulted in the development of the 10-item ACE scale.[136] Using this scale, the authors reported a high prevalence of ACEs in the general population, and a dose-response relationship between childhood adversity and health risk behaviours, which may ultimately contribute to morbidity and mortality.[29]

The prevalence of ACEs differs globally, as reported in the World Mental Health Survey.[137] However, very few studies come from LMIC settings.[138] One of the limited studies in the South African general population found higher rates of adversities compared to HICs on a 13-item modified CDC-Kaiser Permanente ACE scale.[139]

Incarcerated populations are at increased risk of having experienced ACEs.[140,141] It has consistently been documented that many prisoners have experienced multiple types of trauma during childhood and adulthood.[142,143] A systematic review examining ACEs and subsequent psychopathology in prisoners, predominantly from the USA and Europe, confirmed an association between childhood adverse events and adult psychiatric disorders.[144] However, it did not contain any studies from low-income

countries and specifically, none from Africa. Adverse childhood experiences are also associated with recidivism.[145] Hence, identification of, and intervention efforts directed at management of ACEs are vital. [145]

1.2.6.4. Trauma and offending

Research indicates a link between traumatic experiences and criminal behaviour, with higher rates of PTSD and associated symptoms among prisoners compared to the general population.[146] A history of trauma has been recognised as a pathway to incarceration for many females, since many of their coping mechanisms are criminalised.[147] In keeping with this, Salisbury & Van Voorhuis proposed a model which asserts that childhood victimisation contributes to the development of mental illnesses. This results in self-medication behaviours, with victims using alcohol or illegal substances (in order to cope with, or escape from unresolved trauma). This leads to arrests and convictions for drug-related crimes, such as prostitution and theft (which are used to subsidise drug use), as well as antisocial behaviour when intoxicated.[147] This theory is partially consistent with the seminal work of Daly.[57]

If an individual has repeated and prolonged periods of exposure to violence, this can result in dysfunctional practices, both within the family and community settings.[148] Hence, there is a relationship between experiencing violence as a victim in childhood, and later perpetrating violence on others.[148] There is a significant body of evidence documenting the relationship between traumatic experiences as children and subsequent aggressive and criminal acts.[148,149] According to Widom's cycle of violence theory, violent victimisation, in particular physical abuse inflicted on children by parents or caregivers, increases the likelihood of violent behaviour in later years.[149] In addition, children who suffered neglect are also at increased risk of perpetrating violent offences later in life.[149]

In further support of this theory, researchers have found that female children who suffered physical abuse had an increased likelihood of being arrested as adolescents than female children who were not abused. In addition, female children who were sexually abused were more likely to be arrested for prostitution as an adult than children who were not sexually abused.[150] Messina and colleagues in California, USA, found a robust relationship between exposure to childhood traumatic events and the

onset of criminal activities, with greater exposure associated with younger age of onset.[151]

The ACE study also reported on the cumulative negative impact of ACEs on health in later life, as well as a higher risk for the perpetration of violent acts with cumulative ACEs.[152] A meta-analysis investigating the relationship between exposure to childhood abuse and the cycle of violence among women, in general and prison populations, found a small, but significant positive association between exposure to childhood maltreatment and a wide range of violent behaviours.[153] A Swiss study comparing male and female violent offenders, found that violent female offenders were more likely to have a history of ACEs such as sexual abuse than their male counterparts.[71] In a prospective study in the USA, women with a history of any childhood maltreatment (neglect, physical abuse and sexual abuse) were at significantly higher risk of an arrest for violence in comparison to the control group.[154] These studies provide evidence for the association between trauma (in the form of ACEs) and later violent offending.

1.2.7. The South African cultural setting

South Africa is made up of people of diverse ethnicities and cultures. The United Nations Educational, Scientific and Cultural Organization (UNESCO) defines culture as “a set of distinctive spiritual, material, intellectual and emotional features of society or a social group, that encompasses, not only art and literature, but lifestyles, ways of living together, value systems, traditions and beliefs”.[155] Ethnicity refers to “shared cultural practices, perspectives and distinctions that set apart one group of people from another”. Common characteristics that distinguish various ethnic groups are territorial possession, ancestry, a sense of history and religion, forms of dress and language.[156] Although SA has a diverse cultural landscape, in this study we focus mainly on the cultural beliefs of the majority of the people. The largest ethnic group in SA is the Zulu nation, who reside predominantly in KZN and Gauteng provinces.[156] Culture is highly complex and comprises diverse features as mentioned above. For the purposes of this study, the main aspects of culture that were used to differentiate one group from another were population group and language.

The African worldview informs the way in which Black African people relate to phenomena, including problems that they are confronted with.[157] Traditional beliefs, medicine and health practitioners form an integral part of the healing process in the lives of many Black African people.[46] A South African study found that Black African people defined their psychological problems in terms of their cultural beliefs and practices, and it highlighted the contrast between how psychological problems are dealt with from an African traditional perspective (with respect to rituals) as opposed to the western perspective (which takes the form of psychotherapy).[158]

A study conducted in four correctional centres in SA found that inmates' cultural conceptualisations impacted their health-seeking behaviour, with consultation of both traditional African healers and western biomedical remedies being common practice.[159] Culture is thus fundamental to our understanding and assessment of individuals, particularly when they are in distress (physical, emotional or psychological), since culture is the framework that directs human behaviour in a given situation. It is therefore important to examine female inmates' lived experiences of mental illness, trauma and HIV, within this cultural setting.

1.2.7.1. Cultural beliefs in the context of mental illness

Culture-bound syndromes refer to "certain behavioural, affective and cognitive manifestations seen in specific cultures".[160] Notably, these phenomena differ from the usual behaviour of the individuals of that culture and cause significant distress.[160] They may or may not be linked to a particular Diagnostics and Statistical Manual (DSM) diagnostic category.[160] Although culture-bound syndromes are not restricted to the African culture in SA, this review will focus on the more frequently cited culture-bound syndromes in the South African context.[161-163] Amafufunyane and ukuthwasa are two such culture-specific descriptive terms used by Xhosa and some Zulu traditional healers to explain such behavioural and psychological phenomena.[161] The term "amafufunyana" is used to describe claims of demonic possession, while "ukuthwasa" is viewed as a summoning by the ancestors to serve as a traditional healer.[161-163] Both amafufunyane and ukuthwasa may be used to explain symptoms in schizophrenia as was borne out in the study by Niehaus and colleagues in 2004, thus, demonstrating a link between culture and mental illness.[161] A recent South

African study by Campbell and colleagues from the University of Cape Town further illustrates the influence of African culture in the context of mental illness.[164] They interviewed 200 Xhosa people with schizophrenia using the structured clinical interview for DSM diagnoses (SCID) to analyse the content of their delusional beliefs. The majority (72.5%) reported that others had bewitched them to make them mentally ill because they were jealous of them.[164] According to Campbell and colleagues, this is in keeping with the understanding of jealousy-induced witchcraft in South African communities.[164] This emphasises the pervasive role cultural beliefs play in the content and presentation of mental illness in SA.

1.2.7.2. Cultural beliefs in the context of criminality

Eighty percent of the more than one billion people in 54 African countries consult with traditional healers and use traditional medicine.[165] One of the reasons that may account for this is the disparity in the accessibility and availability of medical doctors compared to traditional healers among the general population.[165] The ratio of traditional healers to people in sub-Saharan Africa is approximately 1:500, while the ratio of medical doctors to people is 1:40 000.[165] Hence, traditional practitioners and medicinal remedies continue to play a dominant role in sub-Saharan Africa.

In SA, some ethnic groups or individuals consult traditional faith healers such as sangomas. A sangoma is an African traditional or spiritual healer who connects to the ancestors.[166] The sangoma plays a crucial role in guiding, healing and advising on financial, emotional, sexual, intimate, social and spiritual problems.[166] Frequently, as part of this process of consulting with the sangoma, “muti” is used in the healing process. “Muti” is indigenous medicine derived from plants or bones.[166] A culturally unique crime in African countries, including SA, is that of “muti” murders. It is defined as “a murder in which body parts are removed from a live victim for the sole purpose of using the victim’s body parts medicinally”.[167] Often, body parts are combined with other ingredients, or used alone, to produce the “muti”. The victim usually demises from blood loss from the wounds inflicted on them.[167] Victims are mostly women and children.[168] Traditional healers who practice “muti” murders usually do not carry out the murder themselves, but rather appoint someone to do so.[167] “Muti” murders are not unusual in SA, often occur in rural areas, particularly in the Limpopo province of

SA.[169] They often go unreported to the police.[169] There are strong beliefs that body parts make the "muti" more effective and that it can eradicate any problem from poverty to health issues.[167] Hence, African cultural beliefs may influence the types of offences committed in SA.

A recent South African study by Hesselink and Dastile showed that culture can also be associated with the commission of crimes.[166] In their study, 40% of female inmates who murdered their male intimate partners, admitted to consulting a sangoma before the murder of their intimate partners. The sangomas were consulted and remunerated for various reasons including guidance, protection and not to be detected or arrested.[166] Thus, culture plays a pervasive role in the lives of South Africans and has a significant influence on their perceptions, beliefs, experiences and ultimately their behaviour.[166]

1.2.8. Conclusion

Although the prevalence of mental illness as well as the associations between mental illness, trauma, HIV and offending among female inmates have been studied internationally, such studies have not been undertaken in South Africa. Specifically, there are no mixed method studies that holistically examine these inter-connected factors in the context of female offending. Not only is SA different because it is a LMIC, factors specific to the South African setting, including the role of culture, and the high prevalence of HIV/AIDS and trauma (particularly GBV) may influence mental illness and offending. We therefore need to understand female inmates' social realities before incarceration, to ultimately determine how we can assist them to address the ills of their past, so that they may be successfully rehabilitated. Interventions such as rehabilitative programmes need to be contextually appropriate, that is, culture and trauma sensitive, so that they result in improved mental health outcomes and decreased rates of recidivism. This study serves to bridge this gap in the literature.

CHAPTER TWO: METHODOLOGY

2.1. INTRODUCTION

Considering the gap in the knowledge on mental illness in female inmates on the African continent, and particularly in South Africa, the aim of this study was to describe the mental health needs of female inmates at a correctional centre in Durban, KZN, SA. This was achieved by means of a mixed methods study which consisted of two phases. In phase one, the prevalence of mental illnesses (including alcohol and substance use disorders), antisocial and borderline personality disorders, lifetime trauma and HIV was measured, among a randomly selected sample of 126 female inmates, including sentenced offenders and remand detainees. In phase two, the lived experiences of HIV, trauma, mental illness and culture was explored in the lives of 14 purposively selected women from the initial phase one sample, through individual, in-depth, semi-structured interviews.

2.2. RESEARCH PARADIGM

Research is based on the researcher's worldview or research paradigm. Guba and Lincoln define a research paradigm as consisting of four major philosophical underpinnings[170]:

- ontology, which is the philosophy of the nature of reality;
- epistemology, which is the philosophy of knowledge construction;
- methodology, which refers to the procedure to be followed in the systematic enquiry or research process; and
- axiology, which refers to ethical principles and moral behaviour in conducting research.

These assumptions were used to guide the overall design of this study, as explained below.

2.2.1. Research Design

Philosophical assumptions, as described above, need to be translated into specific methods to conduct the research, and this is referred to as the research design.[171] Research designs can be quantitative, for example, survey research; qualitative, for example, ethnography; or mixed methods.[171] Methods refer to techniques of data collection such as qualitative in-depth interviews, focus group discussions and observations, or quantitative standardised instruments.[171] Data analysis methods include techniques such as qualitative thematic analysis or quantitative statistical programmes. Qualitative data can take the form of text, for example, interview transcripts, or photos, videos and audio-recordings, whilst quantitative data usually takes the form of numerical data.[171] In the quest for epistemological credibility, qualitative researchers often feel it mandatory to adopt a specific framework for their particular study. However, qualitative work can be more accurately described as qualitative description with influences from theoretical orientations.[172] In reality, diverse techniques are often used in qualitative research.

2.2.1.1. Mixed methods research design

This study employed a mixed-methods, sequential explanatory design.[173] Mixed methods research originated in the 1960s as a method of combining quantitative and qualitative research into one study. It emerged from the paradigm wars between the qualitative and quantitative research approaches, which were previously thought to be incompatible. However, mixed methods designs are now considered to be a legitimate, scientifically accepted mode of inquiry in the social and human sciences.[173] Over subsequent decades, the definition and design of mixed methods research have evolved. Earlier conceptualisations of mixed methods research developed by Greene, Caracelli and Graham, was that it included at a minimum, one qualitative method and one quantitative method.[174] By 2016, there was significant development around the concept of mixed methods research as evidenced by Plano-Clark and Ivankova. They defined mixed methods research as “a process of research when researchers integrate quantitative methods of data collection and analysis and qualitative methods of data collection and analysis to understand a research problem”.[175]

Mixed methods research involves combining two different epistemologies, namely positivism and constructivism, to answer a research question. Positivism is an approach that only recognises knowledge which can be scientifically confirmed or which can be proved mathematically or logically.[176] Positivists differentiate between scientific and normative statements and they assert that scientific statements are the domain of scientists only.[177] Constructivism, on the other hand, is an approach which recognises that knowledge is constructed by humans, through their experiences, ideas, intelligence and their interactions with the world.[176] Hence, reality is not objective but rather subjective.[176] However, positivism and constructivism are not dichotomous or the only epistemological approaches. Another epistemological approach is post-positivism. Some assert that post-positivism challenges the central tenets of positivism,[178] while others assert it is a "milder" form of positivism.[177] Post-positivism argues that the researcher cannot be an independent observer of the social world, and that the ideas and the identity of the researcher influence what they observe, thus impacting their conclusions.[178] It aims to derive objective answers by being cognisant of, and working with such biases. It also recognises that the manner in which scientists think and work, and in which others think and work is not distinctly different. Post-positivists assert that scientific reasoning and common-sense reasoning are fundamentally the same, just differing in degrees.[178]

The major benefit of mixed methods research is that the researcher is able to exploit the strengths of both paradigms, while compensating for the deficits of each simultaneously.[173] A major pitfall in quantitative research is that participants do not have a platform to describe their experiences, and quantitative research does not provide an understanding of the context in which participants express themselves.[173] Furthermore, recognition and acknowledgement of the researcher's own biases are not routinely examined in quantitative research. However, proponents of qualitative research believe that personal bias forms an intrinsic part of the research process and needs to be acknowledged.[173] Personal interpretations are part of the qualitative research process, thus bias is inevitable. This is commonly seen as a flaw of qualitative research. In addition, qualitative research includes smaller numbers of participants, thus, it is difficult to generalise qualitative findings to a large population.[173] To compensate for these limitations, Guba and Lincoln proposed criteria to ensure the trustworthiness of qualitative research, which will be discussed later.[170]

Mixed methods research is often used to answer complex research questions. Its central assertion is that using quantitative and qualitative approaches in combination affords a more comprehensive understanding of the research problem than either approach alone.[179] However, it is imperative for the researcher to ensure that both the qualitative and quantitative procedures are meticulously conducted.

The mixing of the data, often referred to as the point of interface, is a unique aspect of mixed methods research.[179] There are three methods of linking the data namely, convergent, sequential exploratory, and sequential explanatory designs. The method selected for this study was a sequential explanatory design.[179]

2.2.1.2. Philosophical assumptions behind mixed methods design

Mixed methods research has specific philosophical underpinnings and modes of investigation.[173] These philosophical underpinnings provide guidance in terms of the data collection and analysis, and it directs how the qualitative and quantitative methods will be mixed in the different stages of the study.[173]

This raises challenges in the philosophical assumptions underpinning the research since the positivist and constructivist paradigms are intrinsically distinct from each other. The research approach that is often adopted here is a pragmatic paradigm.[180] Pragmatism is defined as “a research philosophy where either, or both, observable phenomena and subjective meanings can provide acceptable knowledge dependent upon the research question”.[180] The emphasis in a pragmatic approach is to conduct practically applied research which combines diverse methods to help analyse and interpret the data.[180] It provides a flexible research approach rooted in problem solving to answer complex research questions.[180]

2.2.1.3. Sequential explanatory mixed methods design

A sequential design entails one dataset building on another and it may begin either with a qualitative exploration followed by a quantitative follow-up, which is referred to as a sequential exploratory design; or it may begin with a quantitative analysis explained through a qualitative follow-up, which is referred to as a sequential explanatory design.[173] The latter was used in this study (Figure 1). The qualitative

phase may be used to explain and to contextualise the quantitative findings, and may enhance and enrich the findings, as well as generate new data.[181-183]

The quantitative data collection in phase one comprised an extensive questionnaire survey. The qualitative phase design and sample was dependent upon the findings of the quantitative phase. The interview guide for the qualitative phase could not be fully determined prior to collection and analysis of the quantitative results. In addition, an emergent design was used in the qualitative phase. This refers to a flexible design which is able to adapt to novel ideas, concepts or findings that arise while conducting qualitative research.[184] As opposed to a more structured approach, emergent designs are more inductive, as well as being receptive and responsive to unanticipated information which enriches the data.[184] In this study, the qualitative research questions, sampling and data collection were guided by the results of the quantitative phase. Participants interviewed in the quantitative phase who were eligible for participation in the qualitative phase, were immediately identified and informed that they might be invited to participate in phase two.

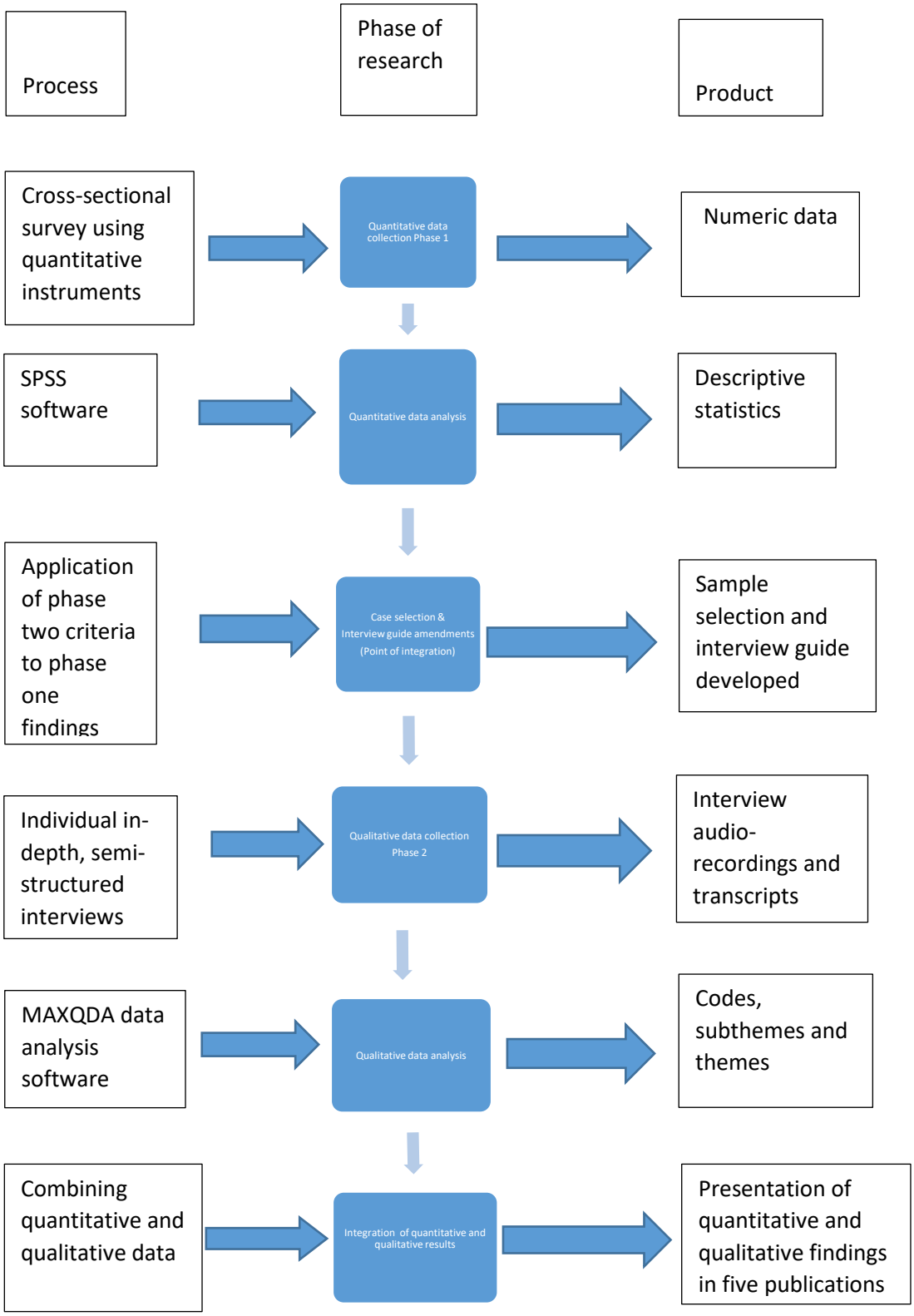


Figure 1: Visual model for the mixed methods sequential, explanatory design procedure

2.2.1.4. Philosophical assumptions of the sequential explanatory design

In this study, a positivist perspective was adopted in the first (quantitative) phase of the study which entailed the measurement, and subsequent analysis of the identified mental disorders, lifetime trauma and HIV, as well as their associations. A constructivist perspective was then adopted during the second (qualitative) phase of the study with the emphasis on in-depth descriptions and meaning-making of participants' experiences. Thus, the philosophical assumption of this research design is a move from positivism to constructivism as the study moved from the first phase to second phase.

2.2.1.5. Quantitative phase design

In the quantitative phase of this study, a cross-sectional, observational design was employed. In a cross-sectional study, the researcher measures the outcome and the exposure in a given population at a given point in time, providing a "snap-shot" of the study population.[185] It is frequently used to determine the prevalence of diseases in identified populations. A temporal relationship between exposure and outcome cannot be determined in a cross-sectional study, therefore, the study cannot determine causality, only correlation.[186] In the quantitative phase of this study, the prevalence of mental illness, lifetime trauma and HIV was measured among 126 randomly selected female inmates.

2.2.1.6. Qualitative phase design

Phase two of this study adopted a phenomenological approach. Phenomenology is "a qualitative research approach that examines an individual's lived experiences within the world".[187] It endeavours to "describe the essence of a phenomenon by exploring it from the perspective of those who have experienced it".[188] Phenomenology seeks to make meaning of this experience, not only in terms of what was experienced but also how it was experienced.[188]

This method of inquiry typically involves interviews with participants who have first-hand knowledge of an incident or experience. Two questions are the focus of these

interviews, namely, “What have you experienced in terms of the phenomenon?” and, “What contexts or situations have typically influenced your experiences of the phenomenon?”[189] Documents and observations may also be used as data sources.

Phenomenology can be conducted in various ways, each based on conceptualising the “what” and “how” of human experience, that is, each approach in phenomenology is rooted in a different school of philosophy.[190] By employing a phenomenological approach, the researcher is able to develop new meanings and appreciations of that experience.[191]

Edmund Husserl is acknowledged as the father of phenomenology.[192] His pioneering work was in the area of descriptive phenomenology which was also known as transcendental phenomenology.[193] This is a simple form of phenomenology which aims to describe the world from the perspective of the individual experiencing that phenomenon at a conscious level.[192] Descriptive phenomenology accesses the essence of an experience. This requires that the researcher put aside their prior understanding of the phenomenon under study, a process referred to as bracketing.[192] Bracketing is used to document the preconceptions and personal experiences of the researcher with the participant, to help remove any potential biases in the research process, which could impact the analysis and interpretation.[192]

Following Husserl’s seminal work in phenomenology, Martin Heidegger, modified the approach to undertaking a phenomenological study, in order to make it more of a study of ‘being’.[192] His approach acknowledged the analysis or interpretation of the experience and was termed hermeneutic or interpretive or existential phenomenology. Hermeneutics is “the interpretation of text or language by an observer and can be used as a methodology or as an enhancement of phenomenology”.[194] Interpretive phenomenology recognises that experience is essentially a product of what is happening and the interpretation the individual places on that experience.[192] Interpretation is seen as critical to the process of understanding the experience. Heidegger maintained that the researcher cannot bracket off the way he/she identifies the essence of the phenomena. The researcher needs to be cognisant of this during the research process, hence the alternate term being existential phenomenology.[194]

The most recent development in phenomenological approaches is interpretive phenomenological analysis (IPA). IPA does not ask the researcher to put aside their

existing understandings of a phenomenon. It attempts to work with, rather than work around the researcher's existing understanding of the phenomenon under study.[192] Therefore IPA is a dynamic process, in which the researcher plays an active role and influences the extent to which he/she gains access to the participant's experiences, and how they make sense of the participant's subjective personal world through interpretation.[195] The analytical process in IPA is regarded as a double hermeneutic or dual interpretation process because IPA starts with the participants who make meaning of their world and, subsequently, the researcher attempts to decipher that meaning to make sense of the participant's interpretation.[195]

In this study, a hermeneutic/interpretive phenomenological approach was adopted. Fourteen participants, from the 126 participants in phase one, were purposively sampled and invited to participate in semi-structured, in-depth interviews. The women's lived experiences of HIV, trauma, mental illness, culture, and the complex inter-relationships between them, were explored. Thematic analysis (TA) was chosen as the method of data analysis (as described by Braun and Clarke).[196] TA is usually recommended for the analysis of data instead of IPA in the following context[196]:

- the research question is not limited to personal experience and meaning-making (as was the case in this study where the PI explored the mental healthcare needs of female inmates which included the current available rehabilitation programmes);
- the sample is relatively large i.e. more than 10 (in this study 14 participants participated in the qualitative phase);
- the sample is heterogenous- such as when the aim is to capture diversity (as was the case in this study where the sample was made up of participants of diverse cultural backgrounds);
- the aim of the study is on identifying themes across the dataset rather than focusing on particular features of individual cases (as was done in this study);
- there is a need for the research to have 'actionable outcomes' with defined implications for practice requires organising the analysis into 'thematic statements' (as was the case in the current study which used a transformative framework);

- the focus of the study is on how personal experiences are situated in the larger socio-cultural contexts (as was done in this study which was framed in the South African context).

2.2.2. Challenges in mixed methods research

Although mixed methods research may appear to be a panacea with respect to compensating for the flaws of quantitative and qualitative methods, this type of research also has many challenges. These are, inter alia[197,198]:

- the researcher/s must be skilled in both quantitative and qualitative research;
- multiple sources of data are collected and analysed. Hence, this process is far more time consuming and resource intensive than conducting a pure quantitative or qualitative study. This can present as a major challenge, especially when such research is being conducted by a single researcher, as was the case in this study;
- with regards to sampling, in a sequential design study, the researcher may encounter challenges with deciding which results from the initial phase should be used in the subsequent phase/s, sample selection, determination of sample sizes for all phases and the interpretation of the results from both phases;
- large volumes of data may be generated through mixed methods research and this can result in difficulties in data analysis and dissemination of findings; and
- a further potential problem lies in the analysis and interpretation of the data. For example, in the sequential design, a crucial decision is about the "point of interface" of the study, that is, where the mixing of the data will occur. In addition, interpreting integrated results can be very difficult because both data sets are not given equal emphasis.

2.2.3. Validity of qualitative research

Scientific rigour is determined by the quality of the entire research process. Rigorous qualitative research (that is the trustworthiness of the study) as defined by Lincoln and Guba should fulfill various criteria.[170] These include credibility, dependability, confirmability and transferability.

2.2.3.1. Credibility can be thought of as the confidence the qualitative researcher has in the truth of the research findings.[170] An important aspect is to ensure that the questions that are asked, and the ways in which responses are elicited, are reasonable and appropriate for generating valid accounts of the phenomena under study. Thick (very detailed) descriptions are also used to enhance the credibility of research findings.[170] Thus, detailed descriptions of the study setting, population, interview techniques and excerpts are provided by the researcher so that the reader can determine how applicable the findings of this study are to the reader's particular setting. Triangulation is another method of strengthening credibility.[170] Triangulation presupposes that, if two or more theoretical frameworks, types of data collected, sources of data, or researchers concur in their assessment, then the conclusion is likely more valid.[170] The skills, training and expertise of the researcher are also crucial for maximising credibility. Prolonged engagement (long duration of period of observation), persistent observation (increased depth of observation), negative case analysis, referential adequacy, peer debriefing, and member checking, all enhance the credibility of the research process and findings.[170]

In this study, credibility was achieved through the following:

- the principal investigator (PI) is a forensic psychiatrist with ten years of experience as a psychiatrist , and was working in a forensic psychiatric unit at the time of data collection. She therefore had substantial experience in working with individuals charged with criminal offences as compared to a general psychiatrist, and was therefore competent to work in a correctional setting. She has also conducted research on inmates previously, thus she had appropriate skills, training and expertise to conduct the research. In addition, the researcher attended qualitative research workshops at the University of the Witwatersrand to receive training on how to conduct qualitative research. The PI was also the sole data collector, which ensured consistency in the data collection process;
- there was a substantial period of engagement with the participants. The data collection period of the study spanned more than three months and included four interactions with the participants in which they directly engaged with the PI. These interactions were the introduction to the study, phase one and phase two interviews, and the final session in which the researcher addressed all the

participants at the conclusion of the study to thank them for their contribution. The researcher's daily presence at the correctional centre for three months allowed many of the women to develop familiarity and rapport with the researcher, and this facilitated the building of trust in the researcher and the research process. This maximised engagement, participation and disclosure in the second phase interviews;

- naturalised transcription was conducted. This refers to near verbatim representations of the spoken language and includes as much detail as possible. This ensured accuracy of data analysed from the transcripts;[199]
- triangulation occurred in multiple ways, which included triangulation of data sources, for example, using a reflexivity journal with observations documented, timelines which gathered significant background information, interview transcripts, as well as information obtained in phase one, by means of quantitative instruments. Triangulation of methods, with the merging of quantitative and qualitative processes was also used. Finally, triangulation of analysts that is, the data being coded and analysed by the researcher and the qualitative supervisor was also employed;
- thick descriptions were used in this study, describing not only the participants' behaviour and experiences but also the context in which they occur in order to give meaning to, and a better understanding of, their experiences and behaviour.[200]

2.2.3.2. Dependability is defined as "the extent to which the study could be repeated by other researchers, and that the findings would be consistently replicable".[170] This was achieved by the researcher's detailed description of the methodology.

2.2.3.3. Confirmability is defined as "the measure of objectivity of a study's findings, that is, that the findings and interpretations are clearly derived from the data".[170] At each stage of the research process, measures must be in place to ensure that the results accurately reflect the ideas and experiences of the participants, and are free from the researcher's biases, so as not to distort the interpretation of what the research participants said to fit a certain preconceived narrative. One way of achieving this is

through reflexivity which is an attitude of being actively aware and cognisant of the researcher's influence on the construction of knowledge throughout the research process.[170] This may take the form of a reflexivity journal in which the researcher documents critical self-reflection (about biases, preferences or preconceptions) as well as reflection about the research relationship (that is, the relationship of the researcher to the participant, and how the relationship affects participants' answers to questions).[200]

Transparency is another important way in which confirmability can be established. This is achieved by the researcher providing an audit trail which highlights every step of data collection and analysis, to demonstrate a rationale for the conclusions reached.[170] This refers to maintaining records of actual audio-recordings, transcriptions and the codebook, which led to the thematic development, all of which are presented as findings of the study.

In this study, confirmability was facilitated through the process of constant reflexivity. Observations and reflections were documented in the form of a reflexivity journal to reduce bias and skewedness (memoing). Transparency was ensured by retaining the raw data collected (including audiotapes, transcripts and codebook as well as the reflexivity journal). A qualitative data analysis software programme, MAXQDA, was used to analyse the qualitative data which enhanced the auditability of the research process. MAXQDA is a software package designed for computer-assisted qualitative and mixed methods data, text and multi-media analysis in academic, scientific and business institutions.[201] Inductive coding (as opposed to deductive coding) was used, thereby ensuring that codes and the subsequent themes developed, accurately reflected the entire data set, and were not based on preconceived themes selected by the researcher, that is, it was grounded in the data.

2.2.3.4. Transferability refers to demonstrating that the research findings are applicable to other settings. This can be achieved by the use of thick descriptions which were described earlier under credibility and which was done in this study.[170]

2.2.4. Transformative framework

A transformative framework was endorsed throughout the research process, from initial conceptualisation of the problem to the finalisation of findings and conclusions.[202] The transformative approach refers to a "meta-physical framework that directly engages the complexity encountered by researchers and evaluators in culturally diverse communities, when their work is focused on increasing social justice".[202] The transformative paradigm creates a platform for individuals who view advocacy, in terms of furthering social justice, as a part of their role in the research process. Transformative research places emphasis on values and ethics in the research process. Researchers in the social and behavioural sciences work within, and as part of, human society. They often encounter, and are challenged by, the full complexity of issues facing different sectors of society.[202] Researchers can, therefore, no longer turn a blind eye to these glaring societal issues, and the need to incorporate them into the realm of research has become inevitable.

Transformative research was borne out of a need for the voices of historically marginalised populations to be brought into realm of research.[202] Transformative research can be applied to populations who experience discrimination and oppression for any reason, and includes, but is not limited to, race, gender, age, sexual orientation, disability, ethnicity, immigrant status, political conflict and poverty.[203] Their voices are shared with researchers, who join forces as their collaborators, to advance social justice and human rights.

There is a paucity of mixed methods studies which focus on advocacy, hence, there is a significant need for transformative research using a mixed methods design.[204] With respect to transformative research which uses a mixed methodology, the quantitative arm allows measurement of the magnitude of a problem and determines associations between variables. However, by adding a qualitative arm, the researcher is able to give a voice to marginalised populations and is able to determine the influence these measured variables or phenomena have on research participants. This is necessary if the researcher wishes to fully understand the needs of the marginalised population, so that the research can advocate for change and improve the status quo.

The transformative axiological assumption asserts that research should be formulated and conducted with the underlying principle of promoting social justice and advocating for the respect of human rights.[203] Included in this assumption is the need to be culturally respectful to the populations or communities on whom the research is being conducted, actively addressing inequities, being cognisant of a community's strengths and resilience, and making provision for some form of reciprocity to the community members.[203] Mertens emphasises that cultural competency is an essential quality for those who endorse a transformative worldview.[203]

Cultural competence in research is a systematic, responsive, mode of inquiry that recognises, understands and appreciates the cultural setting in which the research is conducted.[203] It speaks to an awareness of the unique, and defining characteristics of the study population.[205] The researcher needs to appreciate the importance of the patient's social and cultural influences on their health beliefs and behaviours.[205] Cultural competency goes beyond an awareness of the above-mentioned concepts and extends into action. Hence, cultural competence entails not only a researcher's understanding of their study participants, but this awareness should manifest in the researcher's study design, conduct and interpretation.[205] In this study, the PI had extensive experience working in the public health sector where most of the patients are from different cultural backgrounds, hence, rendering her sensitive to diverse cultural beliefs, including disease expression and meaning attribution. In addition, substantial reading into African traditional beliefs was undertaken during the protocol development phase. Furthermore, various questions were asked during phase one of the study to elucidate each participant's cultural beliefs and what influence it had on their lives (Appendix J, page 278-279 of this thesis). These responses assisted the PI in understanding the participants' cultural backgrounds.

From the transformative axiological assumptions, the ontological assumption is framed in such a way that it is cognisant of power dynamics that exist among different groups of participants in society.[203] The transformative ontological assumption asserts that there exists diverse perspectives about reality. This is due to the different lenses of privilege, which is largely influenced by the different social backgrounds from which people emanate.[203] However, if the aim of the research is to challenge the status quo and advocate for social change, not all versions of reality can be equally weighted.[206] For example, in a correctional setting, accounts of inmates and their correctional

custodians would both be important, however, if there is a desire to bring about social change to advance the rights of inmates, then the researcher would have to place more emphasis on the accounts of the inmates themselves.

With respect to the transformative epistemological assumptions, questions arise about the power dynamics in the relationship between the participants and the researcher, in terms of who controls the research, and the nature of the knowledge in terms of power and privilege.[203] Epistemologically, the researcher needs to gain the trust and confidence of the study population, which can be challenging. The researcher also needs to recognise that the participants, and not the researcher, are the "experts" in the field being studied. It is therefore incumbent upon the researcher to design strategies that correct the historical power imbalances in the research process, so that both parties can engage respectfully and meaningfully in the research process. The participants, who have historically been marginalised, should feel valued and acknowledged in the research process.[203]

Methodologically, although the transformative framework is not prescriptive, mixed methods will be the preferred choice for many transformative researchers. The qualitative arm is required to gauge community perspectives throughout the research process, while the quantitative arm reports on findings that are considered credible by community members and scholars.[207] Transformative mixed method research provides a platform that enables the researcher to address the complexities of research in culturally diverse settings, so that it can provide a basis to advocate for social change.[207]

Mertens describes how the researcher should relate stages in the research process to transformative ideas that is, by defining the problem, reviewing the literature, determining the research design, selecting participants, identifying data sources, identifying or constructing data collection instruments and methods, performing the analysis, and finally, interpreting and reporting of the findings.[208] This research project adopted a transformative stance with respect to advocacy for the mental health needs of female inmates.

In this study, the research is approached through a social justice and feminist lens. Historically, inmates have been considered a marginalised group and female inmates specifically, may be considered an even more marginalised population, as reflected

by their under-representation in the literature.[209] Feminism refers to advocacy for women's rights on the grounds of equality of the sexes.[210] Feminist research refers to research done by women, for women, and about women.[211] Feminist research involves the construction of new knowledge and the production of social change.[211] It is grounded in feminist values and beliefs. Although there are substantial differences in the methods countries use to address the special needs of women in conflict with the law, there is undoubted evidence that current practices for managing female inmates are inadequate to meet their basic needs as prescribed by human rights, international recommendations and social justice.[209] Focusing on issues related to female inmates' health needs including their histories of mental illnesses, trauma and HIV can be viewed as feminist and social advocacy work since it attempts to increase awareness of, and mobilise interventions, to improve the status quo for female inmates. Hence, this is in keeping with a feminist and social justice lens.

It is the intention of the researcher to use the results of the research for broader social objectives. This includes the findings serving as an evidence base to inform future policy development for rehabilitative programmes for female inmates in the Department of Correctional Services (DCS). It is the researcher's perspective that female inmates are a highly neglected and under-researched population with respect to their mental health. It is critical to create an awareness of the unique mental health needs of female inmates, not only in the academic fraternity, but more importantly within the DCS, and in society, so that measures for reform can be advocated for, formulated and implemented. After completion of this doctoral project, the researcher intends to create an awareness on the subject by publishing findings in scientific journals; presenting the relevant findings to major stakeholders including the DCS; and engaging on the topic with the public through the media, in an ethically appropriate and sensitive manner. In keeping with the transformative framework of the study, one way to facilitate and foster change is to provide direct service to the marginalised community. Thus, after completion of this research, the researcher would like to embark on the initiation and coordination of psychological interventions for women at this correctional centre to address some of their mental health needs, based on the findings of this study. The exact nature of the proposed interventions requires further research and design.

In keeping with the transformative framework the researcher included a significant cultural component in the objectives of the study, which highlight the importance of being cognisant of the cultural context of the participants (female inmates) in the research process. In addition, the researcher enlisted the services of an English-isiZulu translator since the majority of women at WCC were first language isiZulu speakers. Enlisting the services of an English-isiZulu translator to include women of all ethnicities in the study is in keeping with the endorsement of the transformative framework. Further evidence of the incorporation of the transformative framework lies in the engagement with female inmates over a substantial period (more than three months) to gain their trust and to encourage their active engagement in the research process. At the end of the qualitative phase, participants were asked for their input on how they felt the DCS should address their mental health needs. This was an attempt to elicit recommendations directly from the inmates themselves, rather than to assume what their needs were. This is another step which highlights the implementation of the transformative framework in this study.

2.3. Aim

The aim of the study was to determine the mental health needs of female inmates at Westville Correctional Centre (WCC) by measuring the prevalence of mental illnesses, antisocial and borderline personality disorders, HIV and lifetime trauma in the quantitative phase one. The qualitative aim was to explore the lived experiences of trauma, HIV and mental illness among a sub-sample of the initial phase one female inmates of diverse cultures.

2.4. Objectives

The objectives of this study were:

2.4.1. to describe the socio-demographic and forensic profile of adult female inmates at WCC;

2.4.2. to determine the prevalence of mental illnesses (that is, psychotic disorders, mood disorders, post-traumatic stress disorders, adult attention deficit and

hyperactivity disorders, substance use disorders and alcohol use disorders), and borderline and antisocial personality disorders, in this female inmate population, and to compare these prevalence rates to international female inmate populations, as well as to the South African general population;

2.4.3. to determine the prevalence of childhood and adult trauma among female inmates;

2.4.4. to investigate associations between childhood trauma and mental illness, as well as childhood trauma and borderline and antisocial personality disorders, among adult female inmates;

2.4.5. to investigate associations between childhood trauma and violent offending among female inmates;

2.4.6. to investigate associations between mental illness and violent offending, as well as antisocial and borderline personality disorders and violent offending among female inmates;

2.4.7. to investigate associations between HIV status and mental illness among female inmates; and

2.4.8. to explore the lived experiences of HIV, trauma and mental illness, among female inmates of diverse cultures.

2.5. Study setting

KZN is one of the most densely populated provinces in SA (second only to Gauteng) with an approximate total population of 11.5 million people.[38] It also has the highest prevalence of HIV/AIDS in SA, with women having a higher prevalence than men.[44] WCC is situated in Durban, KZN, and is one of the largest correctional centres in sub-Saharan Africa. It accommodates male and female inmates, the majority of whom are Black and isiZulu speaking. The reason for choosing this site is that it is largely under-researched, with most scholarly work on female inmates in SA being conducted in Gauteng and the Western Cape provinces. A comprehensive list of all females at WCC was requested from the DCS. This was obtained in August 2019 just prior to

the commencement of data collection. The sampling frame was 349 adult women which consisted of 250 sentenced offenders and 99 remand detainees.

2.6. Sampling method and sample size calculation

2.6.1. Phase 1 (Quantitative data)

Stratified random sampling was conducted to obtain the required number of inmates (see further details under data procedure). Among the seven (quantitative) objectives, four (numbers 4, 5, 6 and 7) were comparative and involve hypothesis testing, and were therefore dependent on sufficient power to detect a given effect size. Objectives 2 and 3 were descriptive and involved estimation of a population parameter with a required degree of precision. Firstly, the comparative objectives were considered in the sample size estimation, and secondly the level of precision the chosen sample sizes would provide for the descriptive objectives was considered.

Since no previous literature was available for a similar population as this, in order to provide assumptions of the magnitude of the differences to be expected between the groups to be tested, the G*Power 3.1[212] was used, together with Cohen's estimates of effect size[213] to estimate the sample sizes required at 80% power and 0.05 level of significance using a Chi square test with one degree of freedom. In order to detect a moderate effect size of 0.3, 88 participants were required, and 785 for a small effect size of 0.1. It was hypothesised that the true effect size would be somewhere between moderate and small. A 0.25 effect size yielded a sample size of n=126 which was also deemed to be a logistically possible sample size, given the finite population size of 422 (which was the estimated female inmate population at the correctional centre at the time of protocol development).

χ^2 tests - Goodness-of-fit tests: Contingency tables

Analysis:	A priori: Compute required sample size	
Input:	Effect size w	= 0.25
	α err prob	= 0.05
	Power (1-β err prob)	= 0.8
	Df	= 1
Output:	Noncentrality parameter λ	= 7.8750000

Critical χ^2	=	3.8414588
Total sample size	=	126
Actual power	=	0.8013024

In addition, n=126 provided a 6.4% level of precision around an estimated prevalence of 0.255 (this was the disorder with the highest prevalence rate according to international literature, that is, ADHD which had a rate of 25.5%)[86] with a finite population size of 422 and a 95% level of confidence. By comparison, n=173 provided a 5% level of precision around the same estimate. However n=126 was deemed a more logistically feasible number. Therefore, not much precision would be compromised if a sample size of n=126 was used.

2.6.2. Phase 2 (Qualitative data)

Participants who fulfilled criteria for phase two were identified immediately after the completion of phase one. Thirty-five possible participants were identified for participation in phase two but, only women who were fluent in English were selected. Language expression and comprehension are critical components of qualitative research (in-depth interviews) since they represent the data as well as the communication process by which the information is elicited.[214] If there is incongruence between the language of the researcher and the participant, it creates complexity and further challenges in the research process. Hence, only women who were fluent in English were selected for phase two.[214] Although women who were not fluent in English were excluded in phase two, many participants in phase two were first language isiZulu speakers. Thus, this ethnic and cultural group was not excluded from the study, which is in keeping with the study's over-arching transformative framework.

According to a review by renowned social scientists, the minimum number of participants required to reach data saturation in qualitative research is 12.[215] In this study, fourteen women were eventually recruited in this phase since data saturation was reached at this point. This occurred when no more new patterns or themes were generated from the data. It is the point in data collection when there is enough data

to ensure the research questions can be answered. This occurred after 14 semi-structured interviews had been conducted.

All of the women selected had a lifetime history of mental illness and trauma; with nine of the 14 women living with HIV (WLWH) and the other five were affected by HIV, either before or during incarceration. The influence of cultural beliefs in these women's lives was also an area of interest for the second phase and thus, women of different cultural backgrounds (language and population groups) were recruited in this phase. Two were Coloured, two were Indian, two were White and eight were Black African. It was determined in phase one that a large proportion of Black African women (who formed the majority of the phase one sample) had subscribed to African cultural beliefs and had visited traditional healers, which was in contrast to women of other population groups and cultures. Thus, it was deemed important to explore this aspect further in phase two. Maximum variation sampling was used so that women who were eventually selected for phase two interviews had diverse profiles, including charges ranging from fraud and drug possession to murder; they were of varied ages, educational levels, socio-economic class and cultures.

2.6.3. Inclusion criteria for phase one

Adult female inmates (18 years and older)

Able to provide written informed consent (whether literate or illiterate)

Remand detainees or sentenced offenders

English or isiZulu speaking women

2.6.4. Exclusion criteria for phase one

Inmates who were floridly psychotic or behaviourally disturbed such that they might pose a danger to themselves or others

Inmates who did not have the capacity to provide informed consent, as assessed by the principal investigator (PI)

2.6.5. Inclusion criteria for phase two (purposive sampling)

Women with a lifetime history of mental illness

Women with a lifetime history of trauma

Women living with, or affected by, HIV (before or during incarceration)

Remand detainees or sentenced offenders

Women who were fluent in English

Women of diverse cultural backgrounds

2.7. Instruments

2.7.1. Timeline activity

A “timeline activity” which was adapted by the PI from available timelines (after extensive reference to the relevant literature) was given to all the women before the commencement of phase one. Timelines are a data collection method which uses a visual and arts-based medium, and falls under the umbrella of graphic elicitation designs.[216] Participants were requested to complete this activity to depict, either through drawings (if illiterate) or words in English or isiZulu, significant life experiences, on a timeline, focusing on both positive and negative experiences. Timeline activities were intended to stimulate a process of reflection and introspection into some of the major topics the study aimed to explore. Timelines were also used to guide the PI during the quantitative and qualitative phases. Prior to commencing phase one interviews, timelines for each participant were translated (where necessary), and read by the PI, to provide background information about participants. Studies have demonstrated that the use of visual aids, such as timelines, together with in-depth interviews increases data quality.[216,217]

Phase one

2.7.2. Socio-demographic, clinical and forensic questionnaire

A socio-demographic, clinical and forensic questionnaire was compiled, based on a review of the literature, and this was administered via individual, face-to-face interviews. The questionnaire contained predominantly quantitative questions, with a few qualitative questions. The forensic component of this interview questionnaire elicited information regarding details of the current and past arrests or convictions; motivation for the offence; circumstances surrounding the offence; and details of the referral for forensic observation (Appendix J, pages 276-278). The clinical component contained questions about past medical illnesses (including HIV), past psychiatric illnesses and the relevant treatments (Appendix J, pages 275-276). HIV status was confirmed using correctional centre hospital records (where HIV testing was conducted), with informed consent from the participants. The questionnaire also included information regarding adult traumatic experiences (Appendix J, pages 279-280), relevant cultural beliefs and practices (Appendix J, pages 278-279), in the context of mental illness and offending. These assisted as screening questions to select appropriate participants for the second phase of the study. Specific questions regarding inmates' concerns during incarceration and after release, rehabilitative programmes they had attended and would like to attend, as well as plans post-release, were also ascertained (Appendix J, pages 281-283). Forensic data regarding participant's offence and sentence were obtained (with their consent) from each participant's official correctional identity card to confirm the participant's report.

2.7.3. Structured clinical interview for the Diagnostic and Statistical Manual of mental disorders 5th edition- Research Version (SCID 5-RV)

The SCID 5 is a structured clinical interview which is used to assess mental illnesses to provide diagnoses according to the definitions and criteria of the American Psychiatric Association's Diagnostics and Statistical Manual of mental disorders 5th edition (DSM-5).[218] The SCID is the most extensively used structured diagnostic instrument for assessing DSM-5 disorders.[219] The SCID-PD is used for the evaluation of DSM-5 personality disorders.[219]

The SCID should be administered by a mental health professional, either a psychologist or psychiatrist, who has been trained to use the DSM-5 classification and diagnostic criteria. It is regarded as the gold standard of psychiatric research interviews.[219] There is no minimum qualification required to administer the SCID as a mental health professional; clinical experience is the more crucial requirement.[218] The PI is an experienced forensic psychiatrist who uses the DSM-5 classification system extensively in daily practice. In addition, the PI used the SCID training manual, which was purchased with the SCID from the APA, prior to commencing data collection. In this study, the Research Version, non-patient edition of the SCID was used. Only the modules diagnosing psychotic disorders, depressive disorders, bipolar mood disorder (BMD), PTSD, AUD, SUD, adult ADHD, BPD and ASPD were administered. The SCID 5-RV assesses both current and lifetime diagnoses. It is the most inclusive version. The SCID-RV has two configurations: a standard core configuration which includes disorders that are most frequently studied in research (which was chosen for this study); and an enhanced configuration which contains many additional disorders.[218]

The SCID 5-RV also allows for changes which include omitting certain disorders, altering the time frames or modifying the order in which disorders are assessed. This is the only version which allows for such customisation and was therefore the version of choice for this study. The SCID 5-RV does, however, require special permission from the American Psychiatric Association for its use in research. This was duly requested, paid for and granted. Since the number of modules administered and the number of symptoms that the participants endorse vary, the duration of the interview is highly variable. Uncomplicated cases can last 20 minutes, while more complex cases last up to two hours.

When comparing this study to the literature the reader must be cognisant that prevalence rates between studies vary not only due to different populations sampled, but also based on differing instruments used (for example using the Composite Diagnostic Interview as opposed to the SCID), whether diagnostic tools are used or screening tools, and who administers these tools (for example lay interviewers compared to mental health professionals).

2.7.4. Adverse Childhood Experiences- International Questionnaire (ACE-IQ)

In 2009, the ACE-IQ was designed by a group of international experts from the World Health Organisation (WHO).[220] The purpose was to create a standardised means of measuring adverse childhood experiences for global surveillance to facilitate comparisons across countries including LMICs and HICs.[220] It has been used in South Africa, Thailand, China, Saudi Arabia, Canada, Yugoslavia Republic of Macedonia, Philippines and Switzerland. The intention was for it to be integrated within larger health surveys to enable the analysis of associations between adverse childhood experiences and subsequent health outcomes and health risk behaviours.[220] A study on prisoners in Nigeria showed that the ACE-IQ and Child Trauma Questionnaire have concurrent validity and that the ACE-IQ is a reliable and valid index of adverse childhood experiences in the prison population.[221]

Phase two (qualitative)

2.7.5. Semi-structured interview guide for in-depth interviews

Information regarding the prevalence of HIV, lifetime trauma and mental illness as well as cultural beliefs was obtained during analysis of phase one data. Semi-structured, individual, face-to-face interviews were then used as the data collection method for the qualitative phase, to allow for an in-depth exploration of the lived experiences of HIV, trauma and mental illness among women from diverse cultures. Data derived from the quantitative phase informed the questions for the qualitative interviews. These interviews consisted of open-ended questions, with minimal probing, to allow participants to narrate their experiences. Individual interviews were conducted since a group setting would not have been conducive to sharing sensitive information such as traumatic experiences and HIV disclosures. Confidentiality also cannot be guaranteed in groups, and this would be especially undesirable in a closed setting such as a correctional facility. The initial qualitative guide was based on the findings from previous studies, both local and international, which showed a high prevalence of HIV, lifetime trauma and mental illness among female inmates, as well as local studies which demonstrated the prevalent cultural beliefs among South African female inmates. After analysis of findings in phase one, amendments were made to the structure and content of the semi-structured interview guide. Questions were also

modified to facilitate better comprehension by participants (Appendix L, pages 293-294).

2.8. Data Management

In phase one, all the data was collected by the PI with the assistance of an English-isiZulu translator where necessary. The translator was bilingual and had a Bachelor of Social Science degree from the University of KZN. She had completed a one-year internship programme in research with the National Research Foundation, and had also been previously employed as a research assistant in other psychiatric research projects in the Department of Psychiatry at the University of KZN. A week before the data collection phase of the study commenced, the translator underwent one-on-one training with the PI, to ensure that she was familiar with the research instruments and the necessary terminology that would be used during the data collection in phase one. She was also informed that she needed to translate exactly what the PI had asked and what the patient's response was, without any interpretation, to ensure validity of the data collection process. Prior to commencement of the study, she signed a non-disclosure agreement as she was the only other individual, aside from the PI, who was privy to the confidential content of phase one.

Access to the data was limited to the PI and statistician through user accounts and passwords. The anonymity of all participants was ensured throughout the data management process. All participants were assigned a unique participant identification number (PIN) on recruitment into the study and were identified throughout the study using their PIN only. All study documents and audio-recordings were kept in a locked cabinet, in a locked office, to which only the PI had access.

2.9. Data collection and collation

2.9.1 Data collection procedure

Prior to commencement of the study, all adult sentenced female offenders were addressed at two locations within WCC. The first was at the female correctional centre, and the second was at the workshop, where a portion of the sentenced female

offenders worked from Monday to Friday. At the workshop the women sewed correctional uniforms which were distributed to WCC as well as to other centres around South Africa. This oral introduction was done by the PI with the aid of the translator. The PI firstly greeted the women and thanked them for gathering to listen. She introduced herself and explained the purpose and nature of the study. Potential participants were briefed on the possible risks and benefits of participation. They were also made aware that participation was completely voluntary and that they could withdraw at any time during the study. Inmates were also reassured that their confidentiality and anonymity would be maintained throughout the study. They were informed of the sensitive nature of the topics that would be discussed should they agree to participate. Potential participants were enlightened on the inability of the PI to influence their judicial proceedings as her purpose was solely that of an independent researcher, not affiliated with the DCS or the judiciary. They were informed that there would be no financial remuneration for participation in the study, but that they would each be given a hygiene pack as a token of appreciation. The decision to give them hygiene packs was a result of consultation with the Head of the Social Work Department at the facility who had made a suggestion of what was most needed by the inmates. Inmates were then given the opportunity to ask questions and make enquiries, prior to deciding whether they wanted to participate. All those who agreed to be part of the study were included in the sampling frame from which 126 inmates were randomly recruited. They were given a study information sheet with all pertinent information as well as the principal investigator's contact details. All participants were interviewed by the PI to ensure consistency in eliciting and recording of information. From the possible 250 SOs, of those who had agreed to participate in the study, 96 were randomly selected. After the 96 SOs had been interviewed for phase one, the PI followed the same procedure as described above to address RDs, who were accommodated in a different section of the female correctional centre. At the time of the study, there were 99 RDs at this correctional centre. From those who agreed to participate, 30 RDs were randomly selected and enlisted into the study. Capacity to provide informed consent was assessed by the PI. The PI is a forensic psychiatrist trained in the skill of assessing capacity when engaging with participants. The study was explained to the participants fully prior to recruiting them into the study. Only those who were able to understand the contents of the participant information sheet and the oral explanation and who agreed to participate were enrolled into the study by the PI.

Upon recruitment into the study, but before the phase one interviews commenced, participants were given a timeline activity sheet to complete (as described under "Instruments"). These were collected prior to their phase one interviews, and were subsequently read, to obtain background information regarding any previous trauma, mental illness, HIV or other relevant topics mentioned by the participants. Information regarding these topics of interest was also directly elicited in phase one. Timelines were also used to guide the researcher in phase two, since topics related to trauma, mental illness and HIV were explored in-depth in this phase.

The first phase of the study was predominantly quantitative and entailed the PI administering the sociodemographic, clinical and forensic questionnaire, SCID 5-RV and ACE-IQ to the sample (n=126). The interviews in the first phase took on average 118,2 minutes per interview, with a range of between 50 minutes (shortest interview) to 240 minutes (longest interview).

Phase one interviews were carried out by the researcher from Mondays to Fridays, from August 2019 to November 2019. Participants were interviewed in a private room in the female correctional centre, as well as at the textile workshop, for women who worked there from 08:00 to 15:00. The participants were interviewed in a private room at the workshop and were seated at a table across the PI and translator. The PI maintained eye contact and actively engaged with the participants at all times during the interview. At no point was there a sense of distance experienced between the interviewer and the participant. The PI directed the questions in English to the participant, then the translator translated the questions if the participant did not have adequate command of English. The majority of participants were first language isi-Zulu speakers but they could communicate in English as well. The translator then translated the participant's response back to the PI in English. The same translator was used throughout the study.

The PI entered the data directly onto research electronic data capture software (Redcap) on her laptop.[222,223] Many women became emotional while relating their experiences of abuse during phase one and phase two interviews. The PI, who is an experienced psychiatrist, was able to contain the participants. The PI displayed warmth and empathy in her interview style and most women engaged very well in the process. Good rapport was established. Many women in the first phase expressed

that they found the interview process cathartic and even therapeutic, as many of them were disclosing details of the offence, as well as the trauma they had endured (such as rape) for the first time. A distress protocol had been put in place for emergencies however, none of the participants decompensated during, or after the interviews.

Phase two interviews followed the completion of phase one and were conducted in November 2019. The average duration of the in-depth, semi-structured interviews in the second phase was 56,9 minutes with a range of 32 minutes (shortest interview) to 98 minutes (longest interview).

All selected participants were addressed individually in a private room, a day before the phase two interviews commenced. The reasons that they were selected, as well as the nature and purpose of these interviews were explained to them. The PI explained that these interviews would be different from those of phase one, in that the questions would be open-ended and they would be given the opportunity to describe their feelings and experiences in detail. They were reminded that the interviews would be audio-recorded for later transcription and that no translator would be present. They were also informed that written informed consent would again be obtained. They were then allowed the opportunity to ask any questions, which the PI answered accordingly. The introduction prepared the participants psychologically and emotionally for the interviews ahead, as they were aware that potentially sensitive information would be discussed.

The phase two interviews were conducted in a private room at the female correctional centre. It was a quiet and secluded area with minimal disturbances, which facilitated engagement with participants and good quality audio-recording. The PI and the participant were seated on sofas next to each other, not across a table as in phase one. No laptop was used and neither was a translator present. This facilitated a deeper level of engagement and subsequent disclosure. Two audio-recorders were used to ensure no data was accidentally lost. Participants were aware of the presence of the audio-recorder, but did not appear perturbed or distracted by it, during the interview. They were reminded that their anonymity and confidentiality would be maintained. They were identified on the audio-recording as, for example, participant number 028, which reinforced their anonymity and made them feel more comfortable. Information from their timelines, data from phase one regarding their HIV status, the

lifetime trauma and mental illness they had endured, and their relevant cultural beliefs, were all referenced during phase two interviews.

The PI was aware of the cultural and other differences (such as educational, socio-economic and marital status) between her and the participants, thus, she attempted to prevent these from forming interpersonal barriers between the participants and herself. She did not wear any cultural identifiers as she felt that this would potentially distance the women from her, rather than facilitate engagement and the building of good rapport. She also dressed in modest, culturally neutral attire such that her socio-economic position was not made obvious to the participants. The assistance of a Black African woman as a translator in the first phase assisted in bridging the initial cultural divide between the PI and the majority of the participants. The PI is an Indian, Hindu, first-language English-speaking female, while the majority of the participants were Black African, Christian, first-language isiZulu- speaking women. Hence, it was surmised that the majority of the participants may perceive this as a cultural divide. The PI also ensured that she maintained professional and ethical research boundaries at all times in an effort to avoid inducement.

In addition to the in-depth interviews, memos were also made during the study. The entire study data collection phase spanned three months, during which the PI collected data daily at WCC. Reflections on the principal investigator's own preconceptions and subjective responses to the interview data were also documented. This helped to raise awareness of personal biases so that it did not influence the interpretation of the data.

2.9.2. Data Collation

Data for all the instruments in phase one was captured electronically directly using Redcap. Redcap is a browser-based, meta-data driven electronic data capture software solution and workflow methodology for designing clinical and translational research data bases.[222,223] It is widely used in the academic and research community.

Transcription of the audio-recordings obtained in phase two was conducted by a professional and reputable transcription company (Top Transactions). All transcribers employed by the company had signed non-disclosure agreements as part of their

contracts. In addition, recordings did not identify participants by their names, only by their PINS. Thus, anonymity was strictly maintained during the process of transcription.

Data from phase one was cleaned after the data collection phase. This was then followed by statistical analysis. Data was exported to SPSS by the statistician. Once again, only participants' PINs were used to ensure their anonymity.

2.10. Data Analysis

Mixed methods can be very challenging in terms of integrating the data. The quantitative and qualitative data were analysed independently and then brought together in the discussion of the papers. The researcher analysed the quantitative data first and then used the results of the quantitative data to inform the development of the qualitative phase, namely the sample selection and modification of the interview questions for the qualitative phase. The qualitative data was then analysed and attempted to provide context for the quantitative findings.

2.10.1. Quantitative data analysis

The quantitative data was analysed using SPSS version 26.[224] A 0.05 level of significance was used in all hypothesis tests. An interim analysis was done when half the intended sample size had been achieved. The results of this were used to inform a more detailed sample size calculation, with estimates which were previously unavailable. Final data analysis was undertaken after the total sample size was achieved. Each objective is specified along with its intended method of statistical analysis.

Objective 1: To describe the socio-demographic and forensic profile of adult female inmates at WCC. This objective was descriptive and thus, descriptive statistics such as frequencies, percentages, mean and standard deviation were used to summarise results. For categorical variables, proportions, as percentages, were reported.

Objective 2: To determine the prevalence of mental illnesses (that is, psychotic disorders, mood disorders, post-traumatic stress disorders, adult attention deficit and

hyperactivity disorders, substance use disorders and alcohol use disorders), and borderline and antisocial personality disorders, in this female inmate population, and to compare these prevalence rates to international female inmate populations, as well as to the South African general population. For all prevalence estimates, 95% confidence intervals were reported.

Objective 3: To determine the prevalence of childhood and adult trauma among female inmates. This objective was descriptive thus, proportions (%) were reported with 95% confidence intervals.

Objective 4: To investigate associations between childhood trauma and mental illness, as well as childhood trauma and borderline and antisocial personality disorders, among adult female inmates. The first alternative hypothesis to be tested for this objective was that there is a difference in the proportion of mental illness between those with and without trauma. The second alternative hypothesis to be tested for this objective was that there is a difference in the proportion of personality disorders between those with and without trauma. Two-tailed Pearson's Chi square tests were used to compare these proportions at the 0.05 level of significance.

Objective 5: To investigate associations between childhood trauma and violent offending among female inmates. The alternative hypothesis to be tested for this objective was that there is a difference in the proportion of violent offending behaviour versus non-violent offending behaviour between those with and without significant trauma. Two-tailed Pearson's Chi square tests were used to compare these proportions at the 0.05 level of significance.

Objective 6: To investigate associations between mental illness and violent offending, as well as antisocial and borderline personality disorders and violent offending among female inmates. The first alternative hypothesis to be tested for this objective was that there is a difference in the proportion of mental illness between those with violent offending behaviour versus those with non-violent offending behaviour. The second alternative hypothesis to be tested for this objective was that there is a difference in the proportion of personality disorders between those with violent offending behaviour versus those with non-violent offending behaviour. Two-tailed Pearson's Chi square tests were used to compare these proportions at the 0.05 level of significance.

Objective 7: To investigate associations between HIV status and mental illness among female inmates. The alternative hypothesis to be tested for this objective was that there is a difference in the proportion of mental illness between those who are HIV-infected versus those who are not HIV-infected. Two-tailed Pearson's Chi square tests were used to compare these proportions at the 0.05 level of significance.

2.10.2. Qualitative data analysis

Thematic analysis

The lived experiences of trauma, HIV and mental illness among female inmates from diverse cultures in South Africa were explored in phase two. The data source used for the qualitative analysis were the 14 transcripts obtained from the in-depth, semi-structured interviews.

Qualitative approaches are very diverse, complex and nuanced.[225] The qualitative research method of analysis chosen for phase two of this study was thematic analysis. There are varied views on the validity of thematic analysis as a research method. Some authors such as Boyatzis argue that is not a method, but merely a tool to use across different methods.[226] However, this study was conducted in line with the view of Braun and Clarke who are proponents of the view that thematic analysis should be regarded as a qualitative method in its own right.[227] One reason to support this notion is that thematic analysis is the technique that is used as a foundational tool for analysing most other types of qualitative research such as narrative analysis, grounded theory and discourse analysis. Another reason is that thematic analysis should not be merely descriptive or summative, but the analysis should ideally progress to a more interpretative level.[227] Braun and Clarke are advocates of reflexive thematic analysis which does not only use qualitative techniques, but also adheres strictly to qualitative philosophy. They advance that reflexive thematic analysis should not be domain summaries, but rather that they should reflect well-developed themes that have been extensively analysed and interpreted.[227]

Thematic analysis is used to identify, analyse and report patterns (themes) within data. Frequently, it delves further to make interpretations of the content of the data.[227] Due to its theoretical freedom, thematic analysis affords the researcher a great deal of

flexibility. It thus provides a versatile and pragmatic research tool which has the potential to provide a comprehensive and intricate account of the data.[227] Thematic analysis can be used within different theoretical frameworks and, in this study, it was used within a hermeneutic phenomenological approach. In contrast to other qualitative methods of analysis such as grounded theory which requires detailed theoretical and technological knowledge, thematic analysis offers a more user-friendly form of analysis, especially for the novice qualitative researcher.[227]

An essential component of thematic analysis is the importance of reflexivity throughout the entire research process, from conception to analysis and interpretation. The researcher needs to be constantly aware of their influence over knowledge construction particularly with regards to their experience and background, as well as to the conceptual framework of the research project, as this plays an integral role in how the data is analysed and interpreted.[227]

A theme represents something significant and relevant in the data with respect to the research question.[227] It captures patterned responses or meanings within the data set. Questions that often need to be addressed in terms of coding are, “What counts as a theme?” or, “What ‘size’ does a theme need to be?” A data item refers to one item in a dataset, for example, a data item would be a single transcript whereas a dataset would refer to the entire collection of transcripts. For content to be considered a theme, the researcher has to consider the prevalence both in terms of space within each data item, and the prevalence across the entire dataset.[227] Frequently there are a number of examples of the theme across the dataset, however more examples or occurrences do not necessarily suggest that the theme itself is more important.[226] When analysing qualitative data, there are no rigid rules about what proportion of the dataset should contain evidence of the theme for it to be regarded as a theme.[227] It is not necessary for the theme to be included in all or most of the data items, or that it should form a large part of each data item. It might occupy a substantial proportion of some data items, or appear minimally or not at all in others. It may also feature in only a small proportion of the dataset.[227] It is up to the researcher to determine what a theme is. Thus, in qualitative research the researcher remains the most crucial research tool.[227]

Another fundamental aspect of thematic analysis that is emphasised by Braun and Clarke is that themes do not just "emerge" from the data, and are not merely "discovered embedded" in the data. They assert that in order to generate a robust set of themes the process must be a rigorous one, that requires a great deal of active work by the researcher. They maintain that this iterative, cyclical process results in the active generation of themes.[227]

Thematic analysis can be either inductive or deductive. The researcher's theoretical or analytical interest in the field is usually what drives a deductive analysis, thus it is analyst-driven.[227] Consequently, a significant pitfall is that it results in a less rich description of the dataset. In contrast to this, is an inductive analysis, which is a "bottom-up" approach, whereby the themes are grounded in the data and are representative of the entire dataset, rather than being limited to the researcher's field of interest. In an inductive approach all the data is coded without manipulating it to fit into a pre-determined coding frame, or the researcher's hypothesis.[227] It is data-driven, and thus, an inductive approach was chosen for this study.

Another level of distinction for analysis is whether semantic (explicit) or latent (interpretative) themes will be identified. Semantic themes are identified within the explicit or surface meanings of the data.[227] However, Braun and Clarke propose that the analytic process should move beyond mere description and into deeper levels of interpretation. Latent thematic analysis looks beyond the semantic content and identifies or examines the underlying ideas, assumptions and conceptualisations which are hypothesised to inform the semantic content of the data.[227] Hence, for latent thematic analysis, the development of themes involves interpretative work and the final analysis is not just descriptive or summative, but is based on an underlying assumption or conceptualisation. A latent approach was used in this study, thus, providing a greater depth of analysis and interpretation. Consistent interpretation among coders both establishes and validates the theme. In this study, this was achieved by analyst triangulation between the PI and the qualitative supervisor. After the initial coding and theme development was completed by the PI, robust discussions and debates were conducted between the PI and qualitative supervisor. This was an attempt to interrogate the themes to ensure they were not merely semantic, superficial representations of the data but rather that they were more reflective of the underlying assumptions and conceptualisations that framed the participants' responses.

This study complied strictly with Braun and Clarke's approach by incorporating all six phases into the analytic process as described below. Data collected via audio-recordings, was transcribed. In this study, transcription was outsourced to a transcription company due to time constraints. Transcriptions were then read with the audio-recordings multiple times to verify accuracy. The necessary corrections were subsequently done.

A sample size of at least 12 was initially postulated for phase two as this is the minimal number of participants recommended by the literature, when conducting qualitative research.[215] Fourteen participants were interviewed and it was assumed that data saturation was reached at this point. The 14 interviews (audio-recordings) were transcribed and MAXQDA was used to analyse the data. Analysis confirmed data saturation, and this is evident in the multiple quotations used to describe each theme.

In phase one the researcher familiarised herself with the data by reading the entire data set multiple times. This allowed the researcher to initiate the process of recognising and making note of important ideas in the data.

Phase two involved the generation of initial codes from the dataset. Codes represent a feature of the data that appears interesting and relevant to the researcher. It refers to the most basic segment of the raw data that can be assessed in a meaningful way, regarding the phenomenon under study.[227] Codes differ from the units of analysis which are the themes, as these are often broader. Detailed line by line coding was conducted on each and every data item of the entire data set.

Phase three began after the entire data set had been coded and an exhaustive list of codes was compiled. This phase required the researcher to sort the initial codes into potential sub-themes and themes and then to collate all the relevant coded data extracts within the identified themes.

Phase four entailed the revision of the provisional themes that is, the refinement of the themes. The researcher read all the extracts from all the codes that formed a theme and considered whether they fitted coherently into that theme, and then evaluated the overall story the themes told about the data.

Phase five started with the researcher defining and naming the themes, that is, identifying what each theme captured.[227]

Phase six began when the researcher had compiled a fully evolved set of themes and this phase involved the final analysis and write up of the report.[227]

2.11. Limitations

The major limitation of the study was that it was based at one correctional centre, hence, findings from the study may not necessarily be generalisable to the whole of the female inmate population in South Africa. A further limitation was that the study relied on retrospective self-report thus, this information was vulnerable to exaggeration, misinterpretation and distortions (including deception), especially when diagnosing lifetime mental disorders (with the SCID). Neuro-cognitive disorders, which are common in prison populations and in PLWHA, were not measured in this study. There was also a lack of collateral information available with respect to the diagnosis of psychiatric disorders in phase one. Collateral information is usually needed to aid diagnosis of mental illnesses such as personality disorders as well as psychotic disorders, since participants with these disorders may lack the necessary insight. In addition, sensitive information was elicited via face-to-face interviews and therefore, social desirability bias may have contributed to under or over-reporting. With regards to ACEs, many studies examining childhood trauma used the Kaiser Permanente's 10-item ACE score, while this study used the 13-item WHO ACE-IQ score, thus direct comparison between the two may be difficult. HIV and substance use was not objectively tested by the PI. However, official correctional records of participants' HIV status were consulted from the hospital at the correctional facility where the HIV tests were performed. In addition, due to the cross-sectional nature of this study, causal inferences cannot be made.

The qualitative component was conducted in English for reasons stipulated under "sampling method". Hence, women who spoke isiZulu only were excluded from this phase. In addition, selecting women who were second language English speakers could have disadvantaged them, as slight nuances in their narratives might have been missed. However, women selected for the qualitative phase were all fluent in English. Since the interviewer was a psychiatrist, she was also aware of the potential for asymmetry in the power dynamics between her and the participants. Hence, anonymity, confidentiality, and the fact that the researcher was independent of the

DCS, was emphasised to participants. Furthermore, participants were informed that the PI had no influence on their criminal proceedings.

Inmates assessed by lay interviewers have been associated with higher prevalence rates of mental illness than interviews conducted by clinically trained psychologists and psychiatrists. The strengths of this study were that the PI is a forensic psychiatrist and conducted all the study assessments. In addition, the SCID-RV, which is the gold standard for diagnosing mental illness, was used to measure mental illness in phase one of the study.

2.12. Ethical Considerations

Inmates are traditionally considered a vulnerable population who might easily be coerced into research studies, which may be detrimental to their physical or mental wellbeing. Thus, stringent ethical principles were adhered to throughout the research process.

Ethical approval for the study was obtained from the University of Witwatersrand Human Research Ethics Committee (certificate number M181026). Approval from the University of the Witwatersrand Postgraduate Research Committee and the DCS (Pretoria) was also obtained prior to commencement of the study. Written informed consent was obtained from all study participants.

Participation was strictly voluntary. Potential participants were briefed regarding the nature and purpose of the study. The sensitive nature of the topics that would be discussed was disclosed, hence, a distress protocol was put in place, should any of the women decompensate emotionally or psychologically during the interviews. Those wishing to participate were informed of the right to withdraw at any stage of the study without fear of prejudice or harm. They were also informed that participation in the study would in no way influence their trial, sentencing or parole procedures. Written informed consent was obtained for both phases separately. Potential participants were also informed that there would be no financial remuneration for participation. Hygiene packs were given to each participant in phase one by the translator, after their interview had been completed. This consisted of basic sanitary items to the value of R60 (included a roll-on, deodorant, bath soap and tissues).

Hence, it was not considered as a perverse incentive that could cause inducement. Permission to distribute these packs to participants was also obtained from the DCS.

Anonymity was stringently ensured. Participants were assured of their anonymity throughout the study. This was achieved by each participant being allocated a unique PIN on recruitment into the study. Only the PI had access to this information. The information generated in the study could in no way be traced back to the individual participants, except by the PI. All research documents and audiotapes were kept in a locked cabinet, in a locked office of the PI. All electronic data were password protected and were only accessible by the PI.

Participants were also ensured of confidentiality in this study. They were informed at the outset that confidentiality would only be breached should the participant be deemed to be an imminent danger to themselves or others, or if it was a statutory obligation. However, neither of these situations occurred during the study. In cases where participants were deemed to be suffering from a SMI, they were immediately informed of the need for further management and, with their consent, they were referred to the psychologist or doctor at WCC. In situations where the participants became emotional due to relating traumatic experiences, the PI paused the interview and used containment where necessary. Interviews were only continued when the participant was comfortable to continue. They were offered the opportunity to cease the interview and withdraw from the study, but all were happy to continue after pausing for a few minutes to comfort them, or validate their experiences. Participants were assured that the DCS would not have access to the data. Data was managed as described earlier under data collection.

In the second phase of the study, individual, semi-structured interviews were chosen as the data collection method since confidentiality could not be guaranteed in a group setting such as a focus group. Sensitive issues such as rape, abuse and HIV were discussed during the second phase, and therefore, it was not appropriate for such disclosures to be made in a group setting. In a correctional facility environment, where the women live together for prolonged periods, such sensitive information could be inadvertently or maliciously disseminated with harmful consequences.

In terms of compliance with DCS regulations and conditions of granting approval for the research, the first two manuscripts were sent to the DCS before publication. The final thesis will also be sent to DCS after finalisation of the thesis.

The data will be archived for a period of five years after the PhD. Hard copies of research documents will be kept in sealed boxes and stored in a locked storeroom which is only accessible to the PI.

2.13. Timeframes

Protocol submission to Wits Postgraduate Studies Committee, Human Research Ethics Committee and Department of Correctional Services – October 2018

Data collection – August 2019 to December 2019

Data analysis and write up – Jan 2020 to December 2021

Submission for publication– September 2020 to December 2021

Submission of thesis manuscript for examination– February 2022

CHAPTER THREE: RESULTS

MENTAL ILLNESS AND HIV AMONGST FEMALE INMATES IN DURBAN, SOUTH AFRICA

ABSTRACT

Background

There is limited data regarding the prevalence of mental illness and HIV amongst female inmates in South Africa. Rehabilitation programmes can only be formulated once the needs of this population have been identified.

Aim

To measure the prevalence of mental illnesses, borderline and antisocial personality disorders, and HIV amongst female inmates.

Setting

This study was based at a correctional centre in Durban, KwaZulu-Natal, South Africa.

Methods

This study forms part of a larger two-phased, mixed methods, sequential, explanatory design study. In phase one, 126 female inmates were interviewed using a clinical questionnaire and the Structured Clinical Interview for DSM-5 diagnoses-Research Version.

Results

The following lifetime prevalence rates were found: depressive disorder 70.6%; alcohol use disorder 48.4%; post-traumatic stress disorder 46.8%; borderline personality disorder 33.3%; substance use disorder 31.7%; antisocial personality disorder 15.1% and psychotic disorder 4.8%. The prevalence of current adult attention-deficit and hyperactivity disorder was 9.5%. Thirty-nine percent admitted to past suicide attempts, while 64.3% reported past suicidal ideation and 36.5% had a current episode of a psychiatric disorder. Sixty-four percent were living with HIV. Although 90.4% had a lifetime psychiatric disorder, only 16.7% were previously diagnosed with a mental illness. The majority of inmates with lifetime disorders had psychiatric comorbidities.

Conclusion

The high prevalence of mental illness and HIV amongst female inmates, and the fact that most with mental illness remain undiagnosed, is concerning. Improved screening, identification and treatment of mental illnesses in this population is needed to ensure optimal mental health outcomes and decreased recidivism.

Keywords: prevalence, mental illness, female inmates or prisoners, HIV and AIDS, South Africa

INTRODUCTION

There is a paucity of research on the mental health of female prisoners as females constitute a minority of the total prison population, which ranges from 2-9% of total prisoners in most countries.[1] Largely due to the minority status of females in the prison environment, rehabilitation programmes that have been designed for men have been applied to women, without consideration of their gender-specific needs.[2] These include a higher prevalence of mental disorders such as post-traumatic stress disorder, suicide and self-harming behaviours, elevated rates of drug or alcohol dependence, extensive histories of physical and sexual victimisation, medical needs such as reproductive health needs and additional issues related to the women's responsibility for their children and families.[3] Furthermore, due to the smaller number of female prisoners, countries often have fewer facilities for women hence women are often incarcerated far from home.[3]

In the past few decades there has been a burgeoning interest in female prisoner's mental health with increased recognition that females have gender-specific vulnerabilities and mental health needs.[4] Assessment tools and rehabilitation programmes need to take cognisance of this if correctional services are to instill meaningful change in these prisoners. Prisoners, like all other citizens, are entitled to access to medical treatment including mental health care, which is a fundamental human right, as enshrined in the South African Constitution (Sections 27 and 35 of the Bill of Rights)[5] and under international law (Article 25 of the United Nations Universal Declaration of Human Rights).[6] It has also been noted that prisoners with a co-occurring mental illness and substance use disorder (SUD) have a higher risk of

recidivism than inmates with mental illness or SUD alone.[7] In addition, prisoners with severe mental illnesses (SMIs) such as major depressive disorder (MDD), bipolar disorder, schizophrenia and non-schizophrenic psychotic disorders have a higher risk of recidivism than those without.[8] Identification and treatment of inmates with mental illnesses, including SUD, should therefore be prioritised by correctional services to decrease recidivism.

Human Immuno-deficiency Virus (HIV) is a global challenge however, the majority of people living with HIV/AIDS (PLWHA) reside in sub-Saharan Africa.[9] South Africa (SA) has one of the highest prevalence rates of HIV in the world,[10] and it has the largest number of PLWHA worldwide (7.8 million).[11] In SA, women are disproportionately affected by HIV with 62.7% of PLWHA being women.[12] In most countries the prevalence of HIV amongst prisoners is higher than that of the general population,[13] and in some countries in West and Central Africa, female prisoners have a higher prevalence of HIV than their male counterparts.[13] HIV and mental illness share a complex bidirectional relationship.[14,15] Thus, it is important to determine the burden of HIV amongst female inmates in KwaZulu-Natal (KZN), the province with the highest prevalence of HIV in SA.[16]

Prison populations

In 2018, worldwide, there were an estimated 10.74 million prisoners (including remand detainees and sentenced prisoners).[17] Seventy percent of the world's prisoners come from low and middle income countries (LMICs).[18] In 2017 the female prison population worldwide was approximately 714 000 which is approximately 6.9% of the total prison population.[1] The total female prison population has grown by approximately 53.3% since the year 2000.[1] South Africa (SA) is ranked 12th highest amongst the world's total prison population and 45th in terms of prisoner rate per 100,000 of the population.[19] Currently there are a myriad of challenges facing correctional centres in SA, as is the case in most LMICs, which include inter alia, overcrowding, human rights violations such as torture and assault, the scourge of infectious diseases such as tuberculosis, Human Immuno-deficiency virus (HIV) and Acquired Immuno-deficiency Syndrome (AIDS),[20] ailing prison infrastructure, inadequate staffing with a resultant inability to offer adequate rehabilitation services, illicit drug addiction and also gangsterism and corruption.[21]

Mental illnesses amongst prisoners

An updated systematic review on 33 588 prisoners from 24 countries worldwide from 1966 to 2010, found little change in the prevalence of SMIs amongst prisoners in the past decade, with psychotic disorders amongst female prisoners averaging 3.9% (3.6% for males) and depressive disorders averaging 14.1% in females (10.2% in males).[22]

Another common mental illness amongst prisoners is post-traumatic stress disorder (PTSD).[23] A 2007 systematic review of sentenced prisoners reported prevalence rates of PTSD ranging from 4% to 21%, with females being disproportionately more affected than males.[23] A more recent systematic review found the pooled point-prevalence of PTSD in female prison populations to be 21.1%.[24]

SUDs and alcohol use disorders (AUDs) are also amongst the most common disorders diagnosed in prisoners, with females having higher rates of addiction than males for illicit substances but lower rates for alcohol.[25] Commonly abused substances include alcohol, cannabis, stimulants and opiates.[25,26,27]

Most children and adolescents with attention deficit and hyperactivity disorder (ADHD) will continue to suffer from the disorder in adulthood,[28] having worse outcomes on academic, career, health, social and even personal safety if untreated.[29] There is a disproportionately higher prevalence of ADHD in individuals in the criminal justice system than in the general population.[30] A recent meta-analysis of 42 studies conducted in 15 countries found a prevalence of 25.5% of ADHD amongst incarcerated populations; with no significant difference between males and females.[30] ADHD is also associated with early age criminality and an increased rate of recidivism.[31]

Incarcerated populations also have an over-representation of personality disorders.[32] In the initial systematic review by Fazel and Danesh in 2002, 21% of female prisoners had antisocial personality disorder (ASPD) and 25% had borderline personality disorder (BPD).[32] There is a strong association between prisoners and ASPD. However, the prevalence of ASPD amongst female prisoners is generally lower than in males.[33,34] There is a preponderance of BPD amongst female prisoners.[32-35]

There are limited studies on prisoners in LMICs, particularly in Africa. A systematic review on the prevalence of SMIs amongst prisoners in LMICs revealed a one-year prevalence rate of 6.2% for psychosis, 16.0% for depression, 3.8% for alcohol use disorders (AUDs) and 5.1% for SUDs.[18] To date there has been only one study on the prevalence of mental disorders amongst offenders in KZN, SA.[36] The major limitation of that study was the significant male gender bias with only three of the 193 participants interviewed being females. The study found that 55.4% of offenders had a DSM-4 Axis 1 psychiatric disorder, the most common being AUDs and SUDs (42%). Twenty-three percent were diagnosed with current psychotic, bipolar, depressive and anxiety disorders and 46.1% had an ASPD. Notably, most offenders who had mental disorders were neither detected nor treated by correctional mental health services at the time.[36] The above-mentioned studies illustrate the hiatus in the literature with respect to the prevalence of mental illnesses amongst female inmates in SA, therefore in this study, we aim to describe the prevalence of mental illnesses and HIV in female inmates in a South African correctional centre.

Definitions

1. Inmate: “any person, whether convicted or not, who is being detained in custody in any correctional centre or remand detention facility”.[37] “Inmate” is used in this study as per the Correctional Services Act (CSA) 111 of 1998 of South Africa (SA), however the word “prisoner” is used more commonly in international research.[1-4,6-8,13,17-19,23-27,30-35]

2. Remand detainee (RD): “a person detained in a remand detention facility awaiting the finalisation of his/her trial, whether by acquittal or sentence, if such person has not commenced serving a sentence or is not already serving a prior sentence”.[37]

3. Sentenced offender (SO): “a convicted person sentenced to incarceration or correctional supervision”.[37]

4. Correctional facility: “any place established under the Correctional Services Act (CSA) 111 of 1998 of South Africa as a place for the reception, detention, confinement, training or treatment of persons liable to detention in custody, or to placement under

protective custody".[37] "Correctional facility" is used in this study as per the CSA 111 of 1998 however, the commonly used term internationally is "prison".[1-4,6-8,17-19,23-27,30-35]

5. Recidivism: the tendency of a convicted criminal to re-offend.[38] Recidivism was calculated as the number of participants (SOs and RDs) who had previously been convicted of an offence.

6. Violent offences: offences where a person is harmed by or threatened with violence, which for the purposes of this study include murder, attempted murder, robbery, robbery with aggravating circumstances, assault, assault with intent to do grievous bodily harm (GBH), rape, conspiracy to murder, human trafficking and kidnapping.[39,40]

7. Non-violent offences: offences in which no injury or physical force or threat of force is used against a person, which for the purposes of this study include theft, fraud, housebreaking, racketeering, corruption, money laundering, dealing in drugs, possession of drugs, forgery and uttering, contravening the Medicines and Related Substances Act, breaking parole, possession of stolen property and unlawful possession of a firearm.[39,40]

METHOD

Study design

This study formed part of a larger two-phased, mixed methods, sequential, explanatory design study,[41] which examined the mental health needs of female inmates in Durban, SA. Phase one was quantitative, cross-sectional and descriptive while phase two was qualitative. The findings reported here are part of the first phase which aimed to describe the prevalence of mental illness, HIV and trauma in this population. This manuscript reports on the prevalence of mental illnesses and HIV in this population.

Study setting

This correctional centre, situated in Durban, KZN is one of the largest correctional centres in sub-Saharan Africa. However, it remains a largely under-researched area geographically. It accommodates male and female inmates. At the time of the study,

the female section of this correctional facility had two full-time social workers and two part-time psychologists who consulted on an ad-hoc basis. In addition, there was one psychiatrist consulting part-time for the entire correctional facility.

Study sample

At the time of the study there were 349 female inmates at this correctional centre, consisting of 250 SOs and 99 RDs. Inclusion criteria for phase one of the study included all adult female inmates (18 years and older), who were able to provide written informed consent. Capacity to provide consent was assessed by the first author. RDs and SOs, either English or isiZulu speaking were included. Exclusion criteria were participants who lacked capacity to provide informed consent, including those who were floridly psychotic and behaviourally disturbed such that they might pose a danger to themselves or others. For women who were illiterate, the contents of the information leaflet were explained and informed consent was obtained via thumbprint. Stratified random sampling for SOs and RDs was conducted. One hundred and twenty-six women participated in phase one interviews.

Instruments

Socio-demographic, clinical and forensic questionnaire

A socio-demographic, clinical and forensic questionnaire, based on a review of the literature, was compiled and administered by the first author. The forensic component of this interview elicited information regarding details of the current and past charges and/or convictions, circumstances surrounding the offence, motivation for the offence and details of referral for forensic observation (if applicable). Information regarding offence and sentence was confirmed from each participant's official prison cards. The clinical component contained questions about current and past medical illnesses (including HIV), past psychiatric illnesses (including self-harming behaviours, suicidal ideation and attempts) and relevant treatment thereof.

Structured Clinical Interview for Diagnostics and Statistical Manual of mental disorders 5th edition- Research Version (SCID 5-RV)

The SCID 5 is a structured clinical interview that can be used to assess mental disorders and provide diagnoses according to the definitions and criteria of the American Psychiatric Association's Diagnostics and Statistical Manual of Mental Disorders, 5th edition (DSM-5). The Research Version, non-patient edition of the SCID was administered in this study.[42] Only the modules diagnosing psychotic, depressive, bipolar, PTSD, AUDs, SUDs, adult ADHD, ASPD and BPD were administered. The SCID measures both current and lifetime prevalence of psychiatric disorders. It also describes stressors precipitating PTSD. The Structured Clinical Interview for DSM-5 Personality Disorders (SCID 5-PD) was used for the diagnosis of ASPD and BPD. Although the current version of the SCID has not been standardised for the South African population, the DSM-5 remains the gold standard for diagnosing mental illness.

Procedure

Data collection was from August to November 2019. The study assessments were conducted by the first author who is a forensic psychiatrist. Prior to commencement of the study, all 349 adult female inmates were addressed and introduced to the study. They were informed that their participation would be voluntary, anonymous and confidential. In addition, they were informed that the first author was not affiliated to the Department of Correctional Services (DCS) and that their participation in the study would in no way influence their criminal proceedings. They were then invited to participate in the study. Inmates who were not keen to participate after being addressed were not included in the sampling frame. Stratified random sampling of both groups of inmates (SOs and RDs) was conducted. Most interviews were conducted in English however, for a minority of women who spoke isiZulu only, an English-isiZulu translator assisted. The translator was a qualified social worker with a research background and was bilingual.

Data collation

Data was captured online by the first author on-site, using Research electronic data capture (Redcap). Redcap is a browser-based, meta-data driven electronic data capture software solution and workflow methodology for designing clinical and translational research data bases.[43]

Analysis

Data from both the SCID-RV (regarding diagnosis) and the clinical questionnaire (regarding other clinical information) was analysed using IBM SPSS version 26. Frequency tables with percentages as well as graphs were used to describe categorical variables. Quantitative variables were summarised using mean and standard deviation (SD). Categorical variables were compared between groups using Chi square tests or Fisher's exact tests as appropriate. A p value <0.05 indicated statistical significance.

Ethical considerations

Approval for this study was obtained from the University of the Witwatersrand Human Research Ethics Committee and from the DCS. Written informed consent was obtained from all participants. Participant's HIV status were confirmed with their informed consent, using prison hospital records. Those who had a mental illness/psychological distress which required urgent intervention were referred, with their consent, to the prison doctor or psychologist. Data was stored electronically and was password protected. The DCS had no access to any information derived from the participants. Participants were advised on their rights not to participate, voluntariness of participation and their right to withdraw at any time without impacting their care at the correctional facility. Undue influence was minimised as the first author was independent of the DCS and offered no financial incentive to participate. Women who participated were given a hygiene pack with sanitary items valued at R60.

RESULTS

Table 1 shows the socio-demographic profile of the 126 female inmates (96 SOs and 30 RDs) who participated.

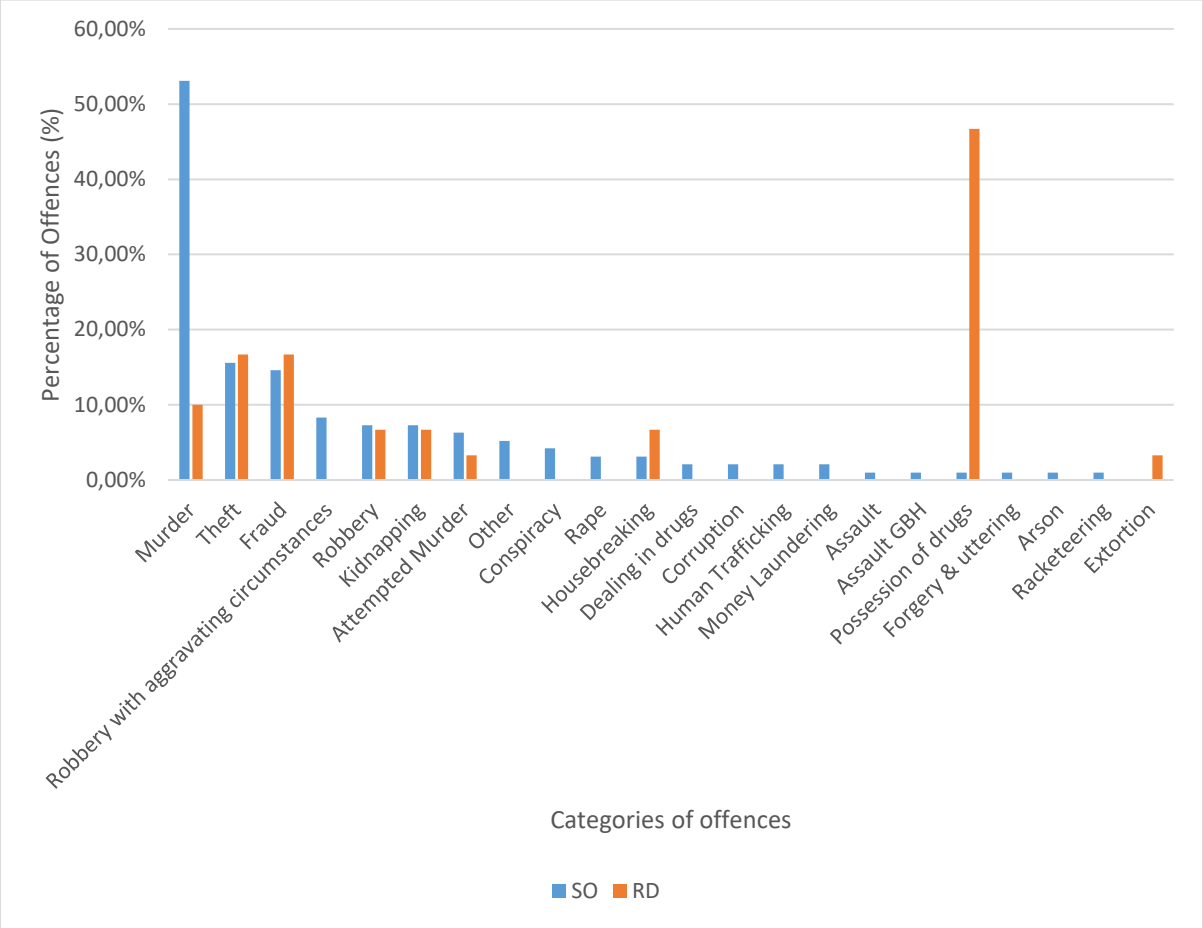
Table 1: Socio-demographic profile of 126 participants (SOs and RDs)

		n	%
Home language	English	18	14.3%
	Zulu	97	77.0%
	Afrikaans	2	1.6%
	Xhosa	6	4.8%
	Sotho	3	2.4%
Nationality	South African	125	99.2%
	Other	1	0.8%
Residential area	Rural	31	24.6%
	Urban	95	75.4%
Population group	Black	106	84.1%
	White	4	3.2%
	Coloured	4	3.2%
	Indian	12	9.5%
Highest level of education	No formal schooling	3	2.4%
	Less than primary school	14	11.1%
	Primary school completed	57	45.2%
	Secondary/High school completed	31	24.6%
	College/University completed	18	14.3%
	Postgraduate degree	3	2.4%
Employment status prior to incarceration	Government employee	15	11.9%
	Non-government employee	40	31.7%
	Self-employed	21	16.7%
	Student	4	3.2%
	Unemployed (able to work)	44	34.9%
	Unemployed (unable to work)	2	1.6%
Civil status prior to incarceration	Married	35	27.8%
	Living as couple	17	13.5%
	Divorced or separated	8	6.3%
	Single	56	44.4%
	Widowed	10	7.9%

Religion	Christianity	120	95.2%
	Islam	3	2.4%
	Hinduism	2	1.6%
	Other	1	0.8%
Total personal monthly income prior to incarceration	Less than R1,000	47	37.3%
	R1, 000 - R2,000	19	15.1%
	R2, 001 - R5,000	25	19.8%
	R5, 001 - R10,000	9	7.1%
	More than R10,000	26	20.6%

Forensic profile

The mean age at first arrest was 32 years (SD 10.01). Thirty-two percent (n=41) of participants were recidivists. Most women (73.8%, n=93) were incarcerated for a single offence however, more than a quarter (26.2%, n=33) were incarcerated for two or more offences. Three percent (n=4) of women had been referred for forensic observation while awaiting trial. Three were found fit to stand trial and criminally responsible (and subsequently found guilty and sentenced) while one was currently awaiting trial. This number does not reflect those who were found not fit and/or not responsible and who were diverted to forensic psychiatric hospitals for care, treatment and rehabilitation under the Mental Health Care Act 17 of 2002.[44] Figure 1 shows the categories of current offences.



Note: Offences under “other” included attempted extortion, contravening the Medicines and Related Substances Act, breaking parole, possession of stolen property and unlawful possession of a firearm.

Assault GBH= Assault with intent to do grievous bodily harm

Figure 1: Categories of current offences

Clinical profile

Table 2 shows the prevalence of DSM-5 disorders.

Table 2: Prevalence of DSM-5 disorders

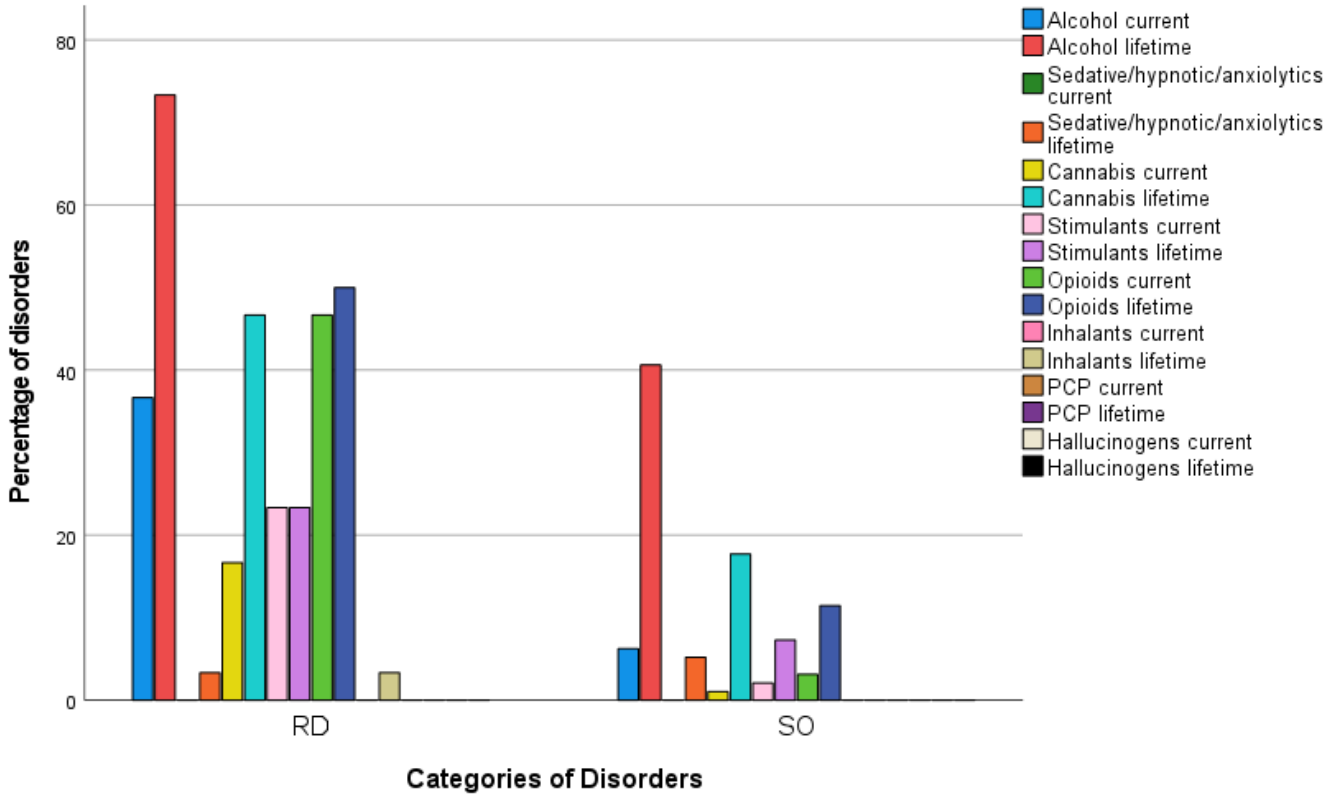
Variables	**RD (n=30)**		**SO (n=96)**		**Total (n=126)**	
	n	**%**	**n**	**%**	**n**	**%**
Psychotic disorders (past month/current)	1	3.3	1	1.0	2	1.6
Psychotic disorders (lifetime)	1	3.3	4	4.2	6	4.8
Depressive disorders (past month/current)	5	16.7	7	7.3	12	9.5
Depressive disorders (lifetime)	19	63.3	70	72.9	89	70.6
Bipolar disorders (past month/current)	0	0.0	0	0.0	0	0.0
Bipolar disorders (lifetime)	1	3.3	0	0.0	1	0.8
PTSD (past month/current)	1	3.3	0	0.0	1	0.8
PTSD (lifetime)	16	53.3	43	44.8	59	46.8
ADHD (past six months/current)	3	10.0	9	9.4	12	9.5
Borderline personality disorder	9	30.0	33	34.4	42	33.3
Antisocial personality disorder	2	6.7	17	17.7	19	15.1

Psychotic disorders (past month) consisted of 0.8% (n=1) schizophrenia and 0.8% (n=1) unspecified psychotic disorder. Psychotic disorders (lifetime) consisted of 1.6% (n=2) psychotic disorders due to another medical condition and 1.6% (n=2) due to unspecified psychotic disorders. Depressive disorders (past month and lifetime) were all in the category of major depressive disorder.

A minority of women with PTSD had experienced more than one episode during their lifetime. Thirty-eight out of the 59 women (64.4%) reported rape as having been the precipitating stressor. Two (3.4%) had experienced PTSD after being hijacked. Ten (16.9%) had witnessed stabbings, shootings, suicide or murder. Five (8.5) had been stabbed while one (1.7%) had been shot in the head. Five (8.5%) had been robbed at either knifepoint or gunpoint, while three (5.1%) had been involved in a motor vehicle accident.

Alcohol and substance use disorders

Figure 2 shows the prevalence of AUDs and SUDs



PCP=phencyclidine

Figure 2: Prevalence of AUDs and SUDs among RDs and SOs

We found 13.5% of women had a 12-month prevalence of an AUD while 48.4% (n=61) had a lifetime prevalence of an AUD. Overall 18.3% (n=23) had a 12-month prevalence of a SUD while 31.7% (n=40) had a lifetime prevalence of a SUD.

Self-harming behavior and suicidality

The lifetime prevalence of non-fatal deliberate self-harming behaviors which included cutting and burning was 5.6% (n=7). The lifetime prevalence of suicide attempts was 39.7% (n=50) and the most common method of attempting suicide was overdosing on medication. Many women (64.3%, n=81) admitted to past suicidal ideation.

Psychiatric comorbidities

Thirty-six percent of the women (n=46) had a current episode of a psychiatric disorder (i.e psychotic, depressive, PTSD, AUD and SUD) or a current psychiatric disorder (adult ADHD) and 7.9% (n=10) experienced two or more psychiatric disorders currently, while 90.4% (n=114) had a lifetime diagnosis of a psychiatric disorder with 62.7% (n=79) having two or more lifetime diagnoses.

Past psychiatric history

Sixteen percent (n=21) had a prior psychiatric diagnosis however, most women (90.4%) were found to have suffered from a lifetime psychiatric disorder.

HIV and mental illness

The prevalence of HIV was 64.3% (n=81) with all, except one participant, being on highly active anti-retroviral therapy currently. Table 3 shows the association between HIV and mental illness. There was a statistically significant association between HIV and PTSD as well as HIV and AUD. Those participants with PTSD were more likely to be HIV positive than those without PSTD (79.7% versus 50.7%, p=0.001). The participants with AUD were also more likely to be HIV positive than those without AUD (75.4% versus 53.8%, p=0.012). There was a non-statistically significant trend shown in those with a SUD or AUD (lifetime) and HIV (71.6% versus 55.9%; p=0.066). Other non-significant trends observed to be more common amongst PLWHA were depressive disorders, SUDs and psychotic disorders. However, a larger study is required to explore these findings further.

Table 3: Associations between HIV and mental illnesses

Variables							P value
	HIV negative		HIV positive		Total		
	n	%	n	%	n	%	
Depressive disorders (lifetime)							
No	15	40.5%	22	59.5%	37	100.0%	0.466
Yes	30	33.7%	59	66.3%	89	100.0%	
Total	45	35.7%	81	64.3%	126	100.0%	
Bipolar disorders (lifetime)							
No	44	35.2%	81	64.8%	125	100.0%	0.357
Yes	1	100.0%	0	0.0%	1	100.0%	
Total	45	35.7%	81	64.3%	126	100.0%	
SUD or AUD (lifetime)							
No	26	44.1%	33	55.9%	59	100.0%	0.066
Yes	19	28.4%	48	71.6%	67	100.0%	
Total	45	35.7%	81	64.3%	126	100.0%	
SUD (lifetime)							
No	34	39.5%	52	60.5%	86	100.0%	0.189
Yes	11	27.5%	29	72.5%	40	100.0%	
Total	45	35.7%	81	64.3%	126	100.0%	
PTSD (lifetime)							
No	33	49.3%	34	50.7%	67	100.0%	0.001
Yes	12	20.3%	47	79.7%	59	100.0%	
Total	45	35.7%	81	64.3%	126	100.0%	
Psychotic disorders (lifetime)							
No	44	36.7%	76	63.3%	120	100.0%	0.420
Yes	1	16.7%	5	83.3%	6	100.0%	

Total	45	35.7%	81	64.3%	126	100.0%	
ADHD (current)							
No	39	34.2%	75	65.8%	114	100.0%	0.346
Yes	6	50.0%	6	50.0%	12	100.0%	
Total	45	35.7%	81	64.3%	126	100.0%	
AUD (lifetime)							
No	30	46.2%	35	53.8%	65	100.0%	0.012
Yes	15	24.6%	46	75.4%	61	100.0%	
Total	45	35.7%	81	64.3%	126	100.0%	

Mental illness and offending

Table 4 shows the association between offending and mental illness as well as offending and personality disorders. Having an AUD or SUD was significantly associated with non-violent offences (p=0.001). Fifty-two percent of participants with SUD or AUD committed non-violent offences whereas 23.7% of those without SUD or AUD committed non-violent offences. Similarly, SUD and AUD independently were associated with non-violent offences (p=0.002 and 0.002 respectively). The most common non-violent offence was drug possession. Conversely, violent offences were associated with not having an AUD or SUD. The most common violent offence was murder. BPD was non-significantly higher in women who committed violent offences (p=0.093).

Table 4: Associations between offending and mental illnesses and personality disorders

Variables	Offences						P value
	Non-violent		Violent		Total		
	n	%	n	%	n	%	
Depressive disorders (lifetime)							
No	18	48.6%	19	51.4%	37	100.0%	0.164
Yes	31	34.8%	58	65.2%	89	100.0%	
Total	49	38.9%	77	61.1%	126	100.0%	
Bipolar disorders (lifetime)							
No	48	38.4%	77	61.6%	125	100.0%	0.389
Yes	1	100.0%	0	0.0%	1	100.0%	
Total	49	38.9%	77	61.1%	126	100.0%	
AUD or SUD (lifetime)							
No	14	23.7%	45	76.3%	59	100.0%	0.001
Yes	35	52.2%	32	47.8%	67	100.0%	
Total	49	38.9%	77	61.1%	126	100.0%	
SUD (lifetime)							
No	25	29.1%	61	70.9%	86	100.0%	0.002
Yes	24	60.0%	16	40.0%	40	100.0%	
Total	49	38.9%	77	61.1%	126	100.0%	
PTSD (lifetime)							
No	26	38.8%	41	61.2%	67	100.0%	0.984
Yes	23	39.0%	36	61.0%	59	100.0%	
Total	49	38.9%	77	61.1%	126	100.0%	
Psychotic disorders (lifetime)							
No	46	38.3%	74	61.7%	120	100.0%	0.667
Yes	3	50.0%	3	50.0%	6	100.0%	
Total	49	38.9%	77	61.1%	126	100.0%	
ADHD (current)							

No	42	36.8%	72	63.2%	114	100.0%	0.213
Yes	7	58.3%	5	41.7%	12	100.0%	
Total	49	38.9%	77	61.1%	126	100.0%	
AUD (lifetime)							
No	17	26.2%	48	73.8%	65	100.0%	0.002
Yes	32	52.5%	29	47.5%	61	100.0%	
Total	49	38.9%	77	61.1%	126	100.0%	
Borderline personality disorder							
No	37	44.0%	47	56.0%	84	100.0%	0.093
Yes	12	28.6%	30	71.4%	42	100.0%	
Total	49	38.9%	77	61.1%	126	100.0%	
Antisocial personality disorder							
No	42	39.3%	65	60.7%	107	100.0%	0.843
Yes	7	36.8%	12	63.2%	19	100.0%	
Total	49	38.9%	77	61.1%	126	100.0%	

DISCUSSION

The main findings of this study were the high prevalence of mental illnesses, personality disorders and HIV amongst female inmates compared to the general population in SA.[45] This elevated prevalence of major psychiatric disorders amongst prisoners compared to the general population is also in keeping with prevalence rates in other LMIC settings.[18]

The estimated overall HIV prevalence rate in SA is approximately 13%. In the age group 15–49 years, an estimated 18,7% of the population is living with HIV.[11] Studies have consistently shown a higher prevalence of HIV amongst women than men in SA particularly in KwaZulu-Natal province,[46] with women in some parts of KwaZulu-Natal having an HIV prevalence of as high as 60%.[47] Cultural practices, the low socio-economic status of women and gender-based violence are some of the reasons cited to explain this disparity.[48] A review of HIV amongst prisoners in sub-Saharan Africa found prevalence rates ranging from 2.3% to 34.9% which were almost always higher

than that of the non-incarcerated population in the same country.[49] Although our findings are in keeping with the literature from sub-Saharan Africa,[49] the extremely high number of women in our study living with HIV, and the association of HIV with mental illnesses, are concerning and should be a focus of targeted interventions at this correctional facility.

The South African Stress and Health study (SASH), which was the first large population-based mental health epidemiological survey in South Africa, measured the 12-month and lifetime prevalence of mental illness amongst the general population in all nine provinces.[45] However, psychotic disorders, bipolar disorders, adult ADHD and personality disorders were not measured in the SASH study.

In Fazel and Seewald's updated review 3.9% had a six-month prevalence of psychotic disorders which is higher than in our study (1.6% one-month prevalence).[22] The one-year pooled prevalence for psychosis in the systematic review in LMICs was 6.2%.[18] Possible reasons to account for the lower rate in our sample may be that we measured one-month prevalence compared to the other studies which measured six-month and one-year prevalences. In addition, it has been reported that prevalence of psychotic disorders is higher on admission to prison, with decreased rates found in inmates with longer time spent in prison.[18] The majority of our sample were sentenced offenders which may account for the lower prevalence of psychosis. Furthermore, accused who were referred for forensic observation and found not fit and/or not responsible on the basis of a psychotic disorder were diverted to forensic psychiatric hospitals instead of the criminal justice system.[44]

Fazel and Seewald's updated review also found a six-month prevalence of 14.1% for depression,[22] while the one-year pooled prevalence for major depressive disorder in the systematic review in LMICs, by Baranyi et al, was 16.0%[18] which are both higher than in our study (9.5%). Possible reasons for the lower prevalence of current MDD in this study may again be accounted for by the shorter one-month prevalence we measured as compared to the other studies, and that the majority of participants in our study were SOs. Higher rates of depression have been reported in prisoners on admission, as was found in the systematic review in LMICS.[18] This was also borne out in our study where RDs had more than double the rate of current depression compared to SOs. This may be due to adjustment to prison posing a huge stressor for women.

The lifetime prevalence of depressive disorders in our study (70.6%) is substantially higher than in the SASH study which found that 4.9% of the general population had a 12-month prevalence of MDD, while 9.8% had a lifetime prevalence.[45] Thus, the inmate population carries a far heavier burden of depressive disorders than the general population. A study from Ethiopia suggests that possible risk factors for this high prevalence of depression amongst inmates includes a family history of mental illness, poor social support, comorbid medical disorders, concern about life after release from prison, substance use and having a history of previous incarceration.[50]

The lifetime prevalence of PTSD in this study (46.8%) is much higher than in the SASH study which found a 2.3% lifetime prevalence in the general population[45] but is consistent with a meta-analysis which found a lifetime prevalence of 40.4% in female prison populations.[24] There was a high level of traumatic experiences including rape, stabbings, and shootings in our sample of women, which is in keeping with the high prevalence of gender-based violence in SA.[51,52] Both physical assault and rape are traumas most likely associated with PTSD.[53,54] In addition, our study found a significant association between PTSD and PLWHA. PTSD may either precede an HIV diagnosis due to previously experienced traumatic events for example rape or sexual assault, or PTSD may appear during the course of the HIV illness due to traumatic incidents experienced.[55] Despite considerable variation in the rates of PTSD amongst PLWHA, the literature suggests that their rate of PTSD is high.[56-59] A meta-analysis in 2012 demonstrated highly disproportionate rates of trauma exposure and recent PTSD in HIV-infected women compared to the general population.[60] PLWHA and PTSD are less likely to adhere to their medication regimens and are less likely to practise safe sex with their partners, which both result in negative health outcomes.[61]

A meta-analysis of ADHD amongst young adults in the general population found a prevalence of 5.0%,[62] while the meta-analysis amongst prisoners by Young and colleagues revealed a prevalence of 25.5% with adult females having a non-significantly lower prevalence of 22.1%.[30] In this meta-analysis on prisoners, European countries had the highest prevalence of ADHD, followed by North America however there was significant heterogeneity. Lower rates of ADHD amongst prisoners have been reported in two recent high-quality studies, conducted on Canadian and French male prisoners, using self-report measures and diagnostic instruments. They reported ADHD prevalence rates of 16.5% and 11% respectively.[63-64] Tyler and colleagues in

their study across 13 prisons in the United Kingdom (UK) found that 7.3% of female prisoners screened positive for ADHD which is similar to the prevalence in our study.[65] The prevalence of adult ADHD in our study (9.5%) is similar to that of the French and British studies but lower than that of the systematic review. Possible reasons for this are that our study measured the current prevalence of ADHD only, and that different instruments were used in the other studies.

The prevalence of AUD was higher in this study than in the general population in the SASH study which was 5.7% (12 month prevalence) and 14% (lifetime prevalence).[45] In the SASH study, 1.5% of the general population had a 12-month prevalence of a SUD, while 4.5% had a lifetime SUD.[45] In another systematic review of prisoners, Fazel and colleagues found a 12-month pooled prevalence of 20% for AUDs and 51% for SUDs in females,[25] thus our sample had a lower rate of AUDs and SUDs compared to international prison populations, but higher rates compared to the South African general population. In addition, our study found an association between AUD and PLWHA. A 2019 systematic review found that PLWHA and AUD are at greater risk of poor medication adherence, unsafe sex practices and poor quality of life.[66]

Thirty-three percent of women in our study were diagnosed with BPD which is higher than that found in Fazel's systematic review (25%).[32] Furthermore, BPD was found to be non-significantly higher in those who had been charged with violent offences. This may be an area for future research as existing literature shows associations between BPD and violent offending.[67] In addition, the high prevalence of past suicide attempts and suicidal ideation is alarming and should be an area of treatment focus since South Africa's suicide rate (11.15 per 100 000) is more than the global average of 10 per 100 000.[68] Suicide is the leading cause of death in custody globally and is preventable; hence it needs to be targeted in this high-risk population.[69]

In our study, a minority of women (16.7%) had a previous psychiatric diagnosis and/or treatment for a psychiatric disorder despite the majority having a lifetime history of mental illness. This is in contrast to the study by Tyler and colleagues (UK) which found that a high number of prisoners had previous contact with mental health services or a prior psychiatric diagnosis.[65] SA, like most other LMICs in sub-Saharan Africa, has a significant treatment gap with respect to mental health care resources available to identify and treat the large burden of mental illnesses in the general population. It is

estimated that this treatment gap is approximately 80% in KZN.[70] There is currently no data describing the treatment gap for prison services in SA. Although the treatment gap was not directly measured in the quantitative phase of this study, the treatment gap may be inferred from the number of women diagnosed with a lifetime mental illness (90.4%) versus the number of women diagnosed with and/or treated for a mental illness previously (16.7%). This significant gap is likely to exist in other correctional centres in SA, and will need to be addressed if correctional services are to achieve optimal mental health outcomes and decreased recidivism.

Limitations

This study was based at one correctional centre in KZN. Another limitation was that the study relied on retrospective self-report and this information was vulnerable to exaggeration, misinterpretation and distortions, particularly when diagnosing lifetime disorders. Neuro-cognitive disorders, which are common in prison populations and in PLWHA, were not measured in this study. A further limitation was the lack of collateral information which would have enhanced diagnostic accuracy. Due to the cross-sectional design of the study, we were unable to draw causal inferences about associations found. Prisoners assessed by lay interviewers have been associated with higher prevalence rates of mental illness than interviews conducted by clinically trained psychologists and psychiatrists. The strengths of this study were that all interviews were conducted by a forensic psychiatrist. In addition, the SCID 5-RV, which is the gold standard for diagnosing mental illness, was used.

CONCLUSION

This is the first study which measured the prevalence of mental illnesses and HIV amongst female inmates at a correctional centre in South Africa. Although conducted at one site, this study demonstrates the substantial burden of mental illness and HIV prevalent amongst female inmates compared to international female prison populations as well as to the general population in SA. This underscores the critical need to improve mental health screening, treatment, care and rehabilitation services in correctional centres in SA. Screening should ideally be conducted at admission such

that individualised programmes may be tailored and implemented during incarceration. Surveillance and monitoring should be ongoing. Incarceration serves as an opportunity for the implementation of integrated mental health programmes including substance rehabilitation and trauma-focused interventions. Robust interventions during incarceration may positively impact women's future behaviour and decrease their rate of recidivism. It is recommended that further research be undertaken at all correctional centres in SA to facilitate comparison, and more importantly to form a knowledge base for the formulation and implementation of mental health care programmes designed specifically for female inmates.

REFERENCES

1. Walmsley R. World Female Imprisonment List. Fourth edition. Women and girls in penal institutions, including pre-trial detainees/remand prisoners. World Prison Brief. 2017 [cited 2020 Aug 25]. Available from https://www.prisonstudies.org.
2. Lewis C. Treating Incarcerated Women: Gender Matters. Psychiatric Clinics of North America. 2006;29:773-789.
3. World Health Organisation. Women's health in prison: Correcting gender inequity in prison health [Internet]. Copenhagen. 2009 [cited 2020 Jul 29]. Available from https://www.euro.who.int/en/healthtopics/healthdeterminants/prisons-and-health/publications/2009/womens-health-in-prison.-correcting-gender-inequity-in-prison-health (https://www.euro.who.int/en/healthtopics/health-determinants/prisons-and-health/publications/2009/womens-health-inprison.-correcting-gender-inequity-in-prison-health
4. Van den Bergh BJ, Gatherer A, Moller LF. Women's health in prison: urgent need for improvement in gender equity and social justice. Bull World Health Organ. 2009;87(6):406.
5. Department of Justice and Constitutional Development of South Africa. the Constitution of the Republic of South Africa [Internet].1996 [cited 2020 Aug 22]. Available from: https://www.justice.gov.za/legislation/constitution/saconstitution-webeng.pdf.
6. United Nations. Universal Declaration of Human Rights [Internet].

[cited 2020 Aug 22]. Available from: https://www.un.org/en/aboutus/universaldeclaration-of-human-rights

7. Baillargeon J, Penn JV, Knight K, Harzke AJ, Baillargeon G, Becker EA. Risk of Reincarceration Among Prisoners with Co-occurring Severe Mental Illness and Substance Use Disorders. Adm Policy Ment Health. 2010;37(4):367-374.
8. Baillargeon J, Binswanger IA, Penn JV, Williams BA. Murray OJ. Psychiatric Disorders and Repeat Incarcerations: The Revolving Prison Door. Am J Psychiatry. 2009;166(1):103-9.
9. WHO. HIV/AIDS [Internet]. 2019 [cited 2020 Jul 28]. Available from https://www.who.int/news-room/fact-sheets/detail/hiv-aids
10. Elflein J. Countries with the highest prevalence of HIV in 2000 and 2020. 2021 [cited 2021 Jun 28]. Available from https://www.statista.com/statistics/270209/countries-with-the-highest-global-hiv-prevalence/
11. Stats SA. Midyear population estimates 2020 [homepage on the Internet]. Pretoria, SA: Department of Statistics South Africa. 2020 [cited 2020 Jul 06]. Available from http://www.statssa.gov.za/?p=13453
12. UN AIDS. Aids Info. Available from https://aidsinfo.unaids.org [cited 2020 Aug 24].
13. Dolan K, Wirtz AL, Moazen B, Ndeffo-mbah M, Galvani A, Kinner SA, Courtney R, McKee M, Amon JA, Maher L, Hellard M, Beyrer C, Altice FL. Global burden of HIV, viral hepatitis and tuberculosis in prisoners and detainees. Lancet. 2016;388(10049):1089-102.
14. Spudich S, Gonzalex-Scarano F. HIV-1-related central nervous system disease: Current issues in pathogenesis, diagnosis and treatment. Cold Spring Harb Perspect Med. 2012;2(6):a007120.
15. Minager A, Commins D, Alexander JS, Hoque R, Chiappelli F, Singer EJ. NeuroAids: Characteristics and diagnosis of the neurological complications of AIDS. Mol Diagn Ther. 2008;12(1):25-43.
16. Zuma K, Manzini K, Mohlabane N. HIV epidemic in SA: A comparison of HIVepidemic patterns of two extreme provinces in South Africa. Health SA Gesondheid[serial online]. 2014 [cited 2021 Jul 06]. Available from

https://hsag.co.za/index.php/hsag/article/view/716/1042(https://hsag.co.za/index.php/hsag/article/view/716/1042)

17. Walmsley R. World Prison Population List. Twelfth edition. World Prison Brief. 2018 [cited 2020 May 03]. Available from https://www.prisonstudies.org.
18. Baranyi G, Scholl C, Fazel S, Patel V, Priebe S, Mundt AP. Severe mental illness and substance use disorders in prisoners in low-income and middle-income countries: a systematic review and meta-analysis of prevalence studies. Lancet Glob Health 2019;7(4):e461-71.
19. Institute for Crime and Justice Policy Research, Birkbeck College, University of London. World Prison Brief [Internet]. 2019 [cited 2020 May 03]. Available from https://www. prisonstudies.org//world-prison-brief
20. Makou G, Skosana I, Hopkins R. Factsheet: The state of South Africa's prisons. Africacheck. 2018 [cited 2020 May 03]. Available from https://www.africacheck.org.
21. White Paper on Corrections in South Africa. 2005 [cited 2020 Aug 16]. Available from https://www.acjr.org.za
22. Fazel S, Seewald K. Severe mental illness in 33588 prisoners worldwide: a systematic review and meta-regression analysis. Br J Psychiatry. 2012;200(5):364-73.
23. Goff A, Rose E, Rose S, Purves D. Does PTSD occur in sentenced prison populations? A systematic literature review. Crim Behav Ment Health. 2007;17(3):152-62.
24. Baranyi G, Cassidy M, Fazel S, Priebe S, Mundt AP. Prevalence of Posttraumatic Stress Disorder in Prisoners. Epidemiol Rev. 2018;40(1):13445.
25. Fazel S, Yoon IA, Hayes AJ. Substance use disorders in prisoners: an updated systematic review and meta-regression in recently incarcerated men and women. Addiction. 2017;112(10):1725-39.
26. Binswanger IA, Merrill JO, Krueger PM, White MC, Booth RE, Elmore JG. Gender Differences in Chronic Medical, Psychiatric, and Substance-Dependence Disorders Among Jail Inmates. Am J Public Health. 2010;100(3):476–82.
27. Fazel S, Baillargeon J. The health of prisoners. Lancet. 2011;377(9769):956–65.

28. Faraone SV, Biederman J, Mick E. The age-dependent decline of attention deficit hyperactivity disorder: a meta-analysis of follow-up studies. Psychol Med. 2006;36(2):159–65.
29. Shaw M, Hodgkins P, Caci H, Young S, Kahle J, Woods AG, Arnold LE. A systematic review and analysis of long-term outcomes in attention deficit hyperactivity disorder: effects of treatment and non-treatment. BMC Med. 2012;10:99.
30. Young S, Moss D, Sedgwick O, Fridman M, Hodgkins P. A meta-analysis of the prevalence of attention deficit hyperactivity disorder in incarcerated populations. Psychol Med. 2015;45(2):247-58.
31. Mohr-Jensen C, Steinhausen HC. A meta-analysis and systematic review of the risks associated with childhood attention-deficit hyperactivity disorder on long-term outcome of arrests, convictions and incarcerations. Clin Psychol Rev. 2016;48:32-42.
32. Fazel S, Danesh J. Serious mental disorders in 23000 prisoners: a systematic review of 62 surveys. Lancet. 2002;359(9306):545-50.
33. Trestman RL, Ford J, Zhang W, Wiesbrock V. Current and Lifetime Psychiatric Illness Among Inmates Not Identified as Acutely Mentally Ill at Intake in Connecticut's Jails. J Am Acad Psychiatry Law. 2007;35(4):490–500.
34. Black W, Gunter T, Allen J, Blum N, Arndt S, Wenman G, Sieleni B. Borderline personality disorder in male and female offenders newly committed to prison. Compr Psychiatry. 2007;48(5):400-5.
35. Nee C, Farman S. Female prisoners with borderline personality disorder: some promising treatment developments. Crim Behav Ment Health. 2005;15(1):2-16.
36. Naidoo S, Mkize DL. Prevalence of mental disorders in a prison population in Durban, South Africa. Afr J Psychiatry. 2012;15(1):30-5.
37. Department of Correctional Services of South Africa. Correctional Services Act 111 of 1998 of South Africa [Internet]. 1998 [cited 2020 Aug 30]. Available from https://www.dcs.gov.za/documents/correctional-services-act
38. National Institute of Justice. Recidivism [Internet]. Washington: US Department of Justice. Available from https://www.nij.ojp.gov/topics/corrections/recidivism [cited 2020 Sep 01].

39. National Institute of Justice. Violent crime [homepage on the Internet]. Washington: US Department of Justice. Available from https://nij.ojp.gov/topics/crimes/violent-crime [cited 2020 Jul 10]

40. Rosenfeld R. Violent Crime [Internet]. Oxford University Press. 2017 [cited 2020 Jul 10]. Available from https://www.oxfordbibliographies.com/view/document/obo-9780195396607/obo-9780195396607-0001.xml

41. Creswell JW, Plano-Clark V. Designing and Conducting Mixed Methods Research. Los Angeles: SAGE; 2011.

42. First MB, Williams JBW, Karg RS, Spitzer RL: Structured Clinical Interview for DSM-5—Research Version (SCID-5 for DSM-5, Research Version; SCID-5-RV). Arlington, VA. American Psychiatric Association. 2015.

43. Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap) – A metadata-driven methodology and workflow process for providing translational research informatics support, J Biomed Inform. 2009;42(2):377-81.

44. Department of Justice of South Africa. Mental Health Care Act 17 of 2002 [Internet]. 2002 [cited 2020 Aug 28]. Available from https://www.gov.za/documents/mental-health-care-act

45. Herman AA, Stein DJ, Seedat S, Heeringa SG, Moomal H, Williams DR. The South African Stress and Health (SASH) study: 12-month and lifetime prevalence of common mental disorders. S Afr Med J. 2009;99(5):339-44.

46. Huerga H, Van Cutsem G, Ben Farhat J, Puren A, Bouhenia M, Wiesner L, Dlamini L, Maman D, Ellman T, Etard JF. Progress towards the UNAIDS 90-90-90 goals by age and gender in a rural area of KwaZulu-Natal, South Africa: a household-based community cross-sectional survey. BMC Public Health. 2018 Mar 2;18(1):303.

47. Allinder SM, Fleischman J. The world's largest HIV epidemic in crisis: HIV in SouthAfrica [homepage on the Internet]. Centre for Strategic and International Studies; 2019 [cited 2021 Jul 11]. Available from: https://www.csis.org/analysis/worlds-largest-hivepidemic-crisis-hiv-south-africa

48. Shisana O, Davids A. Correcting gender inequalities is central to controlling HIV/AIDS. Bulletin of the World Health Organisation. 2004;82:11:811-890.
49. Telisinghe L, Charalambous S, Topp SM, Herce ME, Hoffmann CJ, Barron P, Schouten EJ, Jahn A, Zachariah R, Harries AD, Beyrer C, Amon JJ. HIV and tuberculosis in prisons in sub-Saharan Africa. Lancet. 2016;388(10050):1215-27.
50. Abdu Z, Kabeta T, Dube L, Tessema W, Abera M. Prevalence and Associated Factors of Depression among Prisoners in Jimma Town Prison, South West Ethiopia. Psychiatry J. 2018:5762608 Available from https://doi.org/10.1155/2018/5762608
51. Jewkes R, Levin J, Penn-Kekana L. Risk factors for domestic violence: findings from a South African cross-sectional study. Soc Sci Med. 2002;55(9):1603-17.
52. Maluleka R. Crime against women in South Africa- Report No. 03-40-05. Stats SA. 2018 [cited 2020 Aug 23]. Available from https://www. statssa.gov.za
53. Kessler RC, Sonnega A, Bromet E, Hughes M, Nelson CB. Posttraumatic stress disorder in the National Comorbidity Survey. Arch Gen Psychiatry. 1995;52(12):1048-60.
54. Acierno R, Resnick HS, Kilpatrick DG. Health impact of interpersonal violence 1: Prevalence rates, case identification, and risk factors for sexual assault, physical assault, and domestic violence in men and women. Behav Med. 1997;23(2):53–64.
55. Martin L, Kagee A. Lifetime and HIV-Related PTSD Among Persons Recently Diagnosed with HIV. AIDS Behav. 2011;15(1):125-31.
56. Kelly B, Raphael B, Judd F, Kernutt G, Burnett P, Burrows G. Posttraumatic stress disorder in response to HIV infection. Gen Hosp Psychiatry. 1998;20(6):345-52.
57. Kimerling R, Calhoun KS, Forehand R, Armistead L, Morse E, Morse P, et al. Traumatic stress in HIV-infected women. AIDS Educ Prev. 1999;11(4):321–30.
58. Safren SA, Gershuny BS, Hendriksen E. Symptoms of posttraumatic stress and death anxiety in persons with HIV and medication adherence difficulties. AIDS Patient Care STDS. 2003;17(12): 657–64.
59. Olley BO, Seedat S, Stein DJ. Persistence of psychiatric disorders in a cohort of HIV/AIDS patients in South Africa. J Psychosom Res. 2006;61(4):479–84.

60. Machtinger EL, Wilson TC, Haberer JE, Weiss DS. Psychological Trauma and PTSD in HIV-Positive Women: A Meta-Analysis. AIDS Behav. 2012;16(8):2091-100.
61. Boarts JM, Sledjeski EM, Bogart LM, Delahanty DL. The Differential Impact of PTSD and Depression on HIV Disease Markers and Adherence to HAART in People Living with HIV. AIDS Behav. 2006;10(3):253–61.
62. Willcut EG. The Prevalence of DSM-IV Attention-Deficit/Hyperactivity Disorder: A Meta-analytic Review. Neurotherapeutics. 2012;9(3):490-9.
63. Usher AM, Stewart LA, Wilton G. Attention deficit hyperactivity disorder in a Canadian prison population. Int J Law Psychiatry. 2013;36(3-4):311-5.
64. Gaiffas A, Galera C, Mandon V, Bouvard MP. Attention-deficit/hyperactivity disorder in young French male prisoners. J Forensic Sci. 2014;59(4):1016-9.
65. Tyler N, Miles HL, Karadag B, Rogers G. An updated picture of the mental health needs of male and female prisoners in the UK: prevalence, comorbidity, and gender differences. Social Psychiatry and Psychiatric Epidemiology. 2019;54(9):1143-52.
66. Duko B. Ayalew M, Ayano G. The prevalence of alcohol use disorders among people living with HIV/AIDS: a systematic review and meta-analysis. Subst Abuse Treat Prev Policy. 2019;14(1):52.
67. Kolla NJ, Meyer JH. Trait Anger, Physical Aggression, and Violent Offending in Antisocial and Borderline Personality Disorders. J Forensic Sci. 2017;62(1):137-41.
68. Richie H, Roser M, Ortiz-Ospina E. Suicide. OurWorldinData.org. 2015 [cited 2020 Aud 14]. Available at https://www.ourworldindata.org/suicide
69. Butler A, Young JT, Kinner SA, Borschmann R. Self-harm and suicidal behaviour among incarcerated adults in the Australian Capital Territory. Health Justice. 2018;6(1):13.
70. Burns JK. The burden of untreated mental disorders in KwaZulu-Natal province-mapping the treatment gap. S Afr J Psychiatry. 2014;20(1):6–10.

CHAPTER FOUR: RESULTS

AN HIV NARRATIVE OF FEMALE INMATES WITH A LIFETIME HISTORY OF MENTAL ILLNESS IN DURBAN, SOUTH AFRICA

ABSTRACT

Introduction

South Africa (SA) has one of the highest prevalence rates of Human Immuno-deficiency Virus (HIV) globally, with women carrying a larger burden of the disease. Furthermore, female inmates have higher rates of HIV compared to their male counterparts, with an over-representation of mental illnesses among female inmates as well. Additionally, mental illnesses are highly prevalent in people living with HIV, with HIV and mental illness sharing a complex bidirectional relationship. This study, which forms part of a larger two-phased, mixed-methods study, describes the experiences of contracting and living with/being affected by HIV, among female inmates with a lifetime history of mental illness, in a South African setting.

Method

This study was conducted at a correctional centre in Durban, KwaZulu-Natal, SA. Fourteen adult (18 years and older) female inmates, were purposively selected to participate in individual, in-depth semi-structured interviews. Participants had a lifetime history of mental illness, trauma and were either living with HIV, or affected by HIV. Women from diverse cultural backgrounds, who were fluent in English, were selected. This manuscript focuses on the description of the HIV component of the qualitative interviews only. Thematic analysis was used to analyse the data.

Results

Themes related to contracting HIV included intimate partner betrayal, gender differences regarding sexual behaviour, fear associated with HIV and the importance of pre- and post-test HIV counselling. Themes related to living with/being affected by HIV included the challenges women experienced in their home community, which contrasted with their experience of living with HIV in the prison community, and the importance of accepting an HIV positive life.

Conclusion

HIV is prevalent in the female inmate population at this correctional centre in SA. This study emphasises that whilst incarcerated, attempts should be made to educate, train, support and manage HIV in this population, thereby helping to curb the epidemic. Further research should aim at exploring such strategies. The study also underscores the importance of the continued need for HIV education in order to eradicate associated stigma and discrimination which are still prevalent in SA.

Keywords: HIV, female/women inmates/prisoners, mental illness, South Africa

INTRODUCTION

Although Human Immuno-deficiency Virus (HIV) is a global public health challenge, the majority of people living with HIV/AIDS (PLWHA) reside in sub-Saharan Africa.[1] South Africa (SA) has one of the highest prevalence rates of HIV in the world with only Eswatini, Botswana and Lesotho exceeding HIV prevalence rates in SA.[2] Approximately 7.7 million South Africans were PLWHA and the country had an HIV prevalence of 20.4% among adults aged 15 to 49 years in 2018.[3] SA recorded 240,000 new infections in 2018 and 71000 people died of AIDS related illnesses in the same year.[3] Although the incidence of HIV is declining, the prevalence is increasing, since more PLWHA are on anti-retroviral therapy (ART) and are living longer.[4]

In sub-Saharan Africa women have a higher prevalence of HIV than men,[5] and in SA, women are disproportionately affected by HIV with 62.7% of PLWHA being women.[3] Cultural practices, gender-based violence and the low socio-economic status of women are all cited as reasons to explain this disparity.[5] The HIV prevalence among young women aged 15 to 24 years is almost double that of young men of the same age (3.83% in males vs. 7.25% in females).[6] The epicentre of South Africa's HIV epidemic is KwaZulu-Natal (KZN) province.[7] Although KZN is the second most populous province in the country (Gauteng being the most populous) it carries the largest burden of HIV (27%).[7] However, the burden of HIV and mental illness among female inmates in KZN correctional centres remains under-researched.

While women constitute a minority of the total prison population, the number of incarcerated women has increased by 50% globally since the year 2000.[8] Furthermore, in most countries the prevalence of HIV in prisons exceeds the

prevalence of HIV in the general population.[9] A recent review of HIV prevalence in prisoners found that, in some countries, female prisoners had a higher prevalence of HIV than their male counterparts and this is particularly concerning in West and Central Africa, where the prevalence of HIV in female prisoners is almost double that of male prisoners.[9] Women are at higher risk of entering prison with sexually transmitted diseases and HIV/AIDS.[10] Previous estimates of HIV prevalence in South African correctional centres were as high as 40 to 45% which is more than double the prevalence amongst adults aged 15–49 years in the general population.[11] In addition, women in prison have elevated rates of mental illness compared to their male counterparts.[12] Mental illnesses are highly prevalent in PLWHA,[13] with HIV and mental illness sharing a complex bidirectional relationship.[14,15] Mental illnesses may increase an individual's risk for contracting HIV due to increased social vulnerability; increased inclination for high risk behaviour; associated alcohol and substance misuse; and disinhibition within intimate relationships. Conversely, mental illnesses may be secondary to direct result of HIV neuro-invasion or psychosocial ramifications of living with a chronic illness, or due to adverse effects of antiretroviral therapy (ART).[14,15] Despite this high prevalence of women living with HIV (WLWH) in SA and the elevated prevalence of WLWH in prison, there remains a paucity of qualitative studies that provide an in-depth understanding of their lived experiences, particularly among inmates with mental illness.

A further area of interest of this study was incarcerated women's HIV experience within the South African cultural context. SA is a country made up of people of diverse cultures and ethnicities. The United Nations Educational, Scientific and Cultural Organization (UNESCO) defines culture as a set of distinctive spiritual, material, intellectual and emotional features of society or a social group, that encompasses, not only art and literature, but lifestyles, ways of living together, value systems, traditions and beliefs.[16] Ethnicity refers to shared cultural practices, perspectives and distinctions that set apart one group of people from another. The most common characteristics distinguishing various ethnic groups are ancestry, territorial possession, language, forms of dress, a sense of history and religion.[17]

The largest ethnic group in SA is the Zulu nation, the majority of whom live in KZN and Gauteng provinces.[17] A study in four South African correctional centres found that cultural conceptualizations influence health-seeking behaviour among inmates, and that both consultation of traditional healers and biomedical remedies is widely

practiced.[18] Traditional beliefs, medicine and health practitioners play an important role in healing in the lives of African people.[19] It is therefore important to examine female inmate's lived experiences of HIV within this African cultural setting.

The first phase of this study, which measured the prevalence of mental illness, HIV and trauma in 126 female inmates at this correctional centre in KZN, found that 36.5% of women had experienced a psychiatric disorder, or a relapse of their psychiatric disorder in the past year, while 90.4% of the women had a lifetime history of suffering from a psychiatric disorder.[20] In addition, in phase one of this study, 64.3 % of the participants interviewed were WLWH.[20] Phase one also revealed an association between HIV and post-traumatic stress disorder and between HIV and alcohol use disorder.[20]

The aim of this manuscript was to explore the HIV narratives amongst female inmates with a lifetime history of mental illness in order to gain an in-depth understanding of their lived experiences and perceptions of HIV, in a South African setting.

MATERIALS AND METHODS

The findings reported in this manuscript form part of the second phase of a larger mixed methodology, sequential, explanatory design study which aimed to describe the mental health needs of female inmates in Durban, SA. This study, in keeping with a design as described by Creswell and Plano-Clark,[21] began with a quantitative analysis. A qualitative arm, which was used to explain findings from the quantitative phase (i.e., the high prevalence of trauma, HIV and mental illness), followed and helped to contextualize these quantitative findings. It enriched the quantitative findings and generated new data. The qualitative phase was conducted in keeping with a constructivist epistemology.

This study also adopted a transformative framework.[22] Transformative research helps to create a more just and democratic society. The transformative lens can be applied to taking a stand on a broad array of issues. In this study, the research is done through a social justice and feminist lens. The results of the research are intended to contribute to broader social objectives which include serving as an evidence base to create an awareness of the mental health needs of this marginalised population, and to inform future policy development for rehabilitative programmes for female inmates in the Department of Correctional Services (DCS) in South Africa.

This study was conducted at a correctional centre in KZN in SA, which is one of the largest correctional centres in sub-Saharan Africa. It accommodates mainly male prisoners but it also has a section for females. Females are referred from many parts of KZN as this is one of the only correctional centres in the province which accommodates women serving life sentences.

Participants

In phase one, 126 female inmates were recruited into the study and their prevalence of mental illnesses, trauma and HIV were quantitatively measured. After analysis of phase one data, 14 women (including sentenced offenders and remand detainees) were purposively selected and invited to participate in phase two, which took the form of individual, in-depth semi-structured qualitative interviews. The 14 women, who were from diverse cultural backgrounds, had a lifetime history of mental illness and trauma, and were either living with, or affected by HIV. This manuscript reports on the HIV component of the qualitative interviews. Including women who were not living with HIV, broadened our understanding of perceptions of all incarcerated women regarding HIV. Only women who were fluent in English were selected to participate in phase two as the qualitative interviews were conducted by the first author in English. When no new themes emerged from the data with respect to HIV narratives, saturation was achieved and sampling ceased.

Data Collection

The first author, who conducted the data collection and analysis, is a forensic psychiatrist and completed training in qualitative research at the University of the Witwatersrand. The interview followed an open-ended format with a few questions on each topic (HIV, trauma and mental illness) in the interview guide and with minimal probes. Participants were encouraged to speak freely and openly about their lived experiences. The semi-structured interviews were audio-recorded.

Ethical Considerations

Ethical approval was obtained from the University of the Witwatersrand Human Research Ethics Committee (Clearance number M181026) and approval was also

granted by the DCS in SA. The study was fully explained to the selected participants and written informed consent, including consent for audio-recording, was obtained.

Analysis

After verbatim transcription of audio-recordings, the transcripts were read more than once to verify accuracy with the audio-recordings. Braun and Clarke's thematic analysis was the chosen method of analysis.[23] Data analysis commenced with the first author familiarising herself with the data by reading through all the transcripts several times before commencing the coding process. A qualitative data analysis software programme, MAXQDA, was used to analyse (code) the data,[24] which also ensured an electronic audit trail. A code book was then developed using MAXQDA. After the 14 transcripts were coded, the researcher began the process of compiling initial subthemes and later themes. Themes were revised multiple times and were subsequently correlated with actual extracts of quotations from participants which highlighted the theme. This was an iterative and cyclical process and was done in collaboration with the second author, a qualitative researcher and clinical psychologist. Idiomatic expressions were retained in the quotations. Participants are identified by pseudonyms in the manuscript.

Credibility, dependability, transferability and confirmability (which includes reflexivity) as defined by Guba and Lincoln were the constructs used to establish scientific rigour.[25] Credibility was ensured by the first author conducting all the interviews, as well as through analyst triangulation by the first and second authors. Transparency was enhanced using a qualitative data analysis software programme. Thick descriptions of the study setting and population as well as detailed in-context descriptions facilitated transferability of the findings.

RESULTS

Socio-Demographic, Clinical, and Forensic Profile

The mean age of the 14 participants was 36.2 years (standard deviation 9.3). The majority of women had a high school level of education however, a large proportion were unemployed prior to incarceration. Most participants were from urban areas and were single, separated, divorced or widowed. The majority of women were living with HIV and were on anti-retroviral therapy (ART). Women were charged with offences

including fraud, theft, possession of drugs, murder, robbery with aggravating circumstances and kidnapping. The most common lifetime mental illnesses among participants were major depressive disorder, post-traumatic stress disorder and alcohol use disorder. There was also an over-representation of borderline personality disorder in this qualitative phase sample.

Themes

Significantly, 27 years after the new democratic dispensation in SA, remnants of the destructive effects of apartheid (national policy of racial segregation) still linger.[26] This was manifest in the strong racial sentiments which permeated the women's narratives. The relevant quotations were thus included in the manuscript to highlight the racial stereotypes and prejudices still present in SA today however, the actual words describing specific ethnic/cultural groups have been redacted. The authors dissociate themselves from any prejudicial sentiments reflected in statements harboured by the participants.

The themes are summarised in Table 1 and then described in detail.

Table 1: Summary of the main themes and subthemes

Overarching theme	Theme	Sub-theme
Contracting HIV	Intimate partner betrayal	Disbelief and anger
		Injustice of being infected
		Frustration at partner's denial and lack of support
	Gender differences in sexual behaviour	Men having multiple sexual partners accepted
		Women are raised with traditional conservative values
	Fear associated with HIV	Fear associated with potential loss of physical integrity or loss of life

		Fear of contracting HIV in prison
	Importance of pre- and post-test counselling	
Living with HIV	HIV in the home community	Reluctance to disclose their status
		Lack of knowledge, misconceptions and prejudices about HIV
		Stigma and discrimination
		Cultural beliefs about HIV causation
	HIV in the prison community	Disclosure
		Support
	Coming to terms with an HIV positive life	Acceptance of diagnosis and starting treatment
		Rationalising their illness
		Adopting a healthy lifestyle

Contracting HIV

Intimate Partner Betrayal

Disbelief and Anger

Many women described being shocked at their diagnosis, as they expected their intimate partners to be faithful to them. Sibongile expressed her disbelief upon diagnosis as she had never engaged in sexual intercourse prior to marriage, “My husband…he was my first one, I didn't sleep with my boyfriend in high school…and then now I'm married, pregnant and then I'm HIV positive…I was very angry. I was shocked.” Esther was enraged when she discovered she was HIV positive, “I think if there were not any walls here or any burglars or any cage holding me back, I was furious…I was very, very angry.”

Injustice of Being Infected With HIV

Didi expressed her desire for vengeance at being betrayed by her husband and the injustice of being infected since she had been a faithful wife, “I know I was a good woman, I never cheat but now I find that I am HIV positive.it was so difficult. I could not even like my husband, I was feeling even to fight back because he was the one…I was so trustful, I was so faithful to him.” Katlego also spoke about her feelings of being unjustly infected by her partner, “I never pursued the disease, in a sense as whereby I had a lot of sexual partners, but instead I got it from the one person that I trusted.” Noma described how many women felt about being infected by their partners, “Most of them, especially the married ones, they feel that they have been robbed by their husbands because most of…women, they don't go around cheating. So, most of our…men, going around and cheating, it's kind of a norm. So, you'll be sitting at home doing everything by the book, then your husband will be going around, then he will bring the HIV to you. So, that is what is happening…because most married people are HIV positive and the carrier is their husbands.”

Frustration at Partner's Denial and Lack of Support

Some participants explained that they had to cope with denial from their intimate partners and in some cases the women had to force their partners to get tested. Some assumed the role of a care-giver for their partners, whilst simultaneously having to come to terms with the illness themselves. This was manifest in Noma's account, “The minute you tell him that you're HIV positive, their attitude, they just snap and say ‘No, you're the one who brought this', and they don't want to go and test…so, you have to gradually beg him to go and test so that you can start treatment together. So, i-role iyakho [your role] it becomes more of a nurse, more of a counsellor whilst you are also trying to figure out what to do about this. Whilst you're trying to adjust that now, I'm HIV positive whilst I'm being sincere and honest to my husband. The very same husband that brought this to you is also your responsibility.” Sibusisiwe also expressed her frustration and disappointment at her partner's denial, “He was the cause of it and he was busy denying it and at times I would think what kind of a person he is who doesn't own up or doesn't man up and you know [say], ‘I've done it, I'm sorry' you know, whatever, you know, he just denies everything.”

Gender Differences in Sexual Behaviour

Men Having Multiple Sexual Partners Accepted

Some women alluded to infidelity among men being accepted as a norm and that this was frequently how HIV was introduced into the relationship. Noma expressed the following, “It [cheating] is a norm, Doc. If you're not doing it, it's as if you're not an ordinary man…If you're married, you must be married, then you must have a concubine on the other side. If you're not doing that, you're not man enough. That is a norm…if you're having a problem with your husband, they will tell you that, ‘Even my grandfather, even my great-grandfathers, that's how things were done in an…way'. It's a norm.” Didi stated that her husband's family practised polygamy and he wanted to practise the same in their marriage, “Because he grew up in a family of a polygamy so he wanted to apply that how he grew up to me.” Katlego described her father as having other partners while being married to her mother, “My mom and my dad were married, yes, but he was in and out of the picture. He had other women.”

Women Are Raised With Traditional Conservative Values

Some participants stated that women were raised with strong, conservative, traditional values. They were raised to believe that they had to remain celibate until marriage, as Sibongile commented, “Yeah my culture plays a very important part…because I was told while I was still very, very young ukuthi [that] that you don't sleep with a man…you can have a boyfriend, but there's no sleeping with the boyfriend up until you get married, up until you have somebody whom we know ukuthi [that] okay this is your man; he must pay for your family and then you can have your home, you can start to have your children and everything. That is how I grew up.” Similarly, Katlego noted, “We're taught that from a young age that you keep your virginity for as long as you can. That's your present to your husband, when your family gives you away to the next family.”

With regards to the traditional role of women, participants described gender inequalities that persist in their culture as evident in Noma's comment, “In most African countries or cultures, the woman must always be submissive. That is the problem…They were conditioned to think that way and to act like that.” Didi also

described the traditional view of how a woman should be raised in her culture, “The role of the woman in that [deep rural] area, from the age of sixteen, eighteen when you have got an ID [identity document] you must get married, that is what they know. And when you are able to write a letter then it is how your schooling must stop. There is nothing more that a female must be more educated. You must have children, must have your family.” These accounts, as described by the women, portray themselves as being disempowered and subject to a patriarchal society.

Fear Associated With HIV

Fear Associated With Potential Loss of Physical Integrity or Loss of Life

Women spoke about their overwhelming fear, upon diagnosis of having HIV, related to becoming severely ill and thoughts of imminent death, fuelled by memories of people from their past who had suffered such a fate. Didi feared her physical deterioration. She said, “When I look at my neighbours how they are facing this vulnerable disease, because some, they could not eat. Some they were full of sores. Some the legs were swollen. They have got a problem of rash. So, I was looking at the diseases that I will be facing, a giant. That is why I was so having that fear that ‘Oh, it's me, it's my turn.’" Katlego also expressed fears of premature death due to HIV, “Because I always used to see it as this disease whereby you'll get sick and drop dead…it's scary because to me, I thought it was a life sentence. I was just going to die at any time.” Melissa related the same feeling of being overwhelmed with fear upon diagnosis, “It was terrifying. For me at first I thought it was just over you know.” The fear of impending death was also evident in Nokukhanya's account, “When I went to the clinic here, they counselled me…I even told the person that was counselling me first that I'm too scared to get the result because I used to see my aunty getting sick, so I will be like that and I will die in prison.”

Fear of Contracting HIV in Prison

A few of the women who were HIV negative stated that prior to coming to prison they had never interacted closely with family or friends living with HIV. They spoke about having many fears about contracting the virus in prison which was mostly due to a lack

of knowledge as described here by Neeta, “Outside I didn't come into contact with people who are HIV positive, whereas here, I have. When I first came to prison, I was very cautious, you know, because [of] us using the showers together and all of that, it terrified me…so yeah, I was scared.” Alicia, shared similar sentiments, “I have not come across someone close to me within my family or within my friends that are HIV positive…I was terrified of course of HIV. I didn't want to use the same anything as them [inmates living with HIV] because I thought, ‘Oh my gosh, I could get it.’"

Importance of HIV Pre- and Post-test Counselling Upon Diagnosis

Many participants spoke about the importance of HIV pre- and post-test counselling at the time that they were diagnosed. Women who did not get any counselling described how difficult the experience was and what a devastating impact the diagnosis had on them, because of their lack of knowledge about HIV as described by Katlego, “It was horrible. It was basically one of the worst moments of my life, whereby, what can I say, maybe being on the outside you get counselling, pre-test counselling, here there isn't most of that, so you're just thrown into the deep end of something that you don't know about and it's scary. Because to me, I thought it was a life sentence. I was just going to die at any time so maybe if I got pre-counselling and they told me that you know, this is the disease and this is what happens, you get treatment, then maybe I think I would have gotten, I would have taken it a little bit better.” On the other hand, women who did get HIV pre- and post-test counselling described how this helped them accept and cope with the diagnosis as detailed by Noma, “The counsellor, I think he did a lot. The way he counselled me, he prepared me. He prepared me pre- and post. The time I left there, I did not have any regrets about testing, even the results, I just accepted them…I think the person who was counselling me was good enough because he told me that it's not the end of the world.” Katlego also expressed the desire to become an HIV counsellor so she could help support others, “I like learning about things even if it was HIV courses whereby I could maybe learn to be an HIV counsellor and help someone else.”

Living With HIV

HIV in the Home Community

Reluctance to Disclose Their HIV Status

Many women discussed how difficult it had been for them to disclose their status to their families and friends while they were living in their home communities. Sibusisiwe expressed the need for PLWHA to conceal their status for fear of being judged and disparaged, even by those closest to them, “While I was outside, you have to be discreet, very discreet with what you do and how you do it, who sees you and who doesn't, because even in your own family, people will talk…and belittle you, and you feel like you, you [are] nothing.” Melissa echoed this, stating that her lack of disclosure was due to fear of rejection and possible loss of relationships, “I would like to be open about my status. Currently I'm not though. I think I am also afraid of people judging me. Yes. I'm afraid of the rejection…like people not wanting to be around me maybe if they know that I am HIV positive.” Didi also expressed that people's reluctance to disclose was driven by their fear of rejection by those they loved, “People, they are afraid to disclose their status because they know that they will lose something. They will lose their marriage. They will lose their friendship. They will lose even their children.” Due to the stigma attached to HIV, Sibongile, a teacher, spoke about the need to conceal her status with regards to taking ARTs, “Like maybe you are going for a [matric] marking and I had to pack my medication, you see, and you have to drink your medication. So many people are there, you have to use those pill containers…so that people they won't see you carrying those containers that are written ama [the] antiretroviral and everything, you have to put them into those pill containers like you are drinking pills like everybody else is drinking pills.” Mpumi concurred that people are hesitant to disclose their status because of the stigma attached to the diagnosis “Most people hide their statuses yeah, even getting into relationships, people hide their statuses. I've dated a few guys that have hidden their statuses from me, you know, and [you] end up finding ARVs in their cupboard, somewhere along the line during the relationship. Yeah, people still hide their statuses most of the time because it's still a stigma.” This proved to be the case among women from all cultural backgrounds, as seen with Lisa, “Like in the…community, they still hide the fact that they're HIV positive.” Didi alluded to people's reluctance to disclose their status impacting on their

treatment adherence and ultimately resulting in negative effects on their health outcomes, “But outside it is hard to disclose…people have got their secrets, their confidentiality so that is why people they are not healed…because that is where [why] they do not take their medication on time.”

Lack of Knowledge, Misconceptions, and Prejudices About HIV

Participants related how the lack of knowledge about HIV was still very rife and that this led to misconceptions and prejudices. Participants described how they would be treated by the community if they revealed their HIV status. Didi stated, “The problem is that, if you disclose your status to the outside community…they cannot share their food with you. There will be no contact…there is that myth of HIV, using my spoon, using the same toilet then you will be transmitting the HIV virus…They cannot even hug, if you hug a person where [when] they know you are HIV positive they say ‘Oh'. That is the problem. It is hard because they lack knowledge.” Katlego also remarked that there was a lack of knowledge about HIV in her community and that people were reluctant to openly engage in discussions about HIV, “The…community from what I know is not really educated about HIV. They're blind to it. It's there but it's not something they like talking about. It's not something they're educated about because it's automatically like the mentality that I had, which is automatically when you're sick, you're gonna die when you're infected.” Lack of knowledge and misconceptions about HIV prevailed across women from all cultural backgrounds. Lisa commented, “I am from the…community, they're…very ignorant [about HIV].” Alicia admitted to a lack of knowledge as being responsible for her prejudices, “I would ostracise them [PLWHA] because I had no knowledge of it. Now I've got more knowledge of it and I see it differently.” Esther also shared similar thoughts about the misconceptions that existed among people in her community, “…people are very naive because they only believe I'm sure that it's just amongst…people, which is utter nonsense because at [in] this day and age anybody can get HIV.”

Stigma and Discrimination

Women described that they felt judged by society for being HIV positive. They quoted derogatory terms that were often used to describe WLWH and stated that the

community would often blame the women for contracting the virus, as participant Sibusisiwe remarked, “They would think that maybe you [are] a whore of some sort. That you sleep around that's why you have HIV.” Mpumi who was HIV negative also felt the same way, “But there's still that stigma, you know, having HIV sometimes people think that…the women that are HIV positive probably sleep around and that's why they got it, they deserved it or something.” These sentiments were evident across cultures, as illustrated by Neeta, “The…community…they just assume you were sleeping around and that's how you became HIV positive…the moment you have this HIV positive status, you have a stigma attached to you that you're from the lower end of life and you're the trash of the world.” Similarly, Alicia commented that women received disrespectful labels and were blamed for being infected with the virus, “If it were to happen to someone who's maybe…, it would be frowned upon as maybe something dirty…I thought it was a dirty thing and I am assuming that's what everybody else in my family or in the culture would feel as well…it would be self-inflicted, that's what I thought.” This was also expressed by Seleste, “They [people from her community] think that you sleep around with…people and that you are a disgrace to the family. You are not part of the family because you slept around with so many guys and did so many wrong things and they cannot accept you in the family and all kind of things. And they always just give you bad names and everything.” Melissa remarked, “If they [people from her community] know that you're HIV positive, it's like a death sentence. Yes, so it's like you're the walking dead. You probably don't exist anymore…they would normally treat a person like that like trash, you know.”

Participants also quoted non-verbal examples of discrimination which they encountered regularly. This enacted stigma evoked feelings of loss of worth and dignity, as detailed by Didi, “When you are taking your ARVs in the centre…so people they look at you, they name you. You are just stigmatised, there is that discrimination, ‘This woman is taking the ARVs'…there will be spreading of news that our teacher is HIV positive…so this giant of being HIV positive, people they are still not accepting.” This was echoed by Sibongile, “Like the look nje [just], even by not telling a word, like…outside the doctor will give you a script for 6 months. So you just take that script, you give it to the pharmacy, maybe there are so many people waiting in the pharmacy, they will say, ‘Oh, ARVs, those are ARVs.' Just the look, only the look will tell you a lot without even speaking. So you will see that one is so judgemental.”

Cultural Beliefs About HIV Causation

Women talked about how HIV was perceived, particularly in the rural communities, as being a spiritual illness due to bewitchment rather than as a medical illness. They would thus seek intervention from traditional healers rather than western medical practitioners, as described by Didi, “In my [rural] community there are two groups. Others, they say you are HIV positive, there is nothing of a such. They say if a person is HIV positive, it is only someone that is using the muti [African traditional medicine] to make that person sick. If you have got a problem with the legs, swollen legs, there is something that has happened. Maybe it is this spiritual ancestors, if [so] they want to take you to a spiritual sangoma [African traditional healer]. So, there is that demonic spirit that has come into your life to change you.” Noma concurred with this notion, “Like, there are people who go to Joburg to work in the mines. So, when they come back, some of them they come back critical, sick, sick, sick [with HIV]. Then they [family] will take them to the sangomas and then they will say ‘No, that person has been bewitched,' unedhliso [poison], and all those things. Then, taking the person to the clinic will be the last resort, but maybe by the time they take the person to the clinic, it will be too late. So, they rather go to the traditional healers than to the medical professionals.”

HIV in the Prison Community

Disclosure

The women spoke about it being easier to disclose their status inside prison for many reasons. Outside prison many women felt as though they were alone, as if they were the only ones infected with HIV, whereas in prison, they saw that many women were living with the virus and this encouraged them. This was expressed by Katlego, “There are so many of us living with it here. The majority of us here have it…I think with me being…diagnosed in prison, was in a way I think a blessing because maybe if I was on the outside, I would have still been in denial because I would have thought it's only me that has HIV, but being in prison, I saw that there are women living healthy lives, looking healthy and alive with HIV.” They stated that they did not feel judged like they did outside and that they felt more accepted. Sibusisiwe explains, “When you get here,

it's unlike on the outside. On the outside world you feel everybody's on you, watching you and whatever you do, you must hide this, you must hide that. There's no judging here inside. When we go to the clinic, we go all to the clinic, we go to get our medication. No one says ‘Oh this one is taking ARV'. No one is on anyone's case. You just do you.” Esther shared a similar perception, “So, here it's no big deal because a lot of people here are [have] HIV, I can't say everybody because I don't know but you'll find that the way we know is when we fetch our medication which is obvious so that's the only way you're going to know.”

As alluded to above, due to the lack of privacy in prison, all WLWH attended the same clinic every month to consult with the doctor and collect their ARTs, thus the women's status were revealed due to the nature of the prison system. Most women felt that this unintentional disclosure had a positive effect as the women did not feel alone. It encouraged adherence, they were able to enlist the support of other WLWH and it helped to eradicate stigma, as described here by Noma, “Then, you cannot hide it in prison. Like, what is happening, we are grouped okay, every Tuesday and every Friday there is a chronic clinic. They will call your names, ‘So and so, and so, you're seeing Doctor H'. Everybody will know that Doctor H is the doctor for HIV, so you cannot hide it. Even if you hide it, you're staying with a roommate. At six o'clock, she will see when you're taking tablets and the container for HIV is very loud, you cannot hide them so, you cannot hide it…I think it's good because the more people know about you and now you don't mind, I think it's taking that stigma away. How I wish it can be like that even outside. Here, it's different from outside. There is more acceptance of HIV than outside.” She elaborated on the positive side of being in prison which was that it encouraged good adherence which translated into better health outcomes for inmates, “I think it's better here than outside and I've noticed that most people who are in prison are taking ARVs better than people who are outside.”

Support

Contrary to the participant's experience in the home community, most of them found the prison community to be very supportive. The women spoke about the importance of supporting each other with respect to their HIV status, as a coping mechanism for living with the illness. Didi detailed this, “If you are using the medication, we support each other. Even if the person does not have the medication, we even supply for each

other if we are using the same medication. We remind us [each other], ‘Time, tablets time'. So, we even bang the walls, ‘Six o' clock'…It is good here in prison to disclose the status because we are altogether in one section, in one building for many years…so we must support each other because some other people, if they are having some problem, they do not take their medication, they do not take their food. So, we help each other to make us strong.” The women alluded to support not only from other inmates but also from the staff who encouraged them, as Nokukhanya remarked, “Even if you lose weight, they [staff] will be more concerned, ‘Have you seen that you losing weight? Did you take your CD4 count? Did you take your medication regularly?”'

Participants also identified gaps in the current correctional system with respect to comprehensive management of their HIV illness. They expressed the need to establish support groups both inside and outside prison as described by Katlego, “I think I will gather information once I'm out of prison because here there aren't any of those facilities. There are no support groups, like no one to talk to about it basically. Yes, there are many of us that are positive, but it's every man for themselves basically. You just go to the hospital, you take your treatment and goodbye, that's it…maybe having someone that can tell me, ‘Listen, I've had it for this long. I'm alive and kicking. I'm fine' would bring me more comfort. So, support groups to me, would mean a lot.” Sibusisiwe went on to explain further how support groups would encourage and assist women to start treatment, eradicate their fear of ARTs, encourage adherence and how it would help women by instilling hope that they could live long and healthy lives, “There are people also who are here, maybe they don't want to take their medication and they don't understand and if I come to you, you see I look healthy and strong, and the person who doesn't know me, that I'm taking medication wouldn't even tell that I'm HIV positive…I would encourage that person to take the ARVs, tell them that it's going to be okay, it's their life and it's important for them to do as they are still going to live longer and they can see that you also look healthy…and strong and then they get motivated.”

Coming to Terms With an HIV Positive Life

Acceptance of Diagnosis and Starting Treatment

Many women described taking a while to accept their HIV positive status but, after acceptance, they decided to start ARTs as stated by Katlego, “It took me a while to come to terms with it but eventually I thought I'm infected, I'm infected, I might as well take treatment and try and deal with it.” Sibusisiwe shared similar sentiments, “Now I feel I've accepted and I'm on ARVs and I'm healthy, I'm strong…I adhere to the times how I'm supposed to take the medication, so I've dealt with it.” Noma summed it up by saying, “So, taking treatment is the best thing that you can do for yourself.”

Rationalising Their Illness

Many women rationalised their HIV by comparing it to other chronic illnesses and some even stated that they preferred having HIV, as it had a better prognosis compared to other illnesses such as diabetes or cancer as described by Noma, “The only difference between myself and the other person who is not HIV positive is that I have to take medication. And HIV, the way I look at it, it's better than cancer, because the minute you start taking ARVs, your viral load goes down and you can still live a normal life. Unlike cancer which is a silent killer. So, I think HIV, I think I like my HIV.” Esther shared similar thoughts as well as the fact that HIV had a very simple treatment regimen which facilitated good adherence, “No, I mean my mum…was diabetic so there was a possibility of either having diabetes…which is a worse killer than HIV…There is only one tablet that I take daily so it doesn't affect me at all…I think diabetes is worse than having HIV really…. So, when you say you are HIV positive it's like okay. It's nothing really.” They spoke about how HIV was not a huge problem in their lives, because they had other more stressful issues to deal with being incarcerated, as expressed by Sibongile, “HIV is just a small thing compared to the things that we are facing every day. There are so many things and so many problems around here, so…the HIV thing it is not a problem.”

Adopting a Healthy Lifestyle

Women also spoke about adopting a healthy lifestyle and making positive changes in their lives after accepting the diagnosis, as mentioned by Noma, “But now that I discovered that I'm HIV positive, I started changing my lifestyle, changing the diet, starting taking care more of myself and choosing a better diet, multivitamins and stuff.” Nokukhanya also started making better choices, particularly concerning alcohol use and safe sex practices, “I can say it's changed the way I used to live. I never used to care for myself. I used to drink [alcohol] outside, I used to sleep with women not knowing their status…I don't do that without knowing your status and before I do that, I tells you my status, so let's have condoms.” Seleste shared a similar experience with respect to her illicit drug addiction, “It [HIV] did change my life…It makes me think of not doing the things that I did in my past, like going back to drugs.”

DISCUSSION

This article situates one of the quantitative findings from the first phase of the study, that is, the high prevalence of HIV among female inmates, in a South African setting, and it explores the impact of this illness on the lives of these women, both before and during incarceration. In the narratives of the participants, themes pertaining to contracting HIV and also living with HIV were elicited. These themes revolved around intimate partner betrayal, gender differences regarding sexual conduct, fears surrounding contracting HIV and the consequences thereof, the importance of HIV pre- and post-test counselling, the experience of living with HIV in the home and in the prison community as well as coming to terms with an HIV positive life.

A strong theme of intimate partner betrayal was apparent, with many participants describing that they were unknowingly infected with HIV by their husbands or boyfriends. They lamented the injustice of being infected in this manner as they had trusted their intimate partners. Women spoke about their emotional experiences upon discovering that they were HIV positive, which included feelings of disbelief and anger. To add to their distress, they described their partner's denial of accountability and their frustration at having to force their partners to test for the virus. Similar negative reactions were cited by Maman and colleagues in a South African study in which male

partners were reported to have overtly negative reactions when their female partners disclosed their own positive status.[27]

Participants also alluded to their cultural background with respect to the common practice and social acceptability of men having multiple sexual partners, whether as part of polygamous relationships, or secondary to infidelity with married man having concubines. They also described the generational pattern of this practice. This is supported by the literature. Shisana discussed this practice whereby in some cultures in southern Africa, men are expected to have multiple partners, while women are expected to be monogamous.[5] This finding which related to men more commonly having multiple sexual partners was further reiterated in a South African study by Onoya et al.[28] Multiple sexual partners also represented the main cultural practice cited by participants as being a reason for the spread of HIV in a qualitative study conducted in Lesotho.[29] This community-based study from Lesotho detailed this phenomenon which makes reference to the African culture accepting men having multiple sexual partners, but expecting women to have only one partner.[29]

The women in our study spoke about the values which were inculcated in women such as the traditional gender roles and expectations of women which manifested in women feeling disempowered in relationships. Some African communities remain patriarchal, which contributes to gender inequalities in relationships, and by extension, the sexual relationships between men and women.[5] This leads to women feeling unable to express and assert themselves with respect to issues like safe sex practices, which makes them more vulnerable to contracting HIV and has been cited as one of the reasons women in sub-Saharan Africa are disproportionately affected by HIV. Gender inequality thus drives the HIV pandemic.[30]

Fear associated with HIV was also a common theme expressed in this study. WLWH reported experiencing an overwhelming fear associated with being diagnosed with HIV which was related to the potential loss of physical health and imminent loss of life. Women who were HIV negative spoke about their fear of contracting HIV in prison which was largely due to a lack of knowledge about HIV transmission. A recent qualitative community study in the North West province of SA also described prominent fear, among community members, of contracting HIV from HIV positive individuals.[31] This fear, as was the case with our study participants, was rooted in their lack of knowledge regarding transmission. This underscores the continued need for

education of the general population and incarcerated populations about the transmission of HIV.

WLWH in our study also highlighted the importance of HIV pre- and post-test counselling upon diagnosis. They detailed the devastating impact of the absence of counselling on acceptance of, and coping with the illness. HIV counselling and testing remains the gateway to all strategies related to the care, treatment and prevention of HIV infection.[32,33] Counselling and testing is crucial in not only helping those who test positive to come to terms with their illness, but it is also critical in bringing the rampant scourge of HIV under control, particularly in sub-Saharan Africa. In addition, some women also wanted to learn more about the illness and expressed a desire to become HIV counsellors so that they could educate and support other women both inside and outside prison. Empowering female inmates by training them to educate and support other inmates is an important step in managing and curbing HIV in prison environments.[34]

WLWH also described the difficulty of disclosing their status to their family and friends while living in their home environment because they felt isolated and afraid of being labelled, judged or rejected. They stated that although HIV was prevalent in their communities, most people did not openly discuss the illness. Many lacked knowledge about HIV, particularly with regards to transmission. The study from Lesotho supported this finding and also described the dominant misperceptions and ignorance about HIV transmission prevalent in the community, which was another factor responsible for driving the HIV pandemic in Lesotho.[29] Lack of knowledge and misperceptions about HIV inevitably led to stigma and discrimination, both verbal and non-verbal, which the WLWH in our study encountered regularly. Understanding HIV stigma is crucial to understanding HIV disclosure. The study in the North West province of SA, which was conducted in both rural and urban settings, demonstrated the high prevalence of HIV stigma that still exists and its inter-relationship with disclosure.[31] The fear of stigma, discrimination, rejection and loss of relationships was cited in our study as reasons for WLWH not being able to disclose their status while living in their home environment. This was consistent with a systematic review of community studies from Nigeria.[35] Stigma has been associated with negative consequences which include poor treatment adherence and adverse mental health effects.[36,37] This was also found in our study where WLWH felt the need to conceal

their status for fear of being stigmatized. This compromised their treatment adherence outside of prison.

A recent social anthropological study in Kerala, India, found that intense, pervasive and multi-faceted stigma against PLWHA still exists in Indian society.[38] PLWHA, like persons of lower caste in traditional Brahmanic systems in the region, are subjected to touch aversion, regimes of commensality and marital exclusion. They are also subjected to derogatory labels, being referred to as immoral and impure by HIV-negative individuals. This resonates with the findings of our study where WLWH described similar experiences of enacted stigma.

Some WLWH expressed that although HIV was prevalent in their communities, people avoided discussing it openly. This has also been expressed in other South African studies[39] and underscores the importance of advocating for direct public discourse on HIV/AIDS through education, awareness programmes and support organizations.

Contrary to their home environment, the WLWH described HIV disclosure in prison as being much easier for them. Although many WLWH felt that they were almost forced to disclose due to the lack of privacy in the prison environment, most felt this had a positive effect, as they realised they were not alone. They felt supported by fellow inmates and staff which had a positive impact on them. They described the beneficial effect that disclosure and support had on treatment adherence and health outcomes and discussed the important lifestyle changes they decided to make to live healthier lives. This is in contrast to a recent study conducted in a correctional facility in the United States of America, by Kutnick and colleagues, in which Black and Latin American prisoners spoke about feeling uncomfortable disclosing their HIV status in prison because they felt stigmatised, unsupported and discriminated against.[40]

Finally, understanding the cultural context of WLWH is integral to understanding their experiences of contracting and living with HIV. Studies have found that cultural sensitivity is increasingly recognized as a means to enhance the effectiveness of health promotion programmes universally.[18] Delivering HIV/AIDS programmes to incarcerated populations should occur within a culturally-informed framework to encourage optimal engagement with inmates. This was evident in our study which highlighted the importance of understanding inmate's cultural beliefs and backgrounds.

CONCLUSION

The outcomes of this study revealed that HIV is prevalent in the female inmate population at this correctional centre in KZN, SA and that it has a significant impact on these women's lives biologically, psychologically and interpersonally. The multitude of challenges they face, particularly in their home environment, are highlighted. In contrast, this study underscores the support participants received in the prison setting. Thus, whilst incarcerated, attempts should be made to effectively support and manage the impact of HIV in inmates, which is a view that is supported by international literature.[41-43] Further research should aim at exploring such strategies. If female inmates receive HIV education and training, not only can they engage in peer-based HIV education while incarcerated, but they can also form support groups to help other incarcerated WLWH to cope with their illness. More importantly, upon re-entry into their home communities they will be armed with the necessary knowledge and skills to successfully manage their own illness and to impact positively on the lives of other WLWH in their communities. This would play a pivotal role in curbing the epidemic, since the importance of educating society about HIV regarding causality and transmission, in order to eradicate misconceptions, stigma and discrimination as well as to encourage disclosure and health-seeking behaviour, has also been emphasized. Due to differing inmate profiles in other correctional centres in SA, the authors recommend that similar studies be conducted at these various centres in order to compare findings, and to serve as an evidence base for the development of national rehabilitation programmes aimed at addressing these challenges.

Limitations

The study was conducted at one correctional centre in SA. The home language for the majority of the women in the study was isiZulu, however, all qualitative interviews were conducted in English. Hence, it is possible that subtle nuances in the narratives might have been missed. The first author was also aware of the potential for asymmetry in the power dynamics between the interviewer and the participants, as the interviewer was a psychiatrist. Therefore, confidentiality, anonymity and the fact that the researcher was independent of the DCS was emphasised to participants. In addition, participants were informed that the first author could in no way influence their criminal

proceedings. Lastly, there were limited qualitative studies for comparison, on the lived experiences of HIV in female inmates with a lifetime history of mental illness.

REFERENCES

1. WHO. HIV/AIDS [Internet]. 2019 [cited 2020 June 24]. Available from https://www.who.int/news-room/fact-sheets/detail/hiv-aids
2. Elflein J. Countries with the highest prevalence of HIV in 2000 and 2020 [Internet]. 2021 [cited 2021 Jun 24]. Available from https://www.statista.com/statistics/270209/countries-with-the-highest-global-hiv-prevalence/
3. UN AIDS. Aids Info [Internet]. 2020 [cited 2020 Mar 28] Available from https://aidsinfo.unaids.org
4. Zaidi J, Grapsa E, Tanser F, Newell ML, Barnighausen. Dramatic increases in HIV prevalence after scale-up of anti-retroviral treatment: a longitudinal population-based HIV surveillance study in rural KwaZulu Natal. AIDS. 2013;27:2301-5.
5. Shisana O, Davids A. Correcting gender inequalities is central to controlling HIV/AIDS. Bull World Health Org. 2004;82:812.
6. Stats SA. Midyear Population Estimates 2021. Statistics Release PO302. Statistics South Africa. Pretoria. Stats SA. 2021.
7. Human Sciences Research Council (HSRC). The Fifth South National HIV Prevalence Incidence Behaviour and Communication Survey, 2017: HIV Impact Assessment Summary Report. Cape Town. HSRC Press. 2018.
8. Van Hout MC, Mhlanga-Gunda R. Contemporary women prisoners health experiences, unique prison health care needs and health care outcomes in sub-Saharan Africa: a scoping review of extant literature. BMC Int Health Hum Rights [Internet]. 2018 [cited 2020 JUN 24];18:31. Available fromhttps://doi.org/10.1186/s12914-018-0170-6
9. Dolan K, Wirtz AL, Moazen B, Ndeffo-mbah M, Galvani A, Kinner SA, et al. Global burden of HIV, viral hepatitis and tuberculosis in prisoners and detainees. Lancet. 2016;388:1089-102.
10. Van den Bergh B, Plugge E, Aguirre IY. Women's health and the prison setting. Prisons and health [Internet]. Available from

at: https://www.euro.who.int/__data/assets/pdf_file/0006/249207/Prisons-and-Health,-18-Womens-health-and-the-prison-setting.pdf?ua=1 [cited 2020 Jun 24]
11. Telisinghe L, Fielding KL, Malden JL, Hanifa Y, Churchyard GJ, Grant AD, Charalambous S. High Tuberculosis Prevalence in a South African Prison: Need for Routine Tuberculosis Screening. PLoS ONE [Internet]. 2014;9:e87262. Available from https://doi.org/10.1371/journal.pone.0087262
12. Fazel S, Seewald K. Severe mental illness in 33588 prisoners worldwide: a systematic review and meta-regression analysis. Br J Psychiatry.2012;200:364-73.
13. Ciesla JA, Roberts JE. Meta-analysis of the relationship between HIV infection and risk for depressive disorders. Am J Psychiatry. 2001;158:725-30.
14. Spudich S, Gonzalex-Scarano F. HIV-1-related central nervous system disease: Current issues in pathogenesis, diagnosis and treatment. Cold Spring Harb Perspect Med. 2012 [cited 2020 Jun 24];2:a007120. Available from https://doi.org/10.1101/cshperspect.a007120
15. Minager A, Commins D, Alexander JS, Hoque R, Chiappelli F, Singer EJ. NeuroAids: Characteristics and diagnosis of the neurological complications of AIDS. Mol Diagn Ther. 2008;12:25-43.
16. UNESCO Institute for Statistics. UNESCO Framework for Cultural Statistics [Internet]. Montreal, Quebec. 2009 [cited 2021 June 10]. Available from http://uis.unesco.org/sites/default/files/documents/unesco-framework-for-cultural-statistics-2009-en_0.pdf
17. South African History Online. Race and ethnicity in South Africa [Internet]. 2019 [cited 2021 June 10]. Available from https://www.sahistory.org.za/article/race-and-ethnicity-south-africa
18. Sifunda S, Reddy PS, Braithwaite RB, Stephens T, Bhengu S, Ruiter RAC, et al. Social construction and cultural meanings of STI/HIV-related terminology among Nguni-speaking inmates and warders in four South African correctional facilities. Health Educ Res. 2007;22:805-14.
19. Essien ED. Notions of healing and transcendence in the trajectory of African traditional religion: Paradigm and strategies. Int Rev Miss.2013;102:236-48.
20. Naidoo S, Subramaney U, Paruk S, Ferreira L. Mental illness and HIV among female inmates in Durban, South Africa. South Afr J Psychiatry. In press
21. Creswell JW, Plano-Clark V. Designing and Conducting Mixed Methods Research. Los Angeles. Sage. 2011.

22. Mertons DM. Transformative Research and Evaluation. New York, NY. Guilford Press. 2009.
23. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3:77-101.
24. VERBI Software. MAXQDA 2020 [computer software]. Berlin, Germany: VERBI Software. Available at www.maxqda.com [cited 2020 Oct 21]
25. Lincoln YS, Guba EG. Naturalistic Inquiry. Newbury Park, CA. Sage. 1985.
26. Houston G, Davids YD, Khanyane M. Race and racism in post-apartheid South Africa: A book project [Internet]. 2018 [cited 2020 Jul 2021]. Available online http://www.hsrc.ac.za/en/review/hsrc-review-dec-2018/race-and-
27. Maman S, Van Rooyen H, Groves AK. HIV status disclosure to families for social support in South Africa (NIMH Project Accept/HPTN043). AIDS Care. 2014 26:226-32.
28. Onoya D, Zuma K, Zungu N, Shisana O, Mehlomakhulu V. Determinants of multiple sexual partnerships in South Africa. J Public Health. 2015;37:97-106.
29. Belle JA. Culture, gender bias and the vulnerability of Black African women to HIV and AIDS: a study of Lesotho. Indilinga-Afr J Indigen Know Syst. 2019;18:1-11.
30. WHO. Consolidated Guideline on Sexual and Reproductive Health and Rights of Women Living With HIV. Geneva: World Health Organization. 2017.
31. French H, Greeff M, Watson MJ, Doak CM. HIV stigma and disclosure experiences of people living with HIV in an urban and rural setting. Aids Care. 2015;27:1042-6.
32. Owen SM. Testing for acute HIV infection: implications for treatment as prevention. Curr Opin in HIV AIDS. 2012;7:125-30.
33. Fonner VA, Denison J, Kennedy CE, O'Reilly K, Sweat Michael. Voluntary counselling and testing (VCT) for changing HIV-related risk behaviour in developing countries. Cochrane Database Syst Rev. 2012 [cited 2020 Jun 24];9:CD001224. Available from https://doi.org/10.1002/14651858.CD001224.pub4
34. UNODC UNAIDS. Women and HIV in prison settings [Internet]. 2006 [cited 2020 Jun 24]. Available from https://www.unodc.org/documents/middleeastandnorthafrica/drug-prevention-health-publications/WOMEN_AND_HIV_IN_PRISON_SETTINGS.pdf
35. Adeoyo-Agboola DI, Evans H, Hewson D, Pappas Y. Factors influencing HIV disclosure among people living with HIV/AIDS in Nigeria: a systematic review using narrative synthesis and meta-analysis. Public Health. 2016;136:13-28.

36. Katz IT, Ryu AE, Onuegbu AG, Psaros C, Weiser SD, Bangsberg DR, Tsai AC. Impact of HIV related stigma on treatment adherence: systematic review and meta-synthesis. J Int AIDS Soc. 2013;16(3 Suppl 2):18640.
37. Sweeney SM, Vanable PA. The association of HIV-related stigma to HIV medication adherence: a systematic review and synthesis of the literature. AIDS Behav. 2016;20:29-50.
38. Varghese P. HIV/AIDS and Stigma in Kerala, India: The Wretched New Class of Untouchables. Ann Arbor: Southern Methodist University. 2011.
39. Chariatte N. HIV/AIDS in South Africa: Graphic signs countering the stigma and silence [Internet]. 2017 [cited 2021 Jul 21]. Available from https://bop.unibe.ch/linguistik-online/article/view/ (accessed July 21, 2021).
40. Kutnick AH, Leonard NR, Gwadz MV. Like I have no choice: a qualitative exploration of HIV diagnosis and medical care experiences while incarcerated and their effects. Behav Med. 2019;45:153-65.
41. Braithwaite RL, Hammett TM, Mayberry RM. Prisons and AIDS. San Francisco: Jossey-Bass, Inc. 1996.
42. Bryan A, Ruiz MS, O'Neill D. HIV-related behaviors among prison inmates: a theory of planned behavior analysis. J Appl Soc Psych. 2003;33:2565-86.
43. Avery AK, Ciomcia RW, Lincoln T, Desbrais M, Jordan AO, Rana AI, et al. Jails as an opportunity to increase engagement in HIV care: findings from an observational cross-sectional study. AIDS Behav. 2013;17(2):137-44. doi: 10.1007/s10461-012-0320-0

CHAPTER FIVE: RESULTS

THE ASSOCIATION OF CUMULATIVE ADVERSE CHILDHOOD EXPERIENCES WITH MENTAL ILLNESS, HIV AND VIOLENT OFFENDING AMONG FEMALE INMATES IN DURBAN, SOUTH AFRICA

ABSTRACT

Background

Childhood adversities and adult trauma are common among female inmates. Associations have been documented with childhood adversities and mental illness, personality disorders, human immuno-deficiency virus (HIV) and violent offending. However, no such studies have been conducted in South Africa, which has a high prevalence of trauma and the largest HIV epidemic globally.

Aim

The aim of this study was to measure the prevalence of childhood adversities and adult trauma; and to determine the relationship between childhood adversities, mental illness, borderline and antisocial personality disorders, HIV and violent offending among female inmates at a correctional centre in Durban, South Africa.

Methods

One hundred and twenty-six inmates were randomly recruited into this cross-sectional study. The World Health Organisation's Adverse Childhood Experiences-International Questionnaire (ACE-IQ) was used to measure childhood adversities (both binary and frequency scores); the Structured Clinical Interview for the Diagnostics and Statistical Manual-5 Research Version (SCID 5-RV) was used to diagnose mental illness and personality disorders; and a structured questionnaire was used to measure adult trauma. HIV data was confirmed from correctional medical records. Univariate logistic regression analysis was used to determine associations between mental illnesses, personality disorders, HIV and violent offending.

Results

Elevated rates of individual childhood adversities and adult trauma were found. Associations were found between: cumulative childhood adversities (frequency scores) and post-traumatic stress disorder (OR 6.28, CI 2.01-19.60); alcohol use disorder (OR 6.80, CI 2.81-21.25), substance use disorder (OR 3.76, CI 1.44-9.82); borderline personality disorder (OR 3.17, CI 1.01-9.93); and HIV (OR 5.54, CI 2.15-14.28). No significant associations were found between cumulative childhood adversities and violent offending.

Conclusion

Female inmates are a highly traumatised population with elevated prevalence rates of childhood adversities, which are associated with mental illnesses and HIV. Correctional mental health services should provide trauma-informed and trauma-focused care in order to improve mental health outcomes and address this unmet need.

Keywords: **lifetime trauma, adverse childhood experiences, mental illness, violent offending, HIV, female inmates, South Africa**

INTRODUCTION

Early childhood is a critical period of development, with rapid physiological, psychological and cognitive changes.[1] Trauma in early childhood can result in lifelong impairments in health.[2] Exposure to stress during this period can cause alterations in brain structure and function, and have a negative impact on the brain's reactivity to stress.[3,4] Adverse childhood experiences (ACEs) are defined as "traumatic occurrences before the age of 18 years that are experienced as physically or emotionally harmful or threatening".[5] They include maltreatment, neglect, household dysfunction and environmental influences, such as living with a household member who abuses substances, or witnessing violence towards a household member.[6]

ACEs and mental illnesses in the general and prison populations

The ACE study, which was a seminal study in the United States of America (USA) during the 1990s, resulted in the Centres for Disease Control and Prevention (CDC)

and Kaiser Permanente developing the 10-item ACE scale.[7] Using this scale, they found a high prevalence of ACEs in the general population and a dose-response relationship between childhood adversity and health risk behaviours, which may ultimately contribute to morbidity and mortality. [8] In the ACE study, 52% of the sample had one or more ACEs, while 6.2% had four or more ACEs.[8]

The prevalence of ACEs differs from one country to another, but high prevalence rates have been found globally. There are very few studies in low and middle-income countries (LMICs).[9] One of the limited studies in the South African general population found higher rates of adversities in the general population compared to high-income countries on a 13-item modified CDC-Kaiser Permanente ACE scale.[10]

One population at increased risk of having experienced ACEs, is prisoners.[11,12] It has consistently been documented that many prisoners have experienced multiple types of trauma during childhood and adulthood.[13,14] A systematic review examining ACEs and subsequent psychopathology in prisoners, predominantly from the USA and Europe, confirmed an association between childhood adverse events and adult psychiatric disorders.[15] However, it did not contain any studies from low-income countries and specifically, none from Africa. ACEs are also associated with recidivism,[16] hence identification of, and intervention efforts directed at management of ACEs, are crucial.

ACEs and violent offending

Widom proposed the cycle of violence theory which states that violent victimisation, particularly physical abuse inflicted upon children by their parents or caregivers, increases the likelihood of later violent behaviour.[17] In addition children who suffer neglect are also more likely to develop subsequent violent criminal behaviour.[17] The ACE study revealed the cumulative negative impact of ACEs on health in later life, as well as an increased risk for the perpetration of aggressive acts with cumulative ACEs.[18] A meta-analysis investigating the cycle of violence after exposure to childhood maltreatment among women, in the general and prison populations, found a small, but significant overall positive association between exposure to childhood maltreatment and a wide range of aggressive behaviours.[19] A Swiss study comparing male and female violent offenders, reported that violent female offenders were more

likely to have experienced ACEs, such as sexual abuse, compared to their male counterparts.[20] A prospective study in the USA reported that females with a history of any childhood abuse or neglect were at significantly higher risk of arrest for violence compared to the control group.[21]

ACEs and human immuno-deficiency virus (HIV)

ACEs are increasingly being recognised as predictors of HIV risk and HIV-related disease burden,[22] and are prevalent among people living with HIV/AIDS (PLWHA).[23] ACEs contribute to risky behaviours such as hazardous drinking, illicit drug use, risky sexual behaviours, and they increase the risk of being a victim of intimate partner violence later in life.[24-30] South Africa (SA) has the largest HIV epidemic in the world.[31] KwaZulu-Natal (KZN) province is the second most populous province in the country and carries the highest burden of HIV, with women being disproportionately affected.[31] The first phase of this study reported a 64.3% prevalence of HIV among the female inmates at this correctional centre in KZN.[32]

To date, there is no quantitative literature on childhood adversities and its associations in female inmate populations in SA. Hence, this study aims to fill this gap by describing the prevalence of lifetime trauma, and investigating relationships between childhood adversity and mental illness, personality disorders, violent offending and HIV, among female inmates in a LMIC setting, which has a high HIV prevalence.

METHOD

Study design

This was a cross-sectional, descriptive study among female inmates. The findings reported here form part of the first phase of a two-phased, mixed methods, sequential explanatory design study which was conducted at a correctional centre in Durban, KZN, SA. Phase one of the study measured the prevalence of mental illness, borderline personality disorder (BPD) and antisocial personality disorder (ASPD) using the Structured Clinical Interview for the Diagnostic and Statistical Manual of mental disorders 5th edition- Research Version (SCID 5-RV).[33] The prevalence of childhood and adult trauma was also measured. HIV data was confirmed with correctional

medical records. This manuscript reports on the trauma component of the first phase findings.

Study population and sampling

This correctional centre, situated in Durban, KZN is one of the largest correctional centres in sub-Saharan Africa. However, it remains a hugely under-researched area geographically. It accommodates male and female inmates; the majority of whom are Black African and isiZulu speaking. One hundred and twenty-six female inmates were randomly recruited; 96 were sentenced offenders (SOs) and 30 were remand detainees (RDs). To be eligible for phase one, participants had to be 18 years of age or older, be able to provide written informed consent, and be either English or isiZulu speaking. Exclusion criteria included those who lacked capacity to provide informed consent, or those who were not willing. Ethical approval was obtained from the University of the Witwatersrand Human Research Ethics Committee (M181026)

Data collection

Instruments

Socio-demographic, clinical and forensic questionnaire

A socio-demographic, clinical and forensic questionnaire, based on a review of the literature, was administered by the first author in English and isiZulu, with the aid of a translator. The clinical component contained questions about, inter alia, HIV status, physical, sexual and emotional abuse experienced in adulthood (after age 18). Details regarding the types of physical injuries sustained and medical intervention sought were also documented.

World Health Organization Adverse Childhood Experiences- International Questionnaire (WHO ACE-IQ)

The WHO ACE-IQ was used to measure childhood adverse experiences.[34] It has been used in a previous study on females in KZN, SA,[35] and it has been validated in a

Nigerian prison population.[36] The Nigerian study found that the ACE-IQ and Child Trauma Questionnaire (CTQ) had concurrent validity, and that the ACE-IQ is a reliable and valid index of adverse childhood experiences in the prison population.[36] The ACE-IQ measures 13 categories of childhood adverse experiences, which are described in Table 1. There are two scoring systems; the binary and frequency versions. The binary version is a "yes" or "no" rating system that measures the presence or absence of each adversity, while the frequency version is a measure of the severity of each adversity. Both scales are scored out of 13. The two categories of community violence and collective violence (which are not included in the 10 item CDC- Kaiser Permanente ACE scale) are particularly relevant for LMICs like SA, where these experiences may be more prevalent.[37] Bullying and parental death are additional adverse events which are included in the WHO ACE-IQ, but are not part of the original CDC-Kaiser Permanente ACE scale.

The main outcome measures were mental illness, personality disorders, HIV infection and offending behaviour (either violent or non-violent).

Data collation

Data was collected from August 2019 to November 2019. All participants were interviewed by the first author, a forensic psychiatrist. Prior to commencement of the study, all 349 adult female inmates were informed of, and invited to, participate in the study. A random sample was then drawn from all the women who had agreed to participate. Data was captured on-site using Research electronic data capture (Redcap).[38,39]

Data Analysis

IBM SPSS version 26 was used to analyse the data. Frequency tables with percentages, as well as graphs were used to describe categorical variables. Logistic regression models were used to estimate the odds ratio (OR) and 95% confidence interval (CI) associated with the odds of being exposed to ACE scores >=4 compared to ACE scores <4 for each mental illness, personality disorder, violent offending and HIV (p value <0.05).

RESULTS

The socio-demographic, forensic profile and mental illnesses of the 126 participants have been published elsewhere.[32]

Prevalence of individual ACEs

Table 1 summarises the prevalence of ACE binary and frequency scores reported by the participants.

Table 1: Prevalence of ACE binary and frequency scores reported by the 126 participants

ACE category	Binary score		Frequency score	
	N	%	N	%
Physical abuse	110	87.3%	78	61.9%
Emotional abuse	118	93.7%	97	77.0%
Contact sexual abuse	51	40.5%	51	40.5%
Alcohol and/or drug abuser in household	71	56.3%	71	56.3%
Incarcerated household member	27	21.4%	27	21.4%
Household member depressed/mentally ill/institutionalised or suicidal	28	22.2%	28	22.2%
Household member treated violently	113	89.7%	102	81.0%
One or no parents/parental separation/divorce	74	58.7%	74	58.7%
Emotional neglect	35	27.8%	43	34.1%
Physical neglect	25	19.8%	16	12.7%
Bullying	80	63.5%	56	44.4%
Community violence	100	79.4%	63	50.0%
Collective violence	63	50.0%	63	50.0%

The three most common adverse experiences for both the binary and frequency scores were: physical abuse, emotional abuse and witnessing a household member treated violently. Sexual abuse, community violence, collective violence and living with a substance abusing household member were also notably high. Seventy-seven percent (n=98) of participants had more than six ACEs with the binary version, and 61.1% (n=77) with the frequency version. Notably, 38.9% (n=49) and 32.5% (n=41) had experienced both physical and sexual abuse with the binary score and frequency scores respectively.

Prevalence of cumulative ACEs

Figure 1 illustrates the prevalence of the cumulative ACE binary and frequency scores.

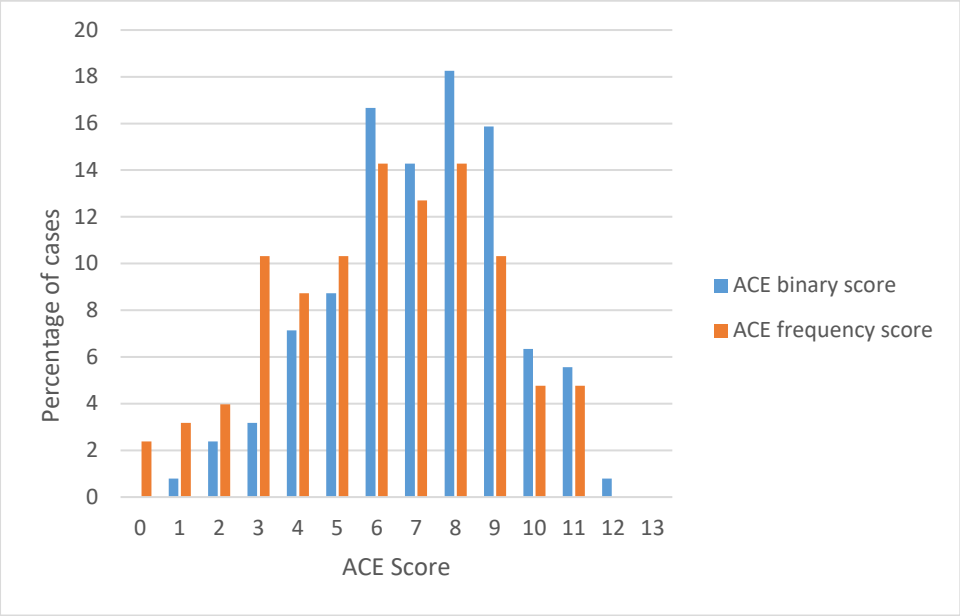


Figure 1: Prevalence of the cumulative ACE binary and frequency scores.

All participants reported at least one ACE with the binary version and 97.6% (n=123) with the frequency version, with 93.7% (n=118) reporting four or more ACEs with the binary version and 80.2% (n=101) with the frequency version.

Association between cumulative ACEs, mental illnesses, personality disorders and HIV

Table 2 shows the unadjusted OR of having a DSM-5 disorder or HIV infection with ACE >=4 vs ACE <4 for both binary and frequency scores.

Table 2: Association of ACEs with DSM-5 disorders and HIV using binary and frequency scores

Lifetime disorders	ACE Binary score>=4 vs <4		ACE Frequency score>=4 vs <4	
	OR	95% CI	OR	95% CI
Psychotic disorders	Cannot compute due to 0 instances of those with ACE binary score <4 having psychotic disorder		0.47	0.08-2.75
Depressive disorders	0.36	0.04-2.74	2.27	0.92-5.61
Post-traumatic stress disorder (PTSD)	6.77	0.81-56.72	6.28	2.01-19.60
ADHD (current)	0.72	0.08-6.40	1.26	0.26-6.17
Alcohol use disorders (AUD)	3.00	0.58-15.47	6.80	2.18-21.25
Substance use disorders (SUD)	3.68	0.71-18.98	3.76	1.44-9.82
Borderline personality disorder (BPD)	1.54	0.30-7.97	3.17	1.01-9.93
Antisocial personality disorder (ASPD)	1.26	0.15-10.87	2.33	0.50-10.81
HIV	3.25	0.74-14.30	5.54	2.15-14.28

Univariate logistic regression models used

Calculations could not be computed for bipolar disorder because there were zero instances of those with ACE binary score <4 having bipolar disorder, as well as only one participant having bipolar disorder.

There were insufficient cases with scores <4 (n=8) for ACE binary scores to reliably report an association. However, several associations emerged from the ACE frequency scores. Those with ACE frequency scores >=4 were 6.28 times more likely to have post-traumatic stress disorder (PTSD); 6.8 times more likely to have an AUD; 3.8 times more likely to have a SUD; 3.17 times more likely to have a BPD; and 5.54 times more likely to have HIV infection than those with ACE scores <4 (frequency scores). Adjusting the ORs (frequency scores) for age, population group, income and level of education did not change the conclusions from the unadjusted values, however, in many instances it inflated the OR and resulted in wider CIs. It was not possible to adjust the OR for the binary scores due to small sample sizes in the reference group.

Association between ACEs and violent offending

There were no significant associations between cumulative ACE scores (binary or frequency) and violent offending using logistic regression models. Those with a binary score >=4 were 1.62 times (95% CI 0.37 - 6.81) more likely than those with ACE binary score <4 to have committed a violent crime, but the CIs overlapped with 1 thus, the risk was not significantly higher. Notably, there were only eight participants with ACE binary score <4. ACE frequency score >=4 also did not confer higher odds of committing a violent crime, OR 0.86 (CI 0.35 -2.13). In those with ACE frequency score <4, 64% (n=16/25) committed violent crimes, while in the group with ACE frequency score >=4, 60% (n=61/101) committed violent crimes.

Prevalence of adult physical, sexual and emotional abuse

Overall, 70.6% (n=89) reported physical abuse; 20.6% (n=26) reported sexual assault or rape and 80.2% (n=101) reported being emotionally abused as adults. Sixty-one percent (n=78) of participants sustained soft tissue injuries from interpersonal violence as adults; 11.9% (n=15) fractures; 23.0% (n=29) stab wounds and 1.6% (n=2) gunshot wounds. Forty-one percent (n=52) of participants reported seeking medical attention for injuries they had sustained from interpersonal violence as an adult.

DISCUSSION

The main findings of this study were the high prevalence of ACEs with both binary and frequency scores, thus confirming not just the presence of adversities, but also their severity. There were also significant associations between cumulative ACEs (frequency scores) and PTSD, AUD, SUD, BPD and HIV infection among female inmates in Durban, South Africa.

Jewkes and colleagues, although not using the full description of ACEs in their study, found that 54.7% of rural South African women experienced emotional abuse; while 41.6% experienced emotional neglect; and 39.1% experienced sexual abuse before the age of 18.[40] Manyema and Richter's study in the South African general population (the Soweto Birth to Twenty Plus cohort) found lower rates of ACEs in women compared to our study.[10] The most common ACEs reported in their study were parental divorce or separation (46%), emotional abuse (30%) and emotional neglect (31%). Two items included in their study, in addition to the CDC-Kaiser Permanente ACE scale, were household chronic illness and unemployment, which are relevant to the LMIC South African context, and measured 27% and 41% respectively. In their study, 88% reported at least one ACE while 34% of women had four or more ACEs[10] whereas, in our study, 100% reported at least one ACE with the binary version (97.6% with the frequency version); and 93.7% reported four or more ACEs with the binary version (80.2% with the frequency version). Although direct comparisons between the studies cannot be made, the above statistics suggest that the female incarcerated population in SA is afflicted with a heavier burden, both in terms of the number and severity of childhood adversities, compared to the general population.

This is also consistent with international general population rates of childhood adverse events across high, middle and low-income countries as measured by the World Mental Health Survey (WMHS), which found that rates for physical abuse ranged from 5.3 to 10.8%, sexual abuse ranged from 0.6 to 2.4%, and neglect ranged from 3.6 to 5.2%.[41] Overall, 61.5% had at least one ACE, while seven percent had four or more ACEs. All 12 ACEs were significantly associated with DSM-4 disorders assessed in the WMHS.[41] A more recent systematic review including both high and middle-income countries found prevalence rates of experiencing four or more ACEs in the general

population ranging from one to thirty-two percent, with the highest prevalence being from a middle-income country,[9] which is still substantially less than our findings.

Significantly, a cumulative Kaiser Permanente-CDC ACE score of six or more places individuals at increased risk of dying 20 years younger, of diseases commonly diagnosed in the primary care setting, compared with individuals without exposure to six or more ACEs.[42] Although we used the WHO ACE-IQ, 10 items overlapped with the Kaiser Permanente-CDC ACE. Thus, the majority of women in our study who had six or more ACEs may likely fall into this high risk category for premature death, which is a cause for serious concern.

All studies in the systematic review by Bowen and colleagues also demonstrated substantially higher rates of ACEs in prisoners compared to community samples.[15] The literature suggests that the majority of female prisoners have experienced childhood physical abuse, childhood sexual abuse, or both, which is consistent with our findings.[43,44] Unfortunately, as Kennedy and colleagues (USA) have highlighted, prison mental health services are generally not designed to address the prevalent experiences of childhood victimisation,[45,46] which is likely to be the same in South African correctional centres**.**

The literature demonstrates that rather than occurring as singular experiences, individuals often experience multiple ACEs.[8,9] This finding is consistent with our study. Furthermore, cumulative exposures to multiple forms of trauma highlight the detrimental impact of the trauma.[47-49] A systematic review and meta-analysis, consisting of data from predominantly high-income countries, found that 45.5% of participants in the studies reviewed had at least one ACE.[50] Similar to the ACE study, the review concluded that there was a graded relationship between ACEs and psychosocial or behavioural outcomes, that is, the more ACEs one had, the higher the risk of a negative outcome, which included tobacco use, alcohol problems, illicit drugs, obesity, risky sexual behavior, depressed mood, suicidal ideation, being a victim of violence, psychological distress, hallucinations, anxiety or panic, and poor health or quality of life.[50]

The systematic review of prisoners by Bowen and colleagues further corroborated the association between childhood adverse events and the presence, number or severity of mental illnesses in adults. Specifically in female prisoners, they found that cumulative trauma was associated with PTSD, anxiety, mood disorders, alcohol and substance abuse, BPD, ASPD and psychopathy. The majority of these findings are consistent with those of our study.[15] Our study highlights the risk that cumulative ACEs impose on female inmates and adds support to the dose-response relationship reported in previous studies.

With respect to psychotic disorders, Varese and colleagues in their 2012 meta-analysis, reported associations between individual categories of childhood abuse (physical, sexual, emotional abuse and neglect) and psychosis.[51] In addition, Kennedy and colleagues concluded that multi-victimisation in childhood was a significant predictor of psychosis in female prisoners.[45] Due to the low number of women with psychosis in our study, the association between childhood victimisation and psychosis could not be corroborated.

No association was found between cumulative ACEs (frequency and binary scores) and violent offending in this study. Previous studies have found associations between individual ACEs and violent offending, but investigations of associations between individual ACEs and violent offending were beyond the scope of this manuscript. This will be a focus of future publications. Another likely reason to explain the lack of association between cumulative ACEs and violent offending is that this study had a limited sample size.

This study found that women with >=4 ACEs were 5.54 times more likely to be HIV infected than those with <4 ACEs (frequency scores). This is consistent with the literature which demonstrates that ACEs are more common in PLWHA.[52,53] ACEs may have an effect on sexual risk behaviours, which increase the risk of sexually transmitted diseases including HIV.[54] Among PLWHA, trauma is associated with mental illness, poor medication adherence, poor quality of life, faster disease progression and higher mortality rates.[55-61] Even PLWHA who are virally suppressed on antiretroviral treatment, are disproportionately affected with mental health problems.[62,63]

Limitations

The study was conducted at one correctional centre in SA which may limit generalisability. Random sampling was only conducted on those who agreed to participate thus, the possibility of sampling bias does exist. The sample size was limited; hence the study was underpowered for showing associations between risk factors and mental illnesses. Furthermore, sensitive information was elicited via face-to-face interviews and therefore, social desirability bias may have contributed to under or over-reporting. In addition, many studies in the literature used the Kaiser Permanente's 10-item ACE score, while our study used the 13-item WHO ACE-IQ score and thus direct comparison may be difficult. Finally, due to the cross-sectional nature of the study, causal inferences cannot be drawn.

CONCLUSION

This study contributes to the emerging literature on ACEs and their associations among incarcerated populations, particularly in a LMIC setting. It found that female inmates in Durban, SA are a highly traumatised population as evidenced by the high rate of adversities experienced during childhood and adulthood. It also found associations between ACEs and mental illnesses such as PTSD, SUD, AUD, BPD, as well as between ACES and HIV. This suggests the need for early screening and intervention for those inmates with ACEs, as well as comprehensive mental health care delivery which includes trauma and HIV care within mental health services. It is imperative for service providers in correctional facilities to adopt a trauma-informed lens so that they can understand the prevalence of trauma and its lasting deleterious impact on an inmate's psychological health. The authors therefore recommend that similar studies be undertaken at other correctional centres in SA, and in other LMICs so that findings may be compared. More importantly, the findings may serve as an evidence base to enable the formulation and implementation of gender-sensitive, trauma-informed policies and trauma-focused interventions, which may benefit female inmates by improving their mental health and re-offending outcomes. Future studies should take additional adversities into account, such as the effect of adverse socio-economic circumstances.

REFERENCES

1. Nelson CA, Zeanah CH, Fox NA. How Early Experience Shapes Human development: The case of psychosocial deprivation. Hindawi. 2019 [cited 2021 Mar 28]:1676285. Available from https://doi.org/10.1155/2019/1676285
2. Shonkoff JP, Garner AS, Committee on Psychosocial Aspects of Child and Family Health; Committee on Early Childhood, Adoption, and Dependent Care; Section on Developmental and Behavioral Pediatrics. The lifelong effects of early childhood adversity and toxic stress. Pediatrics. 2012 [cited 2021 Mar 25];129(1)**:**e232–46. Available from https://doi.org/10.1542/peds.2011-2663.
3. Edalati H, Krank MD. Childhood maltreatment and development of substance use disorders: A review and a model of cognitive pathways. Trauma Violence Abuse. 2016; 17(5):454–67.
4. Hart H, Rubia K. Neuroimaging of child abuse: A critical review. Front Hum Neurosci. 2012 [cited 2021 Mar 24];6:52. Available from https://doi.org/ doi: 10.3389/fnhum.2012.00052
5. Anda RF, Butchart A, Felitti VJ, Brown DW. Building a framework for global surveillance of the public health implications of adverse childhood experiences. Am J Prev Med. 2010;39(1):93-8.
6. Kalmakis KA, Chandler GE. Adverse childhood experiences: towards a clear conceptual meaning. J Adv Nurs. 2014;70(7):1489-1501.
7. Centers for Disease Control and Prevention. Adverse Childhood Experiences (ACE) Study. Available from https://www.cdc.gov/violenceprevention/aces/about.html [cited 2020 May 23]
8. Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences Study. Am J Prev Med. 1998;14(4):245-58.
9. Hughes K, Bellis MA, Hardcastle KA, Sethi D, Butchart A, Mikton C et al. The effect of multiple adverse childhood experiences on health: a systematic review and meta-analysis. Lancet Public Health. 2017 [cited 2021 Mar 30];2(8):e356–e366. Available from https://doi.org/10.1016/S2468-2667(17)30118-4.

10. Manyema M, Richter LM. Adverse childhood experiences: prevalence and associated factors among South African young adults. Heliyon. 2019 [cited 2021 Mar 24];5(12):e03003. Available from https://doi.org/10.1016/j.heliyon.2019.e03003
11. Dierkhising CB, Ko SJ, Woods-Jaeger B, Briggs EC, Lee R, Pynoos RS. Trauma histories among justice-involved youth: Findings from the National Child Traumatic Stress Network. Eur J Psychotraumatol. 2013 [cited 2021 Mar 22];4(1):20274. Available from http://dx.doi.org/10.3402/ejpt.v4i0.20274
12. Baglivio MT, Epps N, Swartz K, Huq MS, Sheer A, Hardt NS. The prevalence of adverse childhood experiences (ACE) in the lives of juvenile offenders. Journal of Juvenile Justice. 2014 [cited 2021 Apr 02];3(2):1-17. Available from http://www.journalofjuvjustice.org/JOJJ0302/article01.htm
13. Wolff N, Shi J, Siegel JA. Patterns of victimization among male and female inmates: evidence of an enduring legacy. Violence Vict. 2009;24(4):469-84.
14. Sadeh N, McNiel N. Posttraumatic stress disorder increases risk of criminal recidivism among justice-involved persons with mental disorders. Crim Justice Behav. 2015;42(6):573-86.
15. Bowen K, Jarrett M, Stahl D, Forrester A, Valmaggia L. The relationship between exposure to adverse life events in childhood and adolescent years and subsequent adult psychopathology in 49,163 adult prisoners: A systematic review. Personality and individual Differences. 2018;131:74-92
16. Wolff KT, Baglivio MT, Piquero AR. The Relationship Between Adverse Childhood Experiences and Recidivism in a Sample of Juvenile Offenders in Community-Based Treatment. Int J Offender Ther Comp Criminol. 2017;61(11):1210-1242.
17. Widom CS. The Cycle of Violence. Washington, DC: National Institute of Justice, US Department of Justice. 1992.
18. Anda RF, Felitti VJ, Bremner JD, Walker JD, Whitfield C, Perry BD, et al. The enduring effects of abuse and related adverse experiences in childhood. Eur Arch Psychiatry and Clin Neurosci. 2006;256(3):174–186.
19. Augsburger M, Basler K, Maercker A. Is there a female cycle of violence after exposure to childhood maltreatment? A meta-analysis. Psychol Med. 2019;49(11):1776-86.

20. Rossegger A, Wetli N, Urbaniok F, Elbert T, Cortoni F, Endrass J. Women convicted for violent offenses: Adverse childhood experiences, low level of education and poor mental health. BMC Psychiatry [Internet]. 2009 [cited 2021 Mar 23];9:81. Available from https://doi.org/10.1186/1471-244X-9-81
21. Trauffer N, Widom CS. Child Abuse and Neglect, and Psychiatric Disorders in Non-violent and Violent Female Offenders. Violence Gend. 2017;4(4):137-143.
22. Brown DW, Anda RF. Adverse childhood experiences: Origins of behaviors that sustain the HIV epidemic. Aids. 2009;23(16):2231-3.
23. Spies G, Afifi TO, Archibald SL, Fennema-Notestine C, Sareen J, Seedat S. Mental health outcomes in HIV and childhood maltreatment: a systematic review. Syst Rev. 2012;1:30.
24. Wilson HW, Widom CS. An examination of risky sexual behavior and HIV in victims of child abuse and neglect: a 30-year follow-up. Health Psychol. 2008;27(2):149-58.
25. Meade CS, Kershaw TS, Hansen NB, Sikkema KJ. Long-term correlates of childhood abuse among adults with severe mental illness: adult victimization, substance abuse, and HIV sexual risk behavior. AIDS Behav. 2009;13(2):207-16.
26. Mimiaga MJ, Noonan E, Donnell D, Safren SA, Koenen KC, Gortmaker S, et al. Childhood sexual abuse is highly associated with HIV risk-taking behavior and infection among MSM in the EXPLORE study. J Acquir Immune Defic Syndr. 2009;51(3):340-8.
27. Cohen M, Deamant C, Barkan S, Richardson J, Young M, Holman S, et al. Domestic violence and childhood sexual abuse in HIV-infected women and women at risk for HIV. Am J Public Health. 2000;90(4):560-65.
28. Dube SR, Felitti VJ, Dong M, Chapman DP, Giles WH, Anda RF. Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: the adverse childhood experiences study. Pediatrics. 2003;111(3):564-72.
29. Hillis SD, Anda RF, Felitti VJ, Marchbanks PA. Adverse childhood experiences and sexual risk behaviors in women: a retrospective cohort study. Family Plann Perspect. 2001;33(5):206-11.

30. Mosack KE, Randolph ME, Dickson-Gomez J, Abbott M, Smith E, Weeks MR. Sexual risk-taking among high-risk urban women with and without histories of childhood sexual abuse: mediating effects of contextual factors. J Child Sex Abuse. 2010;19(1):43-61.
31. Epicentre Health Research. HIV Incidence Provincial Surveillance System (HIPPS). A longitudinal study to monitor HIV prevalence and incidence trends in KwaZulu-Natal, South Africa. Report on the baseline findings June 2018. South Africa. 2018.
32. Naidoo S, Subramaney U, Paruk S, Ferreira L. Mental illness and HIV among female inmates in Durban, South Africa. S Afr J Psychiatry. In press.
33. First MB. Structured Clinical Interview for the DSM (SCID) [Internet]. Wiley Online Library. 2015 [cited 2021 Oct 29]. Available from https://doi.org/10.1002/9781118625392.wbecp351
34. World Health Organisation. Adverse Childhood Experiences International Questionnaire. Geneva: WHO. 2020 [cited 2020 Mar 28]. Available from https://cdn.who.int/media/docs/default-source/documents/child-maltreatment/ace-questionnaire.pdf?sfvrsn=baed215c_2
35. Bhengu BS, Tomita A, Mashaphu S, Paruk S. The Role of Adverse Childhood Experiences on Perinatal Substance Use Behaviour in KwaZulu-Natal Province, South Africa. AIDS Behav. 2020;24(6):1643-52.
36. Kazeem OT. A Validation of the Adverse Childhood Experiences Scale in Nigeria. Res Human Soc Sci. 2015;5(11):18-23.
37. World Health Organisation. World report on violence and health: summary. Geneva: WHO. 2002 [cited 2021 Mar 23]. Available from https://apps.who.int/iris/bitstream/handle/10665/42495/9241545615_eng.pdf
38. Harris PA, Taylor R, Thielke R, J Payne, Gonzalez N, Conde JG. Research electronic data capture (REDCap)- A metadata-driven methodology and workflow process for providing translational research informatics support**.** J Biomed Inform. 2009;42(2):377-81.
39. Harris PA, Taylor R, Minor BL, Elliott V, Fernandez M, O'Neal L, et al. The REDCap consortium: Building an international community of software

partners**.** J Biomed Inform. 2019 [cited 2020 Mar 23];95:103208. Available from https://doi.org/10.1016/j.jbi.2019.103208

40. Jewkes RK, Dunkle K, Nduna M, Jama PN, Puren A. Associations between childhood adversity and depression, substance abuse and HIV and HSV2 incident infections in rural South African youth. Child Abuse and Negl. 2010;34(11):833-41.
41. Kessler RC, McLaughlin KA, Green JG, Gruber MJ, Sampson NA, Zaslavsky AM, et al. Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys. Br J Psychiatry. 2010; 197(5):378-85.
42. Brown DW, Anda RF, Tiemeier H, Felitti VJ, Edwards VJ, Croft JB, et al. Adverse childhood experiences and the risk of premature mortality. Am J Prev Med. 2009;37(5):389-96.
43. Asberg KK, Renk K. Comparing incarcerated and college student women with histories of childhood sexual abuse: The roles of abuse severity, support, and substance use. Psychological Trauma: Theory, Research, Practice, and Policy. 2013;5(2):167-175.
44. Severson M, Postmus JL, Berry M: Incarcerated women: Consequences and contributions of victimization and intervention. Int J Prisoner Health. 2005;1(2-4):223-40.
45. Kennedy SC, Tripodi SJ, Pettus-Davis C. The relationship between childhood abuse and psychosis for women prisoners: assessing the importance of frequency and type of victimization. Psychiatr Q. 2013;84(4):439-53.
46. Kennedy SC, Tripodi SJ, Pettus-Davis C, Ayers J. Examining dose-response relationships between childhood victimization, depression, symptoms of psychosis, and substance misuse for incarcerated women. Women Criminal Justice. 2016;26(2):77–98.
47. Shin SH, McDonald SE, Conley D. Patterns of adverse childhood experiences and substance use among young adults: A latent class analysis. Addict Behav. 2018;78:187-92.
48. Pirkola S, Isometsä E, Aro H, Kestilä L, Hämäläinen J, Veijola J, et al. Childhood adversities as risk factors for adult mental disorders: results from the Health 2000 study. Soc Psychiatry Psychiatr Epidemiol. 2005;40(10):769-77.

49. Merrick MT, Ports KA, Ford DC, Afifi TO, Gershoff ET, Grogan-Kaylor A. Unpacking the impact of adverse childhood experiences on adult mental health. Child Abuse Negl. 2017;69:10-19.
50. Petruccelli K, Davis J, Berman T. Adverse childhood experiences and health outcomes: A systematic review and meta-analysis. Child Abuse Negl. 2019;97:104127.
51. Varese F, Smeets F, Drukker M, Lieverse R, Lataster T, Viechtbauer W, et al. Childhood adversities increase the risk of psychosis: a meta-analysis of patient-control, prospective- and cross-sectional cohort studies. Schizophr Bull. 2012;38(4):661-71.
52. Wallace M, Felker-Kantor E, Madkour A, Ferguson T, Welsh D, Molina P, et al. Adverse Childhood Experiences, Smoking, and Alcohol Use, and Allostatic Load Among People Living with HIV. AIDS Behav. 2020;24(6):1653-62.
53. Whetten K, Leserman J, Lowe K, Stangl D, Thielman N, Swartz M, Hanisch L, Van Scoyoc L. Prevalence of childhood sexual abuse and physical trauma in an HIV-Positive sample from the deep South. Am J Public Health. 2006;96(6):1028–30.
54. Hillis SD, Anda RF, Felitti VJ, Nordenberg D, Marchbanks PA. Adverse childhood experiences and sexually transmitted diseases in men and women: a retrospective study. Pediatrics. 2000;106(1):E11
55. Brezing C, Ferrara M, Freudenreich O. The syndemic illness of HIV and trauma: implications for a trauma-informed model of care. Psychosomatics. 2015;56(2):107-18.
56. LeGrand S, Reif S, Sullivan K, Murray K, Barlow ML, Whetten K. A review of recent literature on trauma among individuals living with HIV. Curr HIV/AIDS Rep. 2015;12(4):397-405.
57. Leserman J, Pence BW, Whetten K, Mugavero MJ, Thielman NM, Swartz MS, et al. Relation of lifetime trauma and depressive symptoms to mortality in HIV. Am J Psychiatry. 2007;164(11):1707-13.
58. Mugavero MJ, Raper JL, Reif S, Whetten K, Leserman J, Thielman NM, et al. Overload: impact of incident stressful events on antiretroviral medication

adherence and virologic failure in a longitudinal, multisite human immunodeficiency virus cohort study. Psychosom Med. 2009;71(9):920-26.

59. Pence BW, Mugavero MJ, Carter TJ, Leserman J, Thielman NM, Raper JL, et al. Childhood trauma and health outcomes in HIV-infected patients: An exploration of causal pathways. J Acquir Immune Defic Syndr. 2012;59(4):409-16.
60. Bekele T, Collins EJ, Maunder RG, Gardner S, Rueda S, Globerman J, et al. Childhood adversities and physical and mental health outcomes in adults living with HIV: Findings from the Ontario HIV Treatment Network Cohort Study. AIDS Res Treat. 2018;1028:2187232.
61. Pence BW, Reif S, Whetten K, Leserman J, Stangl D, Swartz M, et al. Minorities, the poor, and survivors of abuse: HIV-infected patients in the US deep South. South Med J. 2007;100(11):1114-22.
62. Garey L, Bakhshaie J, Sharp C, Neighbors C, Zvolensky MJ, Gonzalez A. Anxiety, depression, and HIV symptoms among persons living with HIV/AIDS: The role of hazardous drinking. AIDS Care 2015;27(1):80-5.
63. Heywood W, Lyons A. HIV and elevated mental health problems: Diagnostic, treatment, and risk patterns for symptoms of depression, anxiety, and stress in a national community-based cohort of gay men living with HIV. AIDS Behav. 2016;20(8):1632-45.

CHAPTER SIX: RESULTS

BEATEN, BROKEN AND BEHIND BARS: A STORY OF FEMALE INMATES WITH A LIFETIME HISTORY OF TRAUMA AND MENTAL ILLNESS IN DURBAN, SOUTH AFRICA

ABSTRACT

Introduction

The high prevalence of lifetime trauma among female inmates is well documented internationally. However, there is a dearth of such research on the African continent, and specifically in South Africa. In addition, there remains a gap in the literature with respect to the impact this trauma has on the development of mental illness and the trajectory towards criminality in female inmates. This study aimed at an in-depth exploration of the lived experiences of trauma among female inmates with a lifetime history of mental illness, in a South African cultural setting.

Methods

The findings of this study emanate from the second phase of a two-phased, mixed methods, sequential, explanatory design study. Fourteen women with a lifetime history of trauma and mental illness, were purposively selected to participate in semi-structured, in-depth interviews, from the initial pool of 126 women who had participated in the quantitative first phase.

Results

The major themes that were developed with respect to the trauma were: abuse is common; women endured many different types of abuse; they often suffered multiple traumas during their lifetime; abuse was experienced as a cycle which was difficult to escape; and the context in which the abuse occurred was described. The women also described the pervasive and lasting emotional, psychological, interpersonal and behavioural impact of the abuse.

Conclusion

All the female inmates who participated in this phase of the study reported traumatic experiences during their lifetime; the majority of whom had suffered complex trauma. They reported that their experiences of trauma contributed to their development of mental illnesses, including substance use disorders, as well as to their trajectories into crime. Trauma screening on admission to, and discharge from, correctional services is imperative. Correctional services should address this unmet need in order to improve mental health outcomes and to decrease recidivism among female inmates.

Keywords: Female/women inmates/prisoners, lifetime trauma/abuse, mental illness, South Africa

INTRODUCTION

The words inmates, offenders or prisoners are commonly associated, by society, with immoral acts and contraventions of the law. What is often lost in these labels is the history that contributed to the life story of incarcerated individuals. It is well documented that female prisoners are far more likely than males to have a history of physical, sexual and emotional abuse;[1-3] with most female prisoners having extensive histories of trauma, abuse and victimisation.[4] International studies, predominantly from developed countries, demonstrate the disproportionate burden of trauma experienced by female inmates compared to that of their male counterparts.[5-7] One study found that more than fifty percent of women in jail have been victims of sexual or physical abuse, in contrast to less than one in five men in jail.[8] This may be a key risk factor in their offending and re-offending behaviour.[9]

In South Africa (SA), work by Dastile, Haffejee and Artz in correctional centres in Gauteng and the Western Cape, highlights the elevated prevalence of trauma among women prior to incarceration.[10-12] Consistent with these findings, the first phase our study found high rates of childhood physical (87.3%), sexual (40.5%) and emotional (93.7%) abuse as well as adult physical (70.6%), sexual (20.6%) and emotional abuse (80.2%) among female inmates at a correctional centre in Durban, South Africa (SA).[13] It also found associations between cumulative childhood adversities and post-traumatic stress disorder (PTSD), alcohol use disorder (AUD), substance use disorder

(SUD), borderline personality disorder (BPD) and human immuno-deficiency virus (HIV).[13]

Childhood trauma (abuse and neglect) has been associated with recidivism in juvenile and adult offenders.[14-16] Accordingly, it is crucial to identify and provide interventions for female inmates with a history of trauma to improve their mental health outcomes, which include substance and related disorders, and to decrease recidivism. Unfortunately, screening and treatment for trauma is not routinely practised in most correctional settings.[4]

While the prevalence of trauma among female inmates has been investigated internationally, there remains a paucity of literature in SA and on the African continent. Furthermore, there exists a critical gap in the literature concerning the impact this trauma has on women's lives, particularly with regards to trauma as a precursor to mental illness, and the contribution of trauma towards female inmates' pathways into criminality. Quantitative studies often decontextualise violence and fails to fully capture the entrenchment of victimisation in female inmates' lives. Thus, the aim of this study was to extend beyond describing the prevalence of trauma, and to explore the experience and impact of trauma in the lives of female inmates with a lifetime history of mental illness, in a South African cultural context, in a low-and-middle income country (LMIC) setting.

METHOD

Study Design

The findings presented in this manuscript form part of the second phase of this sequential, explanatory design mixed methods study.[17] The study adopted a transformative framework.[18] The prevalence of mental illness, HIV[19] and trauma[13] were quantitatively measured in phase one, while the qualitative (second) phase provided an in-depth understanding of the lived experiences of HIV,[20] trauma and mental illness among female inmates in a South African cultural setting. A hermeneutic phenomenological approach was used in the qualitative phase of this study.[21] This paper focuses on the trauma component of phase two.

Study setting

The study was conducted at the largest correctional centre in Durban, KwaZulu-Natal (KZN), SA. It accommodates both male and female inmates. Females are referred from different parts of KZN and the neighbouring Eastern Cape province, since this is one of the only correctional centres in the region which accommodates women serving life sentences.

Study sample

One hundred and twenty-six female sentenced offenders and remand detainees were randomly selected to participate in phase one. From there, fourteen women from culturally diverse backgrounds, with a lifetime history of mental illness, trauma and who were either infected with, or affected by HIV, were purposively selected to participate in individual, in-depth, semi-structured interviews. Both first and second phase samples were representative of all population groups and most cultures. Interviews continued until data saturation was reached.

Procedure

Ethical approval for the study was obtained from the University of the Witwatersrand Human Research Ethics Committee prior to commencement of the study (M181026). Approval was also obtained from the Department of Correctional Services (DCS) in SA. Written informed consent was obtained from all participants. Ethical principles were strictly followed to ensure voluntariness, confidentiality and anonymity throughout the research process. The phenomena of interest were explored in face-to-face interviews conducted in English by the first author, a forensic psychiatrist. These interviews were audio-recorded and later transcribed. Data was stored electronically, password protected, and only accessible by the first author. It was subsequently analysed using thematic analysis, as described by Braun and Clarke.[22]

Analysis

A qualitative data analysis software programme, MAXQDA, was used to analyse the data.[23] This also provided an electronic audit trail. Thematic analysis was used to analyse the data, which was done in collaboration with the second author.

Trustworthiness

Guba and Lincoln's constructs of credibility, dependability, transferability and confirmability were used to ensure scientific rigour.[24] A forensic psychiatrist conducted all the interviews thus ensuring credibility. Credibility was further strengthened through analyst triangulation, by the first and second authors. Transparency and auditability were facilitated through the use of a qualitative data analysis software programme. Thick descriptions of the study setting and population as well as detailed in-context quotations enhanced transferability.

RESULTS

The socio-demographic, clinical and forensic profile of the participants have been described elsewhere.[20] Participants are identified by pseudonyms in this manuscript.

Themes

A summary of the themes is listed in Table 1 and are then described in detail.

Table 1: Summary of main themes

Overarching themes	**Themes**	**Sub-themes**
The trauma	Abuse is common among female inmates	
	Women suffer different forms of abuse	Physical
		Sexual
		Emotional
		Financial

	Women experience cumulative trauma throughout their lives	
	The vicious cycle of abuse	
	Context in which the abuse occurs	Normalisation of abuse
		Inter-generational pattern of abuse
		Cultural expectations of women to tolerate abuse
		No escape: divorce is not acceptable in the African culture
The aftermath	Emotional impact	Anger
		Vengeance
		Feeling betrayed
		Sadness
		Hopelessness
	Psychological impact	Community response: Victimising the victim -Blame and stigma -Abandonment No voice for the victim -Invalidation -Secrecy of abuse
		Intrapsychic impact: Self-blame and guilt Shame Loss of self-worth Lack of sense of safety Change in sexual orientation Precursor to mental illness

		Strength and resilience
	Impact on behaviour and interpersonal relationships	Unhealthy coping mechanisms -alcohol and illicit substances -avoidance, repression, suppression
		Trajectory into crime
		Unsuccessful relationships (intimate and non-intimate)

1. The trauma

1.1 Abuse is common

All participants reported having experienced abuse at some stage of their lives. Several women stated that gender-based violence was very prevalent in their communities. Sibongile explained,

> *"It is a common thing…in the African community, especially Black people" and Noma elaborated, "You'll discover that you're not the only one…Most African women, they are abused…I can say it's common because most women, when we sit down with them, they will share stories and when they share their stories, you'll find that yours is better than theirs, and I think it can be one out of 10 women that cannot be abused."*

Melissa, remarked,

> *"Yes women get beaten up all the time…it is mostly in marriages, couples. They [men] hit their girlfriends or wives,"*

and Neeta added,

> *"From the time I was a kid, I promised myself I would never be the battered woman that I saw in society…there was a lot of that, and I said that it's never going to be me, and it's so funny that this is what I've turned out to be."*

1.2 Women suffer different forms of abuse

Participants experienced a multitude of traumas during their lifetime and detailed the various forms of trauma they had endured which included physical, sexual, emotional and financial abuse.

1.2.1. Physical abuse

Most women in the sample reported suffering physical abuse at the hands of their intimate partners. A significant number of women reported frequent, severe physical assaults. Didi recalled,

> *"My husband, he was so abusive…he was so wild, the way he treated me…he will drag me and he will fight with me without anything I have done…and I had a lot of punches…it was very difficult…I was just his punching bag…he was so violent, he was so abusive."*

Abuse often occurred against a background of intimate partner alcohol abuse, as Seleste described,

> *"He [fiancé] starts beating me up and throw me over the bed…I even had marks on my face…all of the times when he's drunk he does that to me, abuses me."*

Katlego added,

> *"Sometimes when he [boyfriend] would come home drunk, or maybe even when he wasn't drunk, or maybe he was just in a bad mood, then the slaps and kicks would come, the blue eyes would come."*

Women explained that they were not safe in their home environments or in public spaces as Neeta described,

> *"So the moment I would drive into the garage he [husband] will start throwing and then he'll push and shove me…but eventually he used to beat me up…my lawyer had seen what he was doing to me…he would slap me in front of the lawyer."*

Seleste was also abused in public by her boyfriend as she explained,

> *"So he starts following me and starts beating me up in the streets."*

1.2.2. Sexual abuse

Many women described the sexual trauma they had suffered. Their stories revealed that as children they were unsafe with both strangers and trusted figures alike. Didi was first raped by a neighbour when she was six, and then by a stranger when she was 14 years old. There was an imminent threat to her life as she was brutally assaulted during both encounters. She stated,

> *"My first rape, I was just a young, innocent girl…and he [neighbour] called me…then he pulled me and he was dragging me like this, in my neck…to the bushes of the banana and he was forcing me, forcing himself over me. And I think that man was 25 years and I was young at six years and it was so painful, and because he was an old man I could not [move] and he was threatening me. He said if I can scream he will kill me…I was unable to walk because I was having the pains and I was sent to the clinic for treatment…The second one [rape] it was a strange man…I was waiting for the bus…he asked me to accompany him to collect the gift of the chairs and the tables...then I followed him because I trusted him although he was a stranger, because I was just so innocent…When I was following him, then he turned, then he pressed my neck and he took out the knife and…he was cutting me. I have got the scar, you can see. He said, 'I will cut you like a goat if you scream'. While he was pressing me he was taking out my pants and he even raped me, when he was raping me and he was pressing me, rape me, pressing me. That is why all these things, it is so painful."*

Sibusisiwe recounted being sexually molested by her pastor at church for many years,

> *"My parents did not understand why I had this sudden negative attitude towards church, because I used to enjoy going to Sunday school you know, but ever since the pastor started molesting me and like sexually abusing me, I did not have that zeal to go to church anymore."*

Seleste spoke about her step-father who sexually abused her as a child,

> *"Feels like [he is] a real dad and then [I] find out he's just busy playing with me and busy doing jolling [having sex] with me."*

1.2.3 Emotional abuse

Most women also spoke about the emotional abuse they had suffered at the hands of their intimate partners who had made them feel inadequate, worthless, unwanted and ashamed. Noluthando shared,

> *"He will tell me that I'm nothing." Katlego had a similar account, "He would say, 'You're not good enough, I don't care about you, you can leave. I'm better off without you' and then, I instead, I would stay."*

Didi added,

> *"He even swearing me because…we were three [children] and we [were] of different fathers. He said 'Your mother has got a rotten cervix that is why she has got cervical cancer, because she slept with three different men.' He had no mercy for what was happening…he was so abusive."*

Sibusisiwe, who was incarcerated for the murder of her boyfriend, explained how his emotional abuse manifested in controlling behaviour,

> *"The cheating, the controlling. I had to live the life, my life, according to him, his ways, not the way that I wanted. He will seclude me, I was secluded from even my sisters, my friends, my colleagues, he didn't want anyone around me. He will just put me in a corner and be alone and then he will do whatever."*

1.2.4. Financial abuse

Lisa related how her boyfriend imposed a lot of financial pressure on her to support his drug habit,

> *"I had to take it [investment] out and then, I mean it just went up. I don't even know where it went to. He smoked most of it you know."*

Neeta described being financially manipulated and exploited by her husband,

> *"My husband was such a demanding person. He wanted the top of the range TV or a home theatre system. Even when I didn't have the money…my credit card was always maxed. His credit card was maxed. What he was doing, I don't know because he never did a thing in the house, but mine went towards the*

house, it went towards the running of the household, seeing to the child's school fees and all of that."

Didi, who worked as a teacher, recounted her abusive experiences with her husband. He had once bought tyres from a shop and failed to pay for them. This resulted in debt collectors seizing Didi's assets to repay her husband's debt,

"They [debt collectors] took for auction, they took all my belongings…furniture, the sofas, my lounge…my room divider, a huge one with a coffee table as well as studio couch, because he failed to pay…because we [married] in community of property…that is how I had that painful thing."

1.3 Women experience cumulative trauma throughout their lives

Most women had experienced more than one traumatic event during their lifetime. Often, they experienced some form of abuse in childhood and were then re-victimised as adults. Didi recounted all the abusive experiences she had suffered in her lifetime,

"I have been abused from rape at six, at fourteen, [and] while I was a married woman."

Katlego shared this sentiment,

"I'm thinking if it [abuse] can happen once, twice, it can still happen again, and it's been happening my whole life."

Sibusisiwe lamented,

"I feel that I have been robbed…I used to ask God why is He allowing all these things happening to me. First it was the [sexual] abuse [as a child]. Now it's this man [ex-husband] doing this, infecting me [with HIV] and after that it's the physical abuse, and then I get to a relationship again now…and that's where I was abused also emotionally, and I'm now in prison. I was thinking, that I sometimes, I felt like God doesn't love me. Why all these cruel things must happen to me?"

1.4. The vicious cycle of abuse

Women who had suffered domestic violence by their intimate partners described feeling trapped in this vicious cycle of abuse where they would be abused by their spouses and then they would feel compelled to go back, expecting their partners to change, however the abuse continued. Lisa explained,

> *"So I stuck by him and I kept going back to him [thinking]…this time it will be better and this time I will change him…I was at a point after I got stabbed six times [by the boyfriend], I thought that I would die, but still I went back to him."*

Sibongile described how families sometimes inadvertently contributed to the cycle of abuse,

> *"They [family] will talk to your husband...maybe they will allow you to stay for two to three days [after the abuse]. Whenever they see okay, you are fine now, maybe you don't have those blue eyes, you are fine, then you can just go back to your house, 'He's going to change, we have talked to him' but it will happen again."*

Sibusisiwe explained that it was difficult to leave an abusive relationship,

> *"But I did try to leave him, because I told him like several times, 'No, I cannot take this anymore' but then he would come back and he will beg me."*

1.5. Context in which the abuse occurs

1.5.1. Normalisation of abuse

Women spoke about abuse being common in some communities such that it was almost normalised. Katlego explained,

> *"It [spousal abuse] happens and it seems like it's something that's normal."*

Mpumi added,

> *"Like this one time we were laughing at each other, a friend of mine and I, because we both had blue eyes at the same time. Her boyfriend beat her up and my boyfriend had beat me up. It happens."*

Lisa agreed,

> *"It becomes like a normal thing that happens because every second wife gets beaten."*

1.5.2. Inter-generational pattern of abuse

Women of different cultural backgrounds discussed how intimate partner violence existed from previous generations and some had witnessed abuse in their parents' relationship, and had then experienced it in their own relationships. Katlego stated,

> *"When he [father] used to come home there'd be arguments, there was abuse from my dad to my mum…so to me in a way when the abuse started [from the boyfriend], that was what I was accustomed to, I grew up to it."*

She added,

> *"It's very common because sometimes when you talk, the grannies…[they] will say, 'Oh no, also in our time, your grandpa used to beat me up.'"*

Lisa concurred that domestic violence was an inter-generational phenomenon in her community,

> *"You even grow up seeing your parents being beaten…I think in the Coloured communities especially the guys, they feel that because their fathers hit their mothers, they must also hit their wives."*

1.5.3. Cultural expectations of women to tolerate spousal abuse

Many women explained that African culture and families expected women to endure abusive relationships, particularly in the context of marriage. Sibongile, a married woman who was incarcerated for the murder of her husband, commented,

> *"They'll [your family] just tell you…'No, bekezela'. There is that word in Zulu they say, 'Be patient, bekezela. Just stay there, it's going to change; everything is going to work out for the better. Just hang in there…bekezela.'"*

This was reiterated by Noma,

> "*Even when I told my mother, she said, 'You must hang in there. Your grave is in your marriage' That's how they say it…You'll tell one of your closest friends, and she will tell you, 'Just hang in there. Things will be okay'… In some [African] cultures, if a man is not beating you…he's not loving you enough."*

Mpumi also felt this was an expectation of women in the Zulu culture,

> *"There are certain beliefs that African Zulu women have, you know, like even this thing of putting up with abuse from a man."*

Katlego agreed,

> *"So I thought okay, me being a woman, I have to stay as well. I won't just leave over a slap or a kick…Most of us view it as you're being put in line in a way. A husband has to do his husbandly duties. If you're wrong, you're wrong, you get a slap in the right direction. It's not taken as abuse...so I grew up knowing that a woman is beaten…and my mum never left. My mum stayed, my mum persevered and I grew up knowing that okay, you also persevere in a relationship, no matter how abusive it is, you stay."*

1.5.4. No escape: divorce is not acceptable in the African culture

Some Black African women mentioned that divorce was a foreign concept to them, one which they regarded as culturally unacceptable and shameful. Hence, they felt trapped in their abusive marriages. This was highlighted by Sibongile,

> *"As a person, I do not know anything about divorce. I don't have a clue…Divorce, we [Black community] don't talk about that thing."*

Noma agreed,

> *"Because in our culture if you are married, the minute you go divorce and you go back to your home, its taboo. It's like you're bringing a disgrace to your family. So, I couldn't do that."*

2. The aftermath

2.1. Emotional impact

2.1.1. Anger

Many participants reported experiencing anger about the abuse they had suffered. Esther stated,

> *"The sexual molestation [as a child]…at the time when it was happening [during childhood], I didn't know…right from wrong you understand? But later in life I did get angry."*

Sibusisiwe echoed these feelings,

> *"With my husband, for me it [physical abuse] just made me an angry person. I became very angry. I became somebody that I did not know. It just, it just brought out the worst in me, this person that I didn't know that I was. I was always angry, I was always [in an] argument, at times I would even provoke him."*

Participants described anger that never subsided, even many years after the abuse. Seleste expressed her intense, lasting anger at her step-father who sexually molested her as a child,

> *"I hate him today. Sometimes I feel like I wish he can come, I just want to kill him for ruining my life."*

The anger persisted despite correctional services programmes which were aimed at addressing these issues. Nokukhanya, who had been raped by many different perpetrators since childhood, including a herdboy, a traditional healer, a pastor and her brother (whose murder she was incarcerated for) exclaimed,

> *"I hate men! I hate men! If you were a doctor that is a male, I'm sure I wouldn't be here. Closing that door with a male, both of us. I hates them…I don't wanna lie, I have anger inside myself…although I'm here for seven years."*

2.1.2. Vengeance

Some women wanted revenge on their spouses for the abuse they had suffered. Some had even acted upon these emotions which resulted in their incarceration, that is, being convicted for the murder of their intimate partners. Sibongile explained,

> *"You want the revenge; you want to get back to that person, you want him to feel the pain he has been giving you."*

Didi, who also suffered emotional and physical abuse at the hands of her husband and was incarcerated for his murder, expressed similar sentiments,

> *"I was a Christian, but in two hearts. The other heart was how could I revenge my husband."*

2.1.3. Feeling betrayed

A number of participants felt betrayed because people who were expected to love and care for them, had instead violated their trust and hurt them. This was evident in Seleste's account,

> *"It didn't just hurt me from this sexual, but it hurt me inside my heart to know that he's my stepdad and…I even carry his surname when I was a child…so I took him as my dad."*

Didi was raped as a child by her neighbour, who had been entrusted with the responsibility of caring for her after the death of her mother, also shared feelings of betrayal,

> *"Because of people how they look after me, instead of loving me, they hurt me."*

2.1.4. Sadness

Sibusisiwe described how the sexual abuse as a child by her pastor had made her feel,

> *"With abuse when I was still a child, that's changed me from the jolly and the happy child that I was, to be reserved. I became a loner."*

Melissa who was physically abused as a child by her father, after her mother had abandoned the family, lamented,

> *"If there was any happiness, which I don't even remember, that [abuse] has changed everything to sadness, you know…sad, really sad. I don't remember being happy as a child."*

2.1.5. Hopelessness

Many women described relinquishing hope as a result of the repeated abuse they had suffered throughout their lives. Mpumi who had been raped many times, including gang-raped, described,

> *"Like I didn't care, I lost that thing, that drive of wanting to be a better person of wanting to do good."*

Sibongile experienced similar feelings of hopelessness due to the abuse by her husband,

> *"But when you are fed up there is nothing you can do."*

2.2. Psychological impact

2.2.1. Community response

2.2.1.1. Victimising the victim

Blame and stigma

Victims were often blamed by others for the abuse they had endured, as expressed by Lisa,

> *"But now in the Coloured community it's like okay, she likes it [abuse]. She keeps going back to him, or she deserves it."*

Mpumi added,

> *"Sometimes people end up laughing at you, and some think that maybe you've done something wrong, maybe you're bitching [sleeping] around that's why he*

hits you…or you feel like people are going to laugh at you, or say that you deserve it."

According to Katlego, sometimes even family members blame the victim for the perpetrator's actions,

"Some parents will actually say maybe you wanted it to happen, why were you walking around the house naked?…The blame always comes back to the victim."

Melissa described the plight of sex workers when reporting rape and sexual assaults to the authorities,

"So normally, when cases like that [rape cases] go to the police they just kind of turn a deaf ear to it. I don't even bother wasting my time…they normally blame the women because she was doing business [prostitution]. That's how she got picked up…The first question they normally ask is, 'How did you get to know this person? How did he just pick you up? How did you just jump into his car?' You know? So they don't look at it as rape. They look at it like it was just business and he didn't pay you."

Furthermore, trauma victims reported being demeaned and humiliated with derogatory labels, even by their intimate partners. Didi described,

"Because I was raped, I told him [her husband]. He was using that as an instrument. He said, 'I cannot keep on staying with you because you are a rape victim, you are just left-overs, so I cannot continue staying with you. I will live with that [another] lady.'"

Abandonment

In addition to the initial trauma of the rape, victims felt abandoned and rejected by their families and intimate partners when they disclosed the trauma to them, particularly when the perpetrator was a family member. Alicia described,

"You always think, if it happened, if it was someone who wasn't in my family, it would be so much easier. But unfortunately it was someone in my family and

it's torn the entire family apart…I've lost my mother's only sister because of it, and I've lost cousins because of it…you have a lack of support."

Mpumi also felt abandoned when she disclosed her rape to her partner,

"I was raped in 2015. The guy that I was dating, I told him about it, and right after I told him about it, he dumped me because I don't know, he just didn't want to associate himself with that situation…I felt really bad. I was hoping that, you know, he'd bring me some comfort or he'd support me somehow, but he wasn't ready for that."

2.2.1.2. No voice for the victim

Invalidation

Victims stated that as children, when they disclosed the abuse to family members or caregivers, they were not believed. Esther recalled,

"As a child actually, when we told the adults, the nun, or the convent that I was in, that this is what's happening, somebody is touching me where I don't know if it's okay, or it's not, they told us that we're lying…nobody wanted to believe you, it's like you were lying."

Nokukhanya, who had been raped several times, including by her brother, had a similar experience,

"Ja, if you've been raped with [by] someone in the family, relative, by telling them [family] that… 'My brother raped me.' [They reply] 'You are a liar, there's no such a thing, you want police to be up and down here. You [are] breaking the family.'"

Sibusisiwe who had also been raped repeatedly as a child by her pastor stated,

"I thought that no one was going to believe me. I was still a child and I felt that…this person is being held in high esteem. He's a pastor, everybody respects him. Who am I? No one is going to believe me."

Secrecy of abuse

Women related that both childhood sexual abuse and adult domestic violence was shrouded in a veil of secrecy. Mpumi commented,

> *"I think that is also because of our Zulu beliefs that you can't just expose your, what is happening in your relationship [spousal abuse]…If your partner hits you, they try to hide it…you end up making excuses for your boyfriend. Sometimes you end up lying if somebody asks you how did you get hurt."*

Neeta felt the same was relevant to her community,

> *"The general feeling among Indian people is that you don't advertise your dirty laundry [abuse]…then you're going to have to put on makeup to hide all of the blue marks on your face and things like that."*

Katlego who was physically and emotionally abused by her boyfriend concurred,

> *"And I would stay and I would always make excuses at home for why I have the bruises…Then I would say to my mom I got into a fight at school or something. I would always have to make excuses."*

2.2.2. Intrapsychic impact

2.2.2.1. Self-blame and guilt

Some women felt as though they were in some way to blame for the abuse they had endured. Sibusisiwe explained,

> *"All those years I was thinking it's [the sexual abuse] my fault…maybe I deserved this, because this person [pastor] they [community] respect him, everybody loves him."*

Katlego shared these feelings of self-blame,

> *"I blame myself…like did I attract these kinds of people into my life so that I could be abused, and yeah, basically there's self-hatred and self-blame, because I think in one person's lifetime for the same occasion to happen so many times, I must be attracting those kinds of people in my life… and when*

he abuses me I thought, 'No, I led him to hitting me. I pushed him to that point' I never saw him as wrong for doing it."

2.2.2.2. Shame

Participants described feelings of shame for having been abused. Alicia described,

"It's such a shameful thing…you just won't talk about it…rape is shameful…I still feel shame about it, even though I didn't do anything wrong. I didn't entice him [her uncle] intentionally…you know, it's a shameful thing and I still feel the same way."

Sibongile added the following about being a victim of domestic violence,

"You don't want to tell other people your problems, you are ashamed of yourself."

Katlego described feelings of being a disappointment to her family, especially her mother, for being a victim of rape at 13 years old, because she was no longer a virgin,

"Not only being raped, in our black community as well, we value being a virgin, so me coming home and me telling my mum that I'm not a virgin anymore at the age of 13 would have been the ultimate failure in life. So I rather kept it to myself for as long as I could, because in a way, I felt like I failed my mom at such a young age."

2.2.2.3. Loss of self-worth

Many participants reported a negative impact on their self-worth, including their self-esteem and self-confidence. Neeta, whose husband physically and emotionally abused her, remarked,

"It made me feel like a total loser…Yes, it crushed the person I used to be. I was a very confident woman, very responsible…it reduces your self-worth. You have no confidence, you have no self-esteem."

Mpumi stated,

> *"I lost confidence in myself. I ended up just moving with the wrong crowds. I ended up not wanting to be with people that I should be around. I wanted to be around bad people just to make myself feel good and I don't know, I just lost a lot of self-confidence after being abused."*

2.2.2.4. Lack of sense of safety

Women described a persistent impact on their sense of safety following their abusive experiences. Nokukhanya spoke about how the repeated trauma affected her interaction with men,

> *"I'm even scared of my father. I can't be with my father in one room, both of us, the way I'm so scared of mens."*

Didi explained that she suffers from post-traumatic stress disorder,

> *"All what has happened in my life [rapes] is fresh…since 2014…I reported the problem that I have got that fear. I am even shivering. When I am shivering…if people say, 'Warrant is calling you in the office' Then I stopped, then I panic. Then when I panic, then I pee [urinate]. Because there is that fear if people are calling me…if people are whispering or touching my neck, there is those images of people are raping me."*

2.2.2.5. Change in sexual orientation

Nokukhanya expressed that the repeated rapes she had been a victim of, resulted in a change in her sexual orientation,

> *"It's changed me 'cause I wasn't a lesbian. I don't wanna lie that's I was born lesbian. No, not at all. I wasn't a lesbian, I was straight. So by getting hurt [raped by men] I said, 'No, mens and me, two different things' so let me change my roots, let me go this way and see if I'm comfortable. Lucky, fortunately, I did found comforts. 'Cause I wasn't so into mens...so I think it's changed me, it's changed me from [to] being the lesbian."*

It is noted that whilst this was specifically mentioned by one participant, there were others who had reported a history of sexual abuse in childhood and being homosexual, but did not specifically cite this as a reason for their homosexual orientation.

2.2.2.6. Precursor to mental illness

Participants relayed how the trauma they had endured precipitated their mental illness. Noma elucidated,

> *"I have never been to a psychiatric hospital. I've never taken any psychiatric medication, but through abuse, I've been admitted to hospital…at some stage I couldn't sleep without the anti-depressants or the drugs…I was in and out of psychiatric hospitals."*

Didi added,

> *"The experience of rape while I was six years in 1975, and the experience of rape while I was 14…and the abuse of my husband, it changed me, because since last month…I have to undergo a psychological process, because it has changed me who I am…I have that fear…the psychologist called it a [post] traumatic stress disorder."*

2.2.2.7. Strength and resilience

Despite enduring severe and cumulative abuse, some women described gaining strength and resilience from their experiences. Sibongile commented,

> *"I think they [abusive experiences] did change me in a way because I'm stronger now."*

Katlego concurred,

> *"Yes, I think they changed me in a way…I have a hard exterior…I saw myself being tough enough to handle situations," as did Lisa, "So his abuse…it toughened me."*

2.3.Impact on behaviour and interpersonal relationships

2.3.1. Unhealthy coping mechanisms

2.3.1.1. Alcohol and illicit substance use

Some participants dealt with the emotional consequences of the trauma by using alcohol and illicit drugs. Lisa stated,

> *"I became an alcoholic…everything stems from that abuse you know."*

Mpumi added,

> *"I just resorted to alcohol…that's what really messed up my life, alcohol and making bad decisions."*

Katlego also resorted to alcohol to cope with the abuse,

> *"Most of my drinking came when the abuse started with the boyfriend and I thought, 'Why doesn't he love me enough? Why doesn't he care?'…I'd go straight to drinking because that just numbed the pain, and the next morning the pain would come back and I would drink more."*

Noluthando recounted,

> *"Sometimes they [memories of abuse] don't come out of my mind. That's why sometimes I end up drinking too much and I end up using this drug. They call it Rock, it keeps me high."*

2.3.1.2. Defence mechanisms of avoidance, repression and suppression

Some women used defence mechanisms such as avoidance, suppression or repression in an attempt to deal with the trauma. Melissa stated,

> *"I didn't deal with it [the abuse]".*

Sibusisiwe explained,

> *"Because this thing [memories of the abuse] came back to me, like harm me, when I was in prison. All along it subsided…I don't know where it went to at the back of my mind, because I didn't want to think about it so I didn't want to stress*

about it…but now, when I hear things about rape…it comes back…I didn't deal with it and yet it was like it never happened, but now, ever since I came to prison…it came back new, like just fresh, and I had to deal with it."

2.3.2. Trajectory into crime

Most women believed that their traumatic experiences had propelled their lives towards the circumstances which eventually led to their incarceration. Offences they were incarcerated for ranged from drug possession to fraud and murder (mostly of their intimate partners). Sibongile commented that many women, including her, who were currently incarcerated for murdering their spouses, had histories of abuse,

"Those experiences [spousal abuse] pushed me in doing what I did [murder of husband] and then I ended up here…there are so many people who have been abused by their partners…many women who have killed their boyfriends, others, they have killed their husbands because of the abuse."

Katlego echoed this notion,

"Some of them [women in prison] are actually here because they couldn't walk away from an abusive marriage, whereby it got to the point whereby, I die or my husband dies…most women are here…because of murder, are here because they fought back. But if they walked away earlier on, some of them would not be here."

Didi, who was incarcerated for the murder of her husband, also attributed her incarceration to the abuse she had suffered,

"If I was not married, my life would not be the same. I will never receive that life sentence."

Nokukhanya added,

"Yes, it would have been different 'cos first of all, I wouldn't be in prison 'cos I wouldn't kill my brother if he never raped me…My life wouldn't [have] been put on pause in the age of 20 when I came in prison."

Sibusisiwe stated that she could no longer tolerate her partner's emotional abuse after his repeated episodes of being unfaithful to her,

> *"I believed that he meant it [his apology for cheating on her repeatedly] and I will go back to him…so which means I forgave and forgave, but it wasn't forgotten. So, the next thing when he does something bad again after he was forgiven, after he has apologised, then I landed up here [incarcerated for murdering him]."*

Melissa, a sex worker, who was physically abused by her father after her mother had abandoned them, added,

> *"I don't even think I would've been a prostitute if my childhood was different…if my dad had paid more attention, or if my mom had never left, I think I would've turned out a whole lot differently."*

2.3.3. Unsuccessful interpersonal relationships

Some women felt that their traumatic experiences resulted in their inability to sustain and enjoy successful relationships, both intimate and non-intimate. Alicia explained,

> *"It's [childhood sexual abuse] created difficulty in all of my relationships. Friendships or relationships or anything because you just don't want to get close to someone because anybody could do it…it wasn't just about sexually hurting me, it was hurting me in any way, shape or form…I obviously see men very differently because of it. I can't hold a stable relationship. That's not nice."*

Noma elaborated,

> *"I had resentments and the way I look at people now, I'm not a trusting person anymore. When a person comes to me, I take time to befriend a person. I always reserve room for disappointment…I don't trust too much and I don't think I will ever have any good relationship with men."*

Katlego added,

> *"I'm shut out to most people. I avoid contact with most people. I trust no one basically."*

DISCUSSION

This study aimed at an in-depth exploration of the experience and impact of lifetime trauma among female inmates with a history of mental illness, in a South African cultural setting.

According to the narratives of participants, abuse cut across all population groups and cultures, and is very common among incarcerated women. It takes on various forms including physical, sexual, emotional and financial abuse. This is consistent with South African literature, as Artz found that 38% of female inmates in the Western Cape reported childhood physical abuse and 29% admitted to childhood sexual abuse.[12] Dastile also found high levels of physical, sexual and emotional abuse among female inmates in Gauteng correctional centres,[10] while Haffejee and colleagues reported that 78% of women in a Gauteng prison reported some form of abuse in their last relationship prior to incarceration.[11]

For women in some African countries, there seems to be an ever-present threat of sexual violence. In a survey in Ghana, women from low socio-economic neighbourhoods stated that sexual violence was a large part of their everyday lives, which they were afraid to report.[25] In the present study many women described multiple sexual assaults during their lifetime, with perpetrators being both trusted, familiar figures as well as strangers. Hesitancy about reporting these assaults was also a common finding. However, sexual abuse is not the only form of abuse that impacts on the wellbeing of women. Women described the unrelenting physical assaults and victimisation they had endured from childhood through to adulthood, being severely traumatised and robbed of their physical safety, self-worth and possessions.

Participants in this study were furthermore subjected to several traumas throughout their lifespan, a finding that is in line with that of Dastile.[10] Female inmates being victims of cumulative trauma is not unique to the South African context, as international literature demonstrates that the majority of female prisoners suffer complex trauma.[9] International studies on prisoners have shown prevalence rates of childhood physical and sexual abuse ranging from 25-90%.[5,26-28] High rates of re-victimisation as adolescents and adults are common, including intimate partner violence.[29-32] Participants in the current study often struggled to break free from the cycle of abuse.

They felt disempowered in the face of the abuse, partly due to a lack of support received from families, communities and the greater governing systems. Their accounts underscored the universality of the dominant attitudes of the social acceptability of domestic violence against women. Participants of different cultures also indicated that they had become accustomed to witnessing domestic violence in previous generations and thus, they felt it was not only acceptable, but also expected, within intimate relationships. A study from the European Union found that widespread attitudes, such as victim blaming, which condone domestic violence against women, contribute towards the social acceptability of it.[33] In our study, women related that in African culture women were expected to tolerate and endure abusive relationships, particularly in the context of marriage. In addition, in African societies, marriage is regarded as a life-long contract. Traditionally, divorce was not considered as an option, and was viewed as a sin against God, nature and society.[34] Some women in our study confirmed the existence of this culturally sanctioned belief, which was reinforced by their families and friends. Hence, they felt trapped in their abusive marriages as divorce was not an option.

According to existing literature, as well as the findings of our study, trauma has an enduring impact and affects women emotionally, psychologically, behaviourally and in their interpersonal relationships.[4] Women in this study reported a strong emotional reaction in response to the abuse they had endured. In a Canadian study on female prisoners by Matheson and colleagues, women stated that they continued to experience negative emotions such as anger many years after the abuse, which emphasised the lasting impact of abuse suffered during earlier periods.[4] These findings were confirmed in our study. Participants expressed their lasting anger, desire for revenge and further highlighted a deep sense of betrayal and sadness regarding personal boundary violations. Some women described losing hope and feeling powerless whilst being subjected to abuse.

The women in this study described abuse as an intensely painful experience however, these victims seldom experienced an empathic response from others. Society's response to women who reveal their abuse, for example social stigma, can have a detrimental impact on the women's psychological wellbeing.[25] International literature has described social stigma as a key reason for non-disclosure of childhood sexual abuse.[25] In our study, women described being stigmatised, labelled and even

abandoned by others, including their intimate partners, for being victims of abuse. In addition, cultural factors contributed to the stigmatisation of victims. The virginity of girls is seen as very important in African society thus, girls who are victims of sexual violence are regarded as “damaged” or blamed for provoking sexual attention.[35] This theme was echoed in our study, where victims concealed their sexual assaults from their families, for fear of being shamed for losing their virginity.

Several themes of the intrapsychic impact of abuse were highlighted in our study. Women related feeling invalidated as they were not believed when they had disclosed the abuse to family or caregivers. This was echoed in Artz’s study, where women who revealed to their mothers that they were being sexually abused by their fathers or their mothers’ partners, were told that they were lying.[12] There was a consequent strong theme of having to conceal the abuse, and not being able to reach out for help as a result. Furthermore, victims in this study blamed themselves for the abusive acts of others. Self-blame was also reported by women in the Canadian study.[4] When blame is ascribed to the self, cognitive attributions could result in the experience of shame and self-stigma.[36] According to the literature, social support, gender and developmental period are hypothesised to moderate the proposed stigmatisation process.[36] Early childhood is a crucial stage of physical, emotional, psychological and cognitive development,[37] and some women in our study were very young when their first abusive experiences occurred. In addition, some women in this study described having been abandoned by intimate partners and family when they disclosed their abuse which illustrates their absence of social support. The presence of these factors may likely have contributed to the development of self-blame and self-stigma.

As in Artz’s study, participants in our study reported that the abuse they had endured, had adversely affected their self-esteem, self-worth and confidence.[12] The intrapsychic impact also seems enduring as some of the participants described symptoms of post-traumatic stress years after the abuse. Unresolved trauma may impact on the way women think and feel about themselves; it could diminish their self-worth and self-esteem, as was expressed by the women in our study; and this in turn hinders their ability to recover and heal from the trauma they have experienced.[4] Many women described significant changes in their personality, sexual orientation, interpersonal relations, and mental wellness as a result of abuse, while others felt that

they had gained fortitude and had become more resilient in their efforts to cope with the abuse.

With regards to the behavioural impact of abuse, participants described developing unhealthy coping mechanisms including substance use, and defence mechanisms such as avoidance and repression. International literature, mostly from developed countries, found that many women used alcohol and other illicit substances to cope with the adverse psychological consequences of the trauma.[8,38] Female inmates in previous South African studies have also reported using substances to self-medicate their past traumas.[10,12] Ineffective coping mechanisms or unresolved trauma often result in unhealthy behaviour patterns such as substance use, and this could result in harmful consequences such as criminal offences, as was reported in our study.

There seems to be a link between being a victim of abuse and engaging in criminal behaviour. Neurobiological changes occur as a result of trauma exposure, which leads to cognitive and emotional impairments. This manifests in symptoms such as poor self-regulation, anger and mistrust, which all contribute to criminality.[39] An international review concluded that, among other factors, childhood abuse and intimate relationship violence affected women's risk of violating the law.[40] The majority of women in our study reported that their experiences of abuse had contributed to their pathways into criminality. Furthermore, Haffejee and colleagues found that there was a significant relationship between the experience of economic abuse and involvement in theft,[11] with some women in our study asserting that financial abuse from their spouses contributed to them committing economic crimes such as fraud.

Encompassed in all other themes is the significant impact of trauma on healthy interpersonal relationships. When women experience trauma as part of an intimate relationship it can lead to extreme vulnerability.[4] This may manifest in hesitancy about trusting others in subsequent intimate and non-intimate relationships, as was described by the women in our study. This could also negatively affect help-seeking behaviour and forming trusting relationships with therapists.

Limitations

The main limitation of the study was that it was based at one correctional centre in SA. Interviews were conducted in English thus, participants from phase one of the study who fulfilled the criteria but who were not fluent in English, were excluded from participating in phase two. Thirdly, most women who participated in the qualitative interviews were first language isiZulu speakers, so nuances in their narratives might have been missed. The study also relied heavily on self-report and was thus vulnerable to exaggeration or misrepresentation.

CONCLUSION

This study highlights the pervasive and enduring impact trauma has on the lives of female inmates. All female inmates in this phase of the study reported traumatic experiences during their lifetime, including complex trauma. Quantitative research such as the Adverse Childhood Experiences study in the USA, found a dose-response relationship between childhood adversity and health risk behaviours, which may ultimately contribute to morbidity (including mental health disorders) and mortality.[41] Our findings provide the qualitative evidence for quantitative research into the effect of cumulative trauma on mental health and related consequences in female inmates. It furthermore highlights societal ills that perpetuate this unrelenting cycle of abuse against women.

The women reported that their experiences of trauma contributed to their development of mental illnesses including substance use disorders, as well as to their trajectories into crime. In exploring and understanding their narratives we were able to see beyond the label of ‘inmate’; their stories helped expose ills in society and the gaps in preventative and rehabilitative efforts, and highlighted a desperate need for healing. Incarceration presents an opportunity to address this unmet need by engaging women in psychotherapy and rehabilitation programmes. Participants also shared their experience of rehabilitative efforts within correctional facilities and identified pertinent needs and hiatuses in existing interventions and treatment programmes, which would likely improve mental health outcomes and decrease the rate of recidivism. These findings will be reported on in future publications.

REFERENCES

1. Bloom BE, Covington SS. Addressing the Mental Health Needs of Women Offenders [Internet]. 2008 [cited 2021 Mar 24]. Available from http://www.nationaljailacademy.org/_documents/resources/female/addressing-women-mental-health.pdf

2. Messina N, Burdon W, Hagopian G, Prendergast M. Predictors of prison-based treatment outcomes: A comparison of men and women participants. Am J Drug Alcohol Abuse. 2006;32(1):7-28.

3. Tripodi SJ, Pettus-Davis C. Histories of childhood victimization and subsequent mental health problems, substance use, and sexual victimization for a sample of incarcerated women in the US. Int J Law Psychiatry. 2013;36(1):30-40.

4. Matheson FI, Brazil A, Doherty S, Forrester P. A Call for help: Women offenders' reflections on trauma care. Women and Criminal Justice. 2015; 25(4):241-255.

5. Green BL, Miranda J, Daroowalla A, Siddique J. Trauma exposure, mental health functioning, and program needs of women in jail. Crime & Delinquency. 2005;51(1):133-51.

6. James DJ, Glaze LE. Mental Health Problems of Prison and Jail Inmates. Special Report. Washington, DC: U.S. Department of Justice. 2006 [cited 2021 Mar 24]. Available from https://bjs.ojp.gov/content/pub/pdf/mhppji.pdf

7. Lynch SM, Fritch A, Heath NM. Looking beneath the surface: The nature of incarcerated women's experiences of interpersonal violence, treatment needs, and mental health. Feminist Criminology. 2012;7(4):381-400.

8. Davidson J, Chesney-Lind M. Gender and crime. In: Miller JM, editor. 21st Century Criminology: A Reference Handbook. Thousand Oaks, CA: Sage Publications. 2009. p. 76-84.

9. Meyer S. Women in prison: histories of trauma and abuse highlight the need for specialised care [Internet]. The Conversation. 2016 [cited 2021 Mar 27]. Available from https://theconversation.com/women-in-prison-histories-of-trauma-and-abuse-highlight-the-need-for-specialised-care-68668

10. Dastile, NP. Women's routes to crime and incarceration in South African correctional centres: implications for rehabilitation. Acta Criminologica: South African Journal of Criminology. 2014; 27(1):1-12.

11. Haffejee S, Vetten L, Greyling M. Exploring violence in the lives of women and girls incarcerated at three prisons in Gauteng Province, South Africa. Agenda. 2005; 19(66):40-7.

12. Artz L, Hoffman-Wanderer Y, Moult K. Hard times: Women's pathways to crime and incarceration. Cape Town: Gender, Health and Research Unit, University of Cape Town. 2012.

13. Naidoo S, Paruk S, Subramaney U, Ferreira L. The association of cumulative adverse childhood experiences with mental illness, HIV and violent offending among female inmates in Durban, South Africa. Unpublished.

14. Wolff KT, Baglivio MT, Piquero AR. The Relationship Between Adverse Childhood Experiences and Recidivism in a Sample of Juvenile Offenders in Community-Based Treatment. Int J Offender Ther Comp Criminol. 2017;61(11):1210-42.

15. Vitopoulos NA, Peterson-Badali M, Brown S, Skilling TA. The Relationship Between Trauma, Recidivism Risk, and Re-offending in Male and Female Juvenile Offenders. J Child and Adolesc Trauma. 2018;12(3):351-64.

16. Kim EY, Park J, Kim B. Type of childhood maltreatment and the risk of criminal recidivism in adult probationers: a cross-sectional study. BMC Psychiatry [Internet]. 2016 [cited 2021 Mar 24];16:294. Available from https://doi.org/ 10.1186/s12888-016-1001-8.

17. Creswell JW, Plano-Clark VL. Designing and Conducting Mixed Methods Research. 2nd ed. Los Angeles: Sage Publications. 2011.

18. Mertons DM. Transformative research and evaluation. New York: Guilford Press. 2009.

19. Naidoo S, Subramaney U, Paruk S, Ferreira L. Mental illness and HIV among female inmates in Durban, South Africa. S Afr J Psychiatry. 2022. Available from https://sajp.org.za/index.php/sajp/article/view/1628 [Accessed 27/01/2022]

20. Naidoo S, Ferreira L, Subramaney U, Paruk S. An HIV narrative of female inmates with a lifetime history of mental illness in Durban, South Africa. Front Psychiatry. 2021. Available from https://doi.org/10.3389/fpsyt.2021.637387 [Accessed 25/09/2021]

21. Manen MV. Researching lived experience: Human science for an action sensitive pedagogy. London and New York: Routledge Taylor and Francis Group. 1997.

22. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3(2):77-101.

23. VERBI Software. MAXQDA 2020 [computer software]. Berlin, Germany: VERBI Software. Available at www.maxqda.com [cited 2020 Oct 21]

24. Lincoln YS, Guba EG. Naturalistic Inquiry. Newbury Park, CA. Sage Publications. 1985.

25. Böhm B. “She got spoilt”: Perceptions of Victims of Child Sexual Abuse in Ghana. J Child Sexual Abuse. 2017;26(7):818-38.

26. Browne A, Miller B, Maguin E. Prevalence and severity of lifetime physical and sexual victimization among incarcerated women. Int J Law Psychiatry. 1999;22(3-4):301-22.

27. Cook SL, Smith SG, Poister Tusher C, Raiford J. Self-reports of traumatic events in a random sample of incarcerated women. Women & Criminal Justice. 2005;16(1-2):107–126.

28. Harlow CW. Prior abuse reported by inmates and probationers. Washington, DC: U.S Department of Justice. 1999.

29. Dudeck M, Drenkhahn K, Spitzer C, Barnow S, Kopp D, Kuwert P et al. Traumatization and mental distress in long-term prisoners in Europe. Punishment & Society. 2011;13(4):403-23.

30. Horwitz AV, Widom CS, McLaughlin J, White HR. The impact of childhood abuse and neglect on adult mental health: A prospective study. J Health Soc Behav. 2001:42(2):184-201.

31. Messina N, Grella C. Childhood trauma and women's health outcomes in a California prison population. Am J Public Health. 2006;96(10):1842-8.

32. Stathopoulos M, Quadara A, Fileborn V, Clark H. Addressing women's victimisation histories in custodial settings [Internet]. Melbourne, Australia: Australian Institute of Family Studies. 2012 [cited 2021 Mar 26]. Available from https://aifs.gov.au/publications/addressing-womens-victimisation-histories-custodial-settings

33. Gracia E, Herrero J. Acceptability of domestic violence against women in the European Union: a multi-level analysis. J Epidemiol Community Health. 2006;60(2):123-9.

34. Arugu LO. Social indicators and effects of marriage divorce in African societies. Business & Management Review. 2014;4(4):374-83.

35. Van der Geugten J, van Meijel B, den Uyl MH, de Vries NK. Virginity, sex, money and desire: premarital sexual behaviour of youths in Bolgatanga Municipality, Ghana. Afr J Reprod Health. 2013;17(4):93-106.

36. Feiring C, Taska L, Lewis M. A process model for understanding adaptation to sexual abuse: The role of shame in defining stigmatization. Child Abuse Negl. 1996;20(8):767-82.

37. Nelson CA, Zeanah CH, Fox NA. How Early Experience Shapes Human development: The Case of Psychosocial Deprivation. Hindawi [Internet]. 2019;2019 [cited 2021 Mar 24]:1676285. Available from https://www.hindawi.com/journals/np/2019/1676285/

38. Fuentes CM. Nobody's Child: The role of trauma and interpersonal violence in women's pathways to incarceration and resultant service needs. Med Anthropol Q. 2014;28(1):85-104.

39. Foy DW, Furrow J, McManus S. Exposure to violence, post-traumatic symptomatology, and criminal behaviors. In: Ardino V. Post-traumatic syndromes in childhood and adolescence: A handbook of research and practice. Chichester, UK: John Wiley & Sons. 2011. p.199-210.

40. Kruttschnitt C, Gartner R. Women's Imprisonment. Crime and Justice. 2003;30(1):1-81.

41. Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences Study. Am J Prev Med. 1998;14(4):245-58.

CHAPTER SEVEN: RESULTS

WHAT WOMEN WANT: A QUALITATIVE EXPLORATION ADDRESSING THE UNMET MENTAL HEALTH NEEDS OF FEMALE INMATES IN DURBAN, SOUTH AFRICA

ABSTRACT

Introduction

Current treatment and rehabilitation programmes offered by correctional services in South Africa do not adequately address the mental health needs of female inmates. This is a concern as the lack of interventions aimed at optimising the mental health of female inmates likely contributes to recidivism.

Aim

This study aimed to explore female inmates' opinions on how correctional services in South Africa could improve mental health services, to address their complex mental health needs.

Methods

This study formed part of a larger two-phased, mixed methods project. Fourteen women were purposively selected for the qualitative phase from the 126 women who participated in the quantitative phase. They were of diverse cultures, had a lifetime history of mental illness and trauma, and were either affected by, or infected with HIV. The study employed a hermeneutic phenomenological approach using individual, in-depth semi-structured interviews to obtain the qualitative data. Thematic analysis was used to analyse the data.

Results

The main themes that were generated included: the challenges women experienced in correctional services; the need for mental health of female inmates to be prioritised by correctional services, government and society; the specific need for holistic, integrated psychiatric, psychological, substance rehabilitation and skills development interventions in correctional services; the burdens women face post-release and the

need for continuity of care; and finally the women's resilience and sense of hope for their future. Understanding the women's cultural background and its implications for treatment were also highlighted by participants.

Conclusion

Participants identified gaps within correctional services as well as in the greater system, that is, government and society as a whole, which could more comprehensively address their complex mental health needs. Mental health should be prioritised, with an urgent need for inclusive and integrated substance rehabilitation, trauma-informed and trauma-focused care, as well as expanded skills development programmes which should be delivered within a culturally-informed framework. Continuity of care post-release is imperative.

INTRODUCTION

Female inmates in Durban, KwaZulu-Natal (KZN), South Africa (SA) have reported multiple burdens of traumatic experiences,[1] human immuno-deficiency virus (HIV)[2] and mental illness.[3] Cumulative childhood adversities are associated with multiple mental illnesses including post-traumatic stress disorder (PTSD), alcohol use disorder (AUD), substance use disorder (SUD), borderline personality disorder (BPD), and HIV.[4] Female inmates in KZN have also described the cultural context of their abusive experiences, and how their traumatic experiences contributed to their development of mental illnesses (including SUDs) as well as to their trajectories into crime.[1]

Inmates, like all other citizens, are entitled to access healthcare which includes mental healthcare, as enshrined in the Bill of Rights, (Chapter two of the South African Constitution),[5] and in the United Nations Standard Minimum Rules for the Treatment of Prisoners (also known as the Mandela Rules) which was adopted by the United Nations in 2015.[6] The right to gender-specific healthcare is reinforced in the United Nations Rules for the Treatment of Women Prisoners and Non-custodial Measures for Women Offenders" (also known as the Bangkok Rules). This is a set of 70 rules focused specifically on the treatment of female offenders and prisoners and was adopted by the United Nations in 2010.[7] It is intended to complement the Mandela Rules by providing a guide to decision-makers such as legislators, policy-makers,

sentencing authorities and prison officials to limit the imprisonment of women, and to meet the specific needs of women who are eventually incarcerated.

The primary goal of the Department of Correctional Services (DCS) in South Africa (SA) is successful rehabilitation of offenders and prevention of recidivism.[8] It follows a needs-based approach to rehabilitation, which supports interventions that balance criminogenic factors with the individualised offence profile of inmates.[8] According to the Correctional Services Act 111 of 1998 (CSA), offenders serving sentences of less than 24 months are not compelled, and hence, they are not prioritised, to attend rehabilitation programmes.[9] Remand detainees are excluded from rehabilitation, educational and skills development programmes.[9]

Rehabilitation programmes currently offered by the DCS include, inter alia, new beginnings (which aims to acclimatise newly admitted inmates to adapt to imprisonment), anger management, crossroads (a programme that is intended to assist inmates by giving them the skills and knowledge they need to become, lawful, accountable and productive citizens), restorative justice, economic crimes, life skills and pre-release programmes (which provides inmates with skills and information to prepare them for possible challenges they may encounter post-release, so that they may successfully reintegrate into their communities of origin).[10,11]

Accredited skills programmes offered to sentenced offenders include welding, carpentry, upholstery, plumbing, building and plastering, painting, electrical skills, spray painting, motor mechanics, hairdressing, chef assistant courses, computer skills, plant production, agriculture-related training and entrepreneurship.[12] Skills programmes offered to women are more limited. Educational programmes offered include adult education and training (AET) which is equivalent to a grade nine level of education, grades 10-12, and distance tertiary education.[12] Although there are multiple national correctional programmes currently, none of these programmes focus on specific needs of female offenders, such as the psychological management of past trauma. This view has also been supported by international literature.[13]

Understanding perspectives and recommendations from the female inmates themselves on how correctional services could better address their mental health needs is important. This will assist in the development of meaningful rehabilitation programmes that improve both health and re-offending outcomes, as well as aid in

their successful reintegration into society. This is in keeping with the transformative framework of the study,[14] which emphasises that transformative research should adopt a collaborative approach between researchers and participants, in order to advance the study's advocacy underpinnings.

METHOD

Study Design

The findings presented here form part of the second phase of a larger two-phased, sequential, explanatory design mixed methods study,[15] which aimed to determine the mental health needs of female inmates in Durban, South Africa. The study adopted a transformative framework.[14] The prevalence of mental illness, HIV and trauma were measured in phase one, while the subsequent qualitative phase provided an in-depth understanding of the lived experiences of HIV[2], trauma[1] and mental illness[1] among female inmates in a South African cultural setting.[1,2] This manuscript focuses on exploring the unmet mental health needs of female inmates, as described by the women themselves. The study employed a hermeneutic phenomenological design[16] and comprised in-depth, semi-structured interviews, conducted in English by the first author, a forensic psychiatrist. These interviews were audio-recorded and later transcribed. Data was analysed using thematic analysis, as described by Braun and Clarke.[17]

Study setting

The study was conducted at the largest correctional centre in Durban, KwaZulu Natal (KZN), SA. It accommodates both male and female inmates. Females are referred from different parts of KZN as well as the Eastern Cape province, since this is one of the only correctional centres in the region which accommodates women serving life sentences.

Study sample

One hundred and twenty-six female sentenced offenders and remand detainees were randomly selected to participate in the quantitative phase one interviews. Fourteen women from phase one with culturally diverse backgrounds, a lifetime history of mental illness and trauma, and who were either living with HIV or affected by HIV, were then purposively selected to participate in phase two. These individuals participated in semi-structured in-depth interviews that explored their lived experiences of HIV, trauma and mental illness in a South African cultural setting. Interviews continued until data saturation was reached.

Procedure

Ethical approval for the study was obtained from the University of the Witwatersrand Human Research Ethics Committee (Clearance number M181026) prior to commencement of the study. Approval was also granted from the DCS in SA. Written informed consent for phase one and two was obtained from participants separately. Ethical principles were followed throughout the research process to ensure voluntariness, confidentiality and anonymity.

Analysis

A qualitative data analysis software programme, MAXQDA, was used to analyse the data.[18] This ensured an electronic audit trail. Thematic analysis, according to the principles of Braun and Clarke, was conducted on the data. This was done in conjunction with the second author.

Trustworthiness

Guba and Lincoln's constructs of credibility, dependability, transferability and confirmability were used to ensure scientific rigour.[19] The first author, a forensic psychiatrist conducted all the interviews thus ensuring credibility. This was further facilitated through analyst triangulation, by the first and second authors. Transparency and auditability were facilitated through the use of a qualitative data analysis software

programme. A reflexivity journal was used to document preconceptions and biases to enhance confirmability. Thick descriptions of the study setting and population as well as detailed in-context quotations, enhanced transferability.

RESULTS

The socio-demographic, clinical and forensic characteristics of the 14 inmates have been described elsewhere.[2] Women are identified by pseudonyms in this manuscript.

Themes

A summary of the themes and sub-themes is listed in Table 1 and then described in detail.

Table 1: Summary of the main themes and sub-themes

Themes	Sub-themes
Challenges experienced in correctional services	Mental health is neglected in correctional services
	Correctional service officers are used as surrogate therapists
	Need for re-evaluation of current rehabilitation programmes
Need for government and community interventions	Preventative efforts- protection of citizens from gender-based violence
	Mobilising support both inside and outside correctional facilities- education and awareness about mental illness and abuse
Need for specific interventions in correctional services	Psychiatric treatments
	Psychological interventions
	Substance rehabilitation programmes
	Skills development programmes

	Adopting a culturally-sensitive approach
Post-release: Challenges faced and need for continuity of care	Need for continuity of care
	Challenges of having a criminal record
Resilience and hope for the future: "My story will not end here"	Finding meaning and purpose in helping others
	Furthering their education
	Finding solace in spirituality

1. Challenges experienced in correctional services

1.1. Mental health is neglected in correctional services

Women felt that mental health was not prioritised in correctional facilities despite it being brought to the attention of higher authorities. Neeta described her frustration,

> *"The health care in this place is terrible! Absolutely terrible…I'm so depressed, I didn't get my medication for over a week. Nobody cares about that. I've escalated that right up to the head of prison and I still haven't gotten a reply…they don't really care much about your mental health."*

Esther also expressed that mental health was largely ignored as there was a lack of programmes to address such issues in correctional services,

> *"I've attended nothing about mental health here. They have the normal life-skills…religion, but beyond that, there is nothing."*

The women felt that there were too few mental health care workers such as social workers, psychologists and psychiatrists providing services in correctional facilities. They expressed that they experienced many personal problems during incarceration, and that they were unable to confide in fellow inmates about their problems due to fear of their trust being violated. Mpumi commented,

> *"But we don't get to talk about our problems enough because you're scared to talk to your fellow inmates…You'll tell someone something about your life and then they end up telling other people and then half the section knows about*

it…They should bring in like doctors who deal with mental health problems…that part is just really overlooked like when you come here."

Noma expressed her exasperation about how poorly staffed the correctional facility was with respect to mental health care providers. She exclaimed,

"Imagine in this whole jail of 400 and something inmates, there are only two social workers!"

Sibongile remarked,

"I think what the correctional services should do, when you come here in prison, as a woman, they should allow you to see a psychologist; at least a psychologist…there are so many things that we need to talk, but we don't talk to anybody…It's only the social workers…you only go when you've got problems concerning the children at home, but what about you as a person…We don't have anybody to tell [talk to]."

1.2. Correctional service officials are used as surrogate therapists

Due to the lack of mental health care workers, inmates resorted to talking to correctional service officers about their problems. This was not ideal due to the lack of confidentiality between correctional service officers and inmates, as well as correctional service officers not having received the necessary training to provide mental health care. Mpumi stated,

"Like even with our warrants [correctional service officers] sometimes you can't trust them because you tell them something and then she has a favourite of hers, another inmate, and then she'll tell that inmate what you told her."

Women also spoke about correctional service officers being used as surrogate therapists but not being trained as therapists. Hence, they are not equipped to handle these situations, and it imposes undue emotional burden on them. Noma elaborated,

"I also think members [correctional service officers] they need to be put in some [programme]. Much as we can say they are strong, we take our problems to them. I think that is also affecting them. A certain programme must be designed

for them…they are not trained to deal with our problems. They are not social workers, they are not psychiatrists so, it's sort of taking a toll on them."

Participants also suggested that correctional service officers should be involved in the screening of inmates for mental illness and subsequent referral for mental health services, as they had the most contact with inmates and a keen sense of who needed psychological referral. Noma added,

"I think they [correctional service officers] are the ones who can identify people who have got [mental health] problems."

1.3. Need for re-evaluation of current rehabilitation programmes

Most participants felt that correctional services needed to re-evaluate their current rehabilitation programmes. Alicia, a remand detainee, expressed anger and frustration since women who were awaiting trial were not offered any rehabilitation programmes,

"The biggest thing that [this prison] does, is say this is a place of rehabilitation. What rehabilitation? By putting us behind cells and teaching us discipline, is not rehabilitation…they just don't help us!"

Other women felt that the current programmes did not achieve their desired goals. Nokukhanya explained,

"There's a course that's called anger management. Maybe I did it thrice or fourth. It's not helping…I don't wanna lie, I have anger inside myself, but how to help it to come down, I still don't know, although I'm here for seven years. I still don't know."

Noma suggested that correctional services needed to re-evaluate their rehabilitative programmes, employ appropriate experts in the field or ex-offenders, and be cognisant of the women's traumatic backgrounds. She stated,

"I attended most of them [programmes]…but I sort of feel sometimes they are not talking to me directly…The people who are training us are not specialists…I think maybe if we can be trained by professional people and then the courses, the content of them can speak directly to us…Even if the person is not a

professional, if a person who has been an ex-offender who has done the same offence as mine, I think that person can relate better to me…Like you cannot tell me about the anger management once you have not been in a situation where you have been angered and ended up killing someone. I want someone like that, who I can relate to, who knows where I'm coming from."

2. Need for government and community interventions

2.1. Preventative efforts- protection of women from gender-based violence (GBV)

Women, particularly sex workers, felt very strongly that they needed protection by law enforcement agencies. Participants felt the police were often very judgmental towards them, blamed them for the sexual assaults they had been a victim of, and, in some cases, were even obstructive, since they deterred women from pursuing criminal cases against the perpetrators. This discouraged women from seeking help when they had been sexually violated. Mpumi stated,

"When you go to the police station, sometimes you have a really bad experience. Like the IO [investigating officer] that was in charge of my case in 2015, kept telling me to drop the case and that nothing would come of this case, and that I put myself in that situation because I was drinking with those guys. Why was I spending their money? Why was I drinking with them?"

Melissa echoed similar sentiments and felt that all women should be entitled to equal treatment, irrespective of their employment. She added that sex workers should not be victimised or ignored since they were particularly vulnerable to abuse by their clients, with no form of protection due to their work being an illegal form of employment. She reiterated that law enforcement needed to change their negative attitudes toward sex workers who had been violated,

"I feel that even a prostitute has rights because we're also women. So maybe they [police] should've done something differently to help the girls that have been in a situation like this. Because it's going to keep happening to girls around the world and they're not going to be able to get any help from the police. Something needs to change about that."

2.2. Mobilising support both inside and outside correctional facilities - education and awareness about mental illness and abuse

Participants felt that there was a lack of awareness about abuse and mental illness, by inmates and staff, and that this was a barrier to women accessing care. Noma stated,

> *"I don't think most of us are aware of depression because, amongst us, there are others who have even tried to commit suicide. I think they are suffering from depression…but they are not identified, secondly they are not aware that they have got depressive disorders. That's why they resort to trying to commit suicide."*

Didi shared her perspective and explained that more education, awareness and support for women was needed in their home communities as well. She intimated that women needed to understand the consequences of abuse, which included possible offending, as was her experience (she was incarcerated for the murder of her spouse). Didi pleaded,

> *"People need knowledge…there are no support groups in the rural areas…we need to have that support groups in the community. People…must learn about abuse and the result, because there is the end result. Because I am also the end result of abuse."*

3. Need for specific interventions in correctional services

3.1. Psychiatric treatments

Most women expressed a desperate need for psychiatric services in correctional facilities. Alicia stated,

> *"A doctor needs to come and make sure that we constantly have our medication. I've been to see the doctor twice and I've not seen the doctor and we have not gotten our medication. We need to get our medication…We need to see a psychiatrist…whether we're in yellow [remand detainees] or blue [sentenced offenders]."*

Mpumi agreed,

> *"I think that here in prison there are a lot of females that are battling with stuff like depression. There are a lot of females that are coming from really bad backgrounds."*

3.2. Psychological interventions

Women felt that they needed to psychologically "re-build" themselves after the abusive experiences they had endured during their lifetime. They also alluded to the fact that some inmates felt they were treated in a sub-human manner, and that their dignity was not respected, which further compounded the scars of the trauma they had endured prior to incarceration. Didi explained,

> *"If they can have the programmes that will help ourself to develop that self-esteem…to restore our value because we have lost our self-esteem, our dignity, our character as a woman…because if we are incarcerated you are just like, not a human being, you are just like an animal."*

In terms of the psychological impact, almost all the women stated that the most challenging aspect of being imprisoned was being away from their families. Many women were incarcerated far from their homes, because of the few female correctional centres compared to male correctional centres in SA. This impacted adversely on their mental wellbeing, as their families were unable to visit regularly and give them the support they needed. This was highlighted by Noma who was originally from the Eastern Cape province however, since there are no correctional centres for women serving life sentences in that province, she was transferred to this correctional centre in KZN province to serve her sentence. She explained,

> *"My family is in the Eastern Cape. So, for them to come here, they will need to drive for about four hours. My mother is old, so I don't get regular visits just like other inmates. So, that is also difficult."*

With regards to telephone calls, they were allowed only one telephone call, of not more than 10 minutes, per week. Women found this very challenging, particularly women

whose families lived far away, as this was the only form of communication they had with their families. Didi bemoaned,

> *"Because we are also limited, even to the phone calls. I have to phone five minutes…How can you contact your family for five minutes? It is hard to live in prison."*

Mothers, in particular, lamented the hardship of leaving behind their young children in the care of others, and not being able to fulfill their parental responsibilities. Some were unable to even disclose to their children that they were incarcerated. This was captured in the sentiments expressed by Lisa,

> *"The most difficult is obviously leaving my nine-year-old outside, especially for the fact that he doesn't know exactly where I am."*

The women worried about their children and how their incarceration was impacting on their children's mental wellbeing. Sibusisiwe explained,

> *"It's difficult. Most especially having left a child outside, being a mother and not knowing that how's your child doing, you're not there for your child, taking care of him, helping him with homework, so don't know who's helping…my parents are old and it's very difficult for them…they'll be sitting now with a teenager…I came here when he was eight years. He's now fourteen and there's lot of problems and he's getting to that adolescent stage."*

Some inmates were incarcerated for the murder of their spouses following long-standing abuse hence, their children were left without either parent following their incarceration. Despite these challenges, the women found innovative ways to fulfill their parental duties from "behind bars" via telephone calls or visits. Sibongile, who was an educator prior to incarceration, described,

> *"My daughter is very, very clever. If there is a project or anything she will just come with it at the visit. So I will take two hours, then I will just help her there at the visits with something that she needs."*

In addition, inmates are allowed very limited contact with their family and friends, and different types of visits are allowed depending on their current privilege status in the

correctional facility. Some were allowed non-contact visits through a window, while others were allowed physical contact visits. Mpumi described these challenges,

> *"My kids they wanna know when I'm coming back home and I don't have an answer for them so that's really hard…They don't come through visits because I don't have "A" group visits [higher privileged visit] yet, so I don't want them to see me through the window, and not be able to hug me."*

These experiences illustrate the women's need for counselling and/or therapy to address these challenges.

Participants suggested that group psychotherapy would be a suitable mode of treatment in view of the limited resources correctional facility had to offer. Noma suggested,

> *"Like grouping women who have been abused, grouping people who are not coping with their sentence, grouping people who are not adjusting to the prison environment, grouping people who are suffering from drugs, peer pressure, those kinds of groupings…And then a professional, a qualified professional must have at least, even if it's a group therapy session, because maybe one-on-one [therapy] can take a lot of time, but if you group people with the same problem, then you can make everybody feel free to talk. I think that can also help."*

3.3. Substance rehabilitation programmes

Many women expressed a desperate need for substance rehabilitation programmes, especially remand detainees. Melissa was awaiting trial on a charge of drug possession, and had been struggling with her addictions for many years. She was working as a sex worker to subsidise her drug habits, and described the dire and overwhelming need for drug rehabilitation services for remand detainees like her,

> *"Like rehab, rehab would've been a good idea here. Even for the awaiting trial, because a lot of girls are here for using. A lot. And it just keeps getting more and more. So many girls coming in for using drugs. So, rehab, number one."*

3.4. Skills development programmes

One of the issues highlighted by the inmates was that they desperately needed skills which could help them in securing employment after they were released. This would help relieve financial stressors thereby preventing recidivism due to financial need. Esther stated that the DCS needed to focus more on providing women with pragmatic skills that they could take back to their communities, so that they could gain employment. This would prevent them from resorting to substances and re-offending. She suggested,

> *"Give the people skills. Let them do welding, bricklaying whatever, plumbing, electricity that type of thing. Out there this is what we need. There is a lot of youth in here. A lot. They're going out, they're going back to drugs because their hands are idle. There is nothing for them to do out there. Go back to drugs, go back to prostitution."*

3.5. Adopting a culturally sensitive approach

In addition, some women felt that correctional services needed to be cognisant of the fact that engaging in psychotherapy was a foreign concept to women from the African culture, and this needed to be considered when designing interventions for African female inmates. Noma explained,

> *"You'll need to attend sessions where you will have to sit down and talk about your problems to a stranger, that is a problem. We don't trust too much as Africans. You cannot go and tell a stranger your problems. You'll rather go to the elders of your family. That's how we were raised. So, they don't understand how this whole, psychiatrist, psychologist process works."*

4. Post-release challenges

4.1. Need for continuity of care

Women spoke about the need for post-release after-care to help them successfully re-integrate into society and refrain from re-offending. Alicia, a recidivist, expressed how a lack of rehabilitation during incarceration and after release contributed to recidivism,

"So why do we come back? Because we just don't get any help! We don't get help on the inside and we certainly don't get help when we go back out."

Noma put forth a suggestion of what correctional services could do to address this need,

"Maybe when you're about to go home, then referral letters [should be done] so that, if, maybe a person has not finished the [rehabilitation] programme, the person can still continue with the programme from outside…It's important because some of them come here and then they go out, and then they come back with the same offence."

Mpumi stated that there was a need for programmes upon release especially to help heal families that were wounded by the periods of separation, as well as programmes that would help the community be more accepting of ex-offenders being re-integrated. She added,

"I think that government should also take an initiative to help people after they've been released, to have organisations that help women come back into society and be accepted into society…also have programmes that will be able to counsel them and their children, because being here, obviously it affects the relationship that you have with your family and with the community as a whole."

Esther contributed,

"Just to prepare somebody on going out there and saying, 'Okay these are the people that you contact. This is a psychiatrist you can go and see if you are going through a hard time.'"

4.2. Challenges of having a criminal record

Furthermore, women also expressed that having a criminal record made it extremely challenging for them to secure employment post-release. Esther, a recidivist, explained how their criminal records affected women after release,

"Having that label, that stigma on you as an incarcerated person. I think here we are short of [lacking] the communication from the time you leave and the outside world there…the help that you need on going back into that community

and getting a job. If you have a contact of somebody that will…take on incarcerated people…We are going back into society and I'm finding…there is no help…because there you are on your own again…So, there is no one to say, 'Okay look these are the people you can contact for work. These are the people, are prepared to take incarcerated people' Because now you are going out there, you are going for interviews. You find…they are checking your criminal record, you find…I didn't get it [the job] because of that."

5. Resilience and hope for the future: "My story will not end here"

5.1. Finding meaning and purpose in helping others

Despite the enormous challenges the women faced, many still remained hopeful for a better future and even expressed a desire to make a difference in the lives of others, both inside and outside of the correctional facility. Katlego elaborated,

"I would like to go home and back into my community a changed person, so I won't make the same mistakes again, and, maybe with me being changed, I can help someone else out there not to make the same mistakes I did, and prevent someone's life from going down the drain like mine has."

5.2. Furthering their education

Women spoke about continuing their own education while being incarcerated and continuing to educate and thus, empower other women, for example, through adult education and training (AET). Both Didi and Sibongile offered their services as teachers at the correctional facility, as they were both educators prior to incarceration. Didi explained,

"I am still teaching in [this prison]. I like teaching. It is my passion."

In terms of furthering her own education, even though she was elderly, she eloquently captured her resilient and tenacious spirit when she added,

"I have learned that I must study honours [degree] because my mind is not incarcerated, my body is incarcerated, my mind can be able to study, because my future will not end here."

5.3. Finding solace in spirituality

For some women their spiritual beliefs helped them to remain hopeful and persevere despite their poignant circumstances. Sibusisiwe shared,

"For me, what I see that works the most, what rehabilitates the most…having that connection with your Maker…it's the best of all."

Didi explained that she also found solace in spirituality which motivated her and helped her to accept her current circumstances,

"That is why through being in prison I have learned to love God so much…I have got time to do God's will, so that I have forgiveness, so that I have peace…God has got good plans to prosper me here in prison."

DISCUSSION

This study on female inmates, with a lifetime history of trauma and mental illness in a South African correctional centre, aimed to elicit recommendations from the inmates themselves on what correctional services could do, to assist them in addressing their mental health needs.

Female inmates identified several challenges that needed to be addressed, which included problems within correctional services, as well as needs pertaining to broader government and community interventions. Despite a constitution grounded in human rights with equal rights for women in SA,[5] gender inequity and GBV is prevalent. Patriarchy remains dominant in SA, with widespread violence against women.[20] While the South African government is making strides to curb this epidemic of GBV, by promulgating gender equity via the Constitution, and amending the current legislature, gender inequality must be addressed at all levels. This can be done by advocating for a change in attitudes towards gender inequity and gender-based violence (GBV) within the family system (by raising children with gender-neutral roles), in communities

and in society at large. At grass-roots level, this can be done by intervening at schools and other educational institutions which are responsible for teaching children fundamental life skills. These are potentially powerful organisations which can effect changes in children's developing mindsets and attitudes with regards to gender equality.[21] Furthermore, culture and tradition are often invoked to reinforce biases, stereotypes and unequal practices between sexes.[21] Discriminatory and stigmatising cultural practices that perpetuate gender inequality should also be addressed.

In an effort to decrease the rampant scourge of GBV, the South African National Assembly passed three GBV Bills in June 2021 to strengthen the legislature in response to GBV and make it more victim-centred.[22] In the context of intimate partner violence, Haffejee and colleagues recommended that counselling services and legal protection (presumably including protection orders) may be important in preventing women from coming into contact with the law.[23] In addition, there needs to be strengthening of community-based organisations (both governmental and non-governmental). Women who experience GBV need to be made aware of, and be provided with easier access to these support structures and resources.

Consistent with the accounts of women in our study, sex workers are amongst the most vulnerable women with respect to contracting HIV, due to the high levels of violence they experience.[24] A study in Soweto, Gauteng (SA) found that female sex workers experienced poly-victimisation with 53.8% experiencing sexual/physical violence by their intimate partners, 46.8% experiencing physical/sexual violence by clients and 18.5% by police.[25] Due to the continued criminalisation of prostitution, sex workers are deterred from reporting rapes and assaults.[24] This is compounded by the negative attitudes, and complicit illegal actions of law enforcement agents, who further perpetuate this cycle by discriminating against, and exploiting sex workers.[24,25] This often encourages further violence against them.

With respect to the correctional environment, many women emphasised that mental illness identification, care and treatment was neglected in this correctional facility. This was echoed in a Canadian study in which female prisoners emphasised that mental health and addictions were not prioritised in prison, despite prisoners expressing a strong desire to address the trauma they had suffered.[26] Dastile, in Gauteng, SA, also reported that women complained about poor health care in prison and that they

expressed frustration about the lack of rehabilitative programmes, including substance rehabilitation.[27] Additionally, women with shorter sentences were not eligible for rehabilitation programmes however, they re-offended more frequently resulting in multiple incarcerations. Remand detainees were found to have higher rates of substance use disorders than sentenced offenders as reported in phase one of this study.[3] Women with shorter sentences as well as remand detainees should be prioritised as a target group for rehabilitative services, including mental illness screening and care and substance rehabilitation services.

Artz in the Western Cape (SA), found that there were insufficient mental health care workers including psychologists in correctional services, and that this compromised the women's access to appropriate mental health services.[28] An earlier study at Pollsmoor correctional facility in the Western Cape, also reported on a shortage of medical personnel in correctional mental health services,[29] and this was echoed by participants in our study. In 2017, the Commission for Gender Equality conducted a qualitative study at three correctional centres in SA, namely Johannesburg, Pollsmoor and Bizzah Makhate female correctional centres.[30] They wanted to determine what the mental health care needs of female inmates in SA were, and to what extent the DCS was able to provide for their needs. Their findings revealed prevalent staff shortages across all centres, and they recommended that the DCS should increase the number of mental health care providers within each correctional centre so that female inmates' needs could be adequately addressed.[30] Hence, the failure of correctional services to prioritise mental health care services, including substance rehabilitation services, seems to be a long-standing national and international problem. This highlights the need for greater advocacy around these issues, which will hopefully ignite the transformation and action needed within correctional services.

Many women in this study felt strongly that current rehabilitation programmes did not speak to them and failed to address the issues they were confronted with. It is incumbent on correctional services to re-assess their current rehabilitative programmes by engaging directly with the inmates themselves on how to improve or extend current programmes being offered. Correctional services should consider adopting a more collaborative approach to rehabilitation, to facilitate more meaningful engagement with inmates.

Participants also recommended that correctional service officers were ideally suited for identification, screening and referral of inmates who exhibit symptoms of mental illness. Correctional service officers should thus, receive the necessary training to assist in identification, screening and referral of inmates with mental illnesses. This is in line with the recommendations of a systematic review on mental illnesses in forensic populations in Africa,[31] and the report by the Commission for Gender Equality in SA, which also emphasised an urgent need for the training of correctional service officials in order to effectively address the mental health needs of female inmates.[30] The participants' recommendation that staff members receive support due to the emotional burden related to the nature of their work should also be considered by the DCS.

Inmates reported the need for psychiatric, psychological and substance rehabilitative interventions during incarceration. Dastile's study reported on women's needs for programmes to regain their self-respect and sense of self which was destroyed through the trauma they had endured.[27] This was also echoed in the Canadian study where women spoke about how the trauma resulted in their loss of self-esteem, which needed to be addressed, as it resulted in substance abuse.[26] There is a need for women to gain insight into their maladaptive behaviours that is, the link between their past trauma and substance abuse. This could empower them to unlearn these maladaptive behaviours, and replace them with more constructive, healthy coping mechanisms. They will therefore be better equipped to cope with future stressors once they return to their communities, and it will also assist to prevent them from relapsing into substances.[32]

With respect to possible therapeutic approaches in the provision of psychological interventions for female inmates, correctional services need to be cognisant that trauma experiences affect a woman's perception of herself, others and her environment.[33] It affects her capacity to form healthy attachments and secure safe and trusting relationships.[33] It can also directly impact her ability or desire to engage with, and utilise psychosocial services.[33] Hence, mental health care providers who work with female inmates should receive education and training in the provision of care to previously traumatised women, in order to build trust and minimise the possibility of re-traumatising vulnerable inmates.[33] Correctional services staff must also be trained to deliver care within a trauma-informed framework. Much has been

written in the literature about prison practices, such as invasive body searches and the belittling attitudes of staff, which re-traumatise women, because they are inherently violations of the self and are evocative of past victimisation.[33] These practises need to be reviewed if correctional services is to successfully deliver trauma-informed care.

Due to the large number of inmates nationally and internationally, priority should be placed on identifying efficient, yet effective correctional-based psychological interventions.[34] Group psychotherapy remains a viable option for inmate rehabilitation.[34] Using a group therapy format to equip women with, interalia, healthy coping skills, would be pragmatic and cost-effective for correctional services to implement, and will likely result in decreased rates of recidivism.

Mothers in our study described that the most difficult aspect of incarceration was being separated from their minor children. Rule 64 of The United Nations Rules for the Treatment of Women Prisoners and Non-custodial Measures for Women Offenders (the Bangkok Rules) states that, “Non-custodial sentences for pregnant women and women with dependent children shall be preferred where possible and appropriate.”[7] Thus, criminal justice systems in SA should prioritise non-custodial sentences for pregnant women or women with minor children, particularly when they are convicted of non-violent crimes.

Furthermore, Rule 43 of the Bangkok Rules stipulates that, “Prison authorities shall encourage and, where possible, also facilitate visits to women prisoners as an important pre-requisite to ensuring their mental wellbeing and social reintegration.”[7] Research indicates the multiple beneficial effects of mothers receiving visits from their children during their sentence which include: visits can reduce trauma to the children due to the separation; visits can have a direct effect on the mother’s mental health; visits can help to maintain the mother-and-child bond; it can sustain the mother psychologically with the motivation to serve her sentence; and it can ultimately increase her chances of successful reintegration upon her release.[35] Hence, correctional services should try their best to encourage contact visits between children and their incarcerated mothers, and mothers should be incarcerated as close to home as possible. In cases, where visits are not possible due to women being incarcerated long distances away from home, allowing alternatives such as access to video-calls

will facilitate women maintaining contact with their children, and it will reduce the detrimental impact of a lack of visitation on their mental health.[36]

Some women expressed that seeking psychological and psychiatric interventions was an unfamiliar concept to people of African culture and this has to be acknowledged, and accommodated for, when designing rehabilitation programmes for African women. This has been described in the literature where African people defined their psychological problems in terms of their cultural beliefs and practices.[37] It also highlighted the contrast between how psychological problems are dealt with from an African traditional perspective (with respect to rituals) as opposed to the western perspective (which takes the form of psychotherapy).[37] Western practices, albeit evidence-based, are not in keeping with the African worldview.[38] Hence, such practices cannot be enforced on people of African culture as it will likely be met with a great deal of scepticism and resistance. Extant literature has reported that cultural sensitivity is increasingly being recognised as a way to increase the effectiveness of health promotion programmes universally.[39] Thus, correctional services must take cognisance of this if they are to engage meaningfully with inmates, and if rehabilitation programmes are to succeed.

In addition, although addressing women's mental health needs is a priority, it cannot be ignored that what women also need are skills that will enable them to find employment upon release. This would improve their overall mental health by reducing economic stressors,[40] and would also assist in decreasing recidivism.[41]

Participants also highlighted the need for post-release continuity of care to help women re-integrate into society and to prevent recidivism. Studies suggest that low self-esteem, trauma and depression in female inmates may result in destructive ideation which can trigger women to turn to substances.[32] Recognition and management of these issues for relapse prevention is crucial, particularly once women are released, to prevent them from cycling back into the prison system.[32] Referral to appropriate social service agencies, mental health and support groups must be offered to women on release from correctional services, as was expressed by the women in our study. This is in line with the conclusions of the Commission for Gender Equality, which also recommended that the DCS should strengthen their care and support system for inmates upon release into their communities, to ensure efficient re-

integration.[30] In addition, assisting women by aligning them with work opportunities from employers who are willing to take on women with criminal records, will help them overcome the additional stigma of having a criminal record. This stigma serves as a barrier to successfully securing employment and to re-integration post-incarceration.

Finally, despite the extensive trauma the women had endured, many retained a strong sense of hope regarding their future and expressed a desire to help others to prevent them from suffering a similar fate. This resilience and hope in the aftermath of complex lifetime trauma and current challenging circumstances, is very encouraging. This should be recognised by correctional services so that they may facilitate these women becoming beacons of hope and mentors for other inmates (particularly recent admissions to correctional services) as well as for other women in their communities upon their release.

Limitations

The study was based at one correctional centre in SA. Interviews were conducted in English thus, participants from phase one of the study who fulfilled the criteria for phase two but who were not fluent in English, were excluded from participating in phase two. Thirdly, most women who participated in the qualitative interviews were first language isiZulu speakers, so nuances in their narratives might have been missed, despite their fluency in English. The study also relied heavily on self-report and was thus vulnerable to exaggeration or misrepresentation.

CONCLUSION

Female inmates in this study identified limitations both within correctional services and in the greater governing and societal systems, which could more comprehensively address their complex mental health needs in the community, in correctional facilities and upon release. They described the challenges they experienced in correctional facilities, with mental health not being prioritised, and the urgent need for current rehabilitation programmes to be re-evaluated and made more inclusive of all inmates, not only medium and long-term sentenced offenders. They expressed the need for integrated, holistic psychiatric, psychological and substance rehabilitation

programmes. However, despite the multitude of challenges they encountered, they remained hopeful to improve their own lives and that of their fellow inmates. The provision of psychoeducation and psychotherapy might empower female inmates to develop a sense of agency and control over their own lives, as well as positively impact the lives of others. Hence, the period spent away from their children and families will not be in vain, and will result in constructive changes. In addition, upon release, skills learnt can be transferred to their communities of origin. Rehabilitative programmes that are specifically designed to address the needs of female inmates should be collaborative, holistic and culturally-sensitive. Programme development should be prioritised as it will likely have a positive impact on female inmates, their families, their communities of origin, correctional services (due to decreased rates of recidivism) and society at large.

REFERENCES

1. Naidoo S, Ferreira L, Paruk S, Subramaney U. Beaten, broken and behind bars: A story of female inmates with a lifetime history of trauma and mental illness in Durban, South Africa. Unpublished.
2. Naidoo S, Ferreira L, Subramaney U, Paruk S. An HIV narrative of female inmates with a lifetime history of mental illness in Durban, South Africa. Frontiers in Psychiatry. 2021 [cited 2021 Oct 20]. Available from https://doi.org/ 10.3389/fpsyt.2021.637387
3. Naidoo S, Subramaney U, Paruk S, Ferreira L. Mental illness and HIV among female inmates in Durban, South Africa. S Afr J Psychiatry. In press
4. Naidoo S, Paruk S, Subramaney U, Ferreira L. The association of cumulative adverse childhood experiences with mental illness, HIV and violent offending among female inmates in Durban, South Africa. Unpublished.
5. Department of Justice and Constitutional Development of South Africa. The Constitution of the Republic of South Africa [Internet]. South Africa. 1996 [cited 2020 Aug 20]. Available from https://www.justice.gov.za/legislation/constitution/saconstitution-web-eng.pdf

6. United Nations Office on Drugs and Crime. The United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules). Available from https://www.unodc.org/documents/justice-and-prison-reform/Nelson_Mandela_Rules-E-ebook.pdf [cited 201 Oct 10]
7. United Nations Office on Drugs and Crime. The United Nations Rules for the Treatment of Women Prisoners and Non-custodial Measures for Women Offenders (The Bangkok Rules) [Internet]. 2011 [cited 2021 Oct 01]. Available from https://www.unodc.org/documents/justice-and-prison-reform/Bangkok_Rules_ENG_22032015.pdf
8. South African Government. White paper on Corrections in South Africa [Internet]. Pretoria, Republic of South Africa. 2005 [cited 2021 May 21]. Available from https://www.gov.za/documents/white-paper-corrections-south-africa-27-may-2005-0000
9. Department of Correctional Services of South Africa. Correctional Services Act 111 of 1998 of South Africa [Internet]. 1998 [cited 2021 Aug 30]. Available from https://www.dcs.gov.za/documents/correctional-services-act
10. Department of Correctional Services of South Africa. Correctional programmes targeting offender behaviour [Internet]. Available from https://www.gov.za/sites/default/files/gcis_document/201409/correctionalprogrammestargetingoffending-behaviour.pdf
11. Department of Justice and Correctional Services of South Africa. Rehabilitation and re-integration programme challenges: Correctional Services Briefing [Internet]. Parliamentary Monitoring Group. 2014 [cited 2021 Nov 03]. Available at https://pmg.org.za/committee-meeting/17574/
12. Department of Correctional Services of South Africa. Department of Correctional Services Annual Performance Plan 2019/2020 [Internet]. 2020 [cited 2021 Oct 20] Available from http://www.dcs.gov.za/?page_id=665
13. Sorbello L, Eccleston L, Ward T, Jones R. Treatment needs of female offenders: A review. Australian psychologist. 2002;37(3):198-205.
14. Mertons DM. Transformative research and evaluation. 2009. New York. Guilford Press.

15. Creswell JW, Plano-Clark VL. Designing and Conducting Mixed methods Research. Los Angeles, CA: Sage Publications; 2011.

16. Manen MV. Researching lived experience: Human science for an action sensitive pedagogy. London and New York: Routledge Taylor and Francis Group. 1997.

17. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative Research in Psychology 2006; 3(2):77-101.

18. VERBI Software. MAXQDA 2020 [computer software]. Berlin, Germany: VERBI Software. 2020 [cited 2020 Oct 21]. Available at www.maxqda.com

19. Lincoln YS, Guba EG. Naturalistic Inquiry. 1985. Newbury Park, CA: Sage Publications

20. Jewkes R, Morrell R. Gender and sexuality: emerging perspectives from the heterosexual epidemic in South Africa and implications for HIV risk and prevention. J Int AIDS Soc. 2010;13:6

21. Jha A, Shah M. Leveraging Education as a Tool to Achieve Gender Equality-Strategies and Signposts. London School of Economics and Political Science. 2020 [cited 2021 Oct 10]. Available from https://blogs.lse.ac.uk/gender/2020/04/08/leveraging-education-as-a-tool-to-achieve-gender-equality-strategies-and-signposts/

22. Parliament of the Republic of South Africa. National Assembly passes Gender-based violence Bills and approves names of commissioners for the South African Human Rights Commission [Internet]. 2021 [cited 2021 oct 24]. Available from https://www.parliament.gov.za/press-releases/national-assembly-passes-gender-based-violence-bills-and-approves-names-commissioners-south-african-human-rights-commission.

23. Haffejee S, Vetten L, Greyling M. Exploring violence in the lives of women and girls incarcerated at three prisons in Gauteng Province, South Africa. Agenda. 2005;66:40-47.

24. Coetzee J, Jewkes R, Gray GE. Cross-sectional study of female sex workers in Soweto, South Africa: Factors associated with HIV infection. PLoS ONE. 2017;12(10) e0184775.

25. Coetzee J, Gray GE, Jewkes R. Prevalence and patterns of victimization and polyvictimization among female sex workers in Soweto, a South African township: a cross-sectional, respondent-driven sampling study. Glob Health Action. 2017;10(1):1403815.

26. Matheson FI, Brazil A, Doherty S, Forrester P. A Call for Help: Women Offender's Reflections on Trauma care. Women and Criminal Justice. 2015; 25:241-255.

27. Dastile, NP. Women's routes to crime and incarceration in South African correctional centres: implications for rehabilitation. Acta Criminologica: South African Journal of Criminology. 2014;27(1):1-12.

28. Artz L, Hoffman-Wanderer Y, Moult K. Hard times: Women's pathways to crime and incarceration. Cape Town: Gender, Health and Research Unit. University of Cape Town. 2012.

29. Gaum G, Hoffman S, Venter JH. Factors that influence adult recidivism: an exploratory study in Pollsmoor prison. S Afr J Psychol. 2006;36(2):407–24.

30. Mohlakoana-Motopi L, Selebano N, Bazola L, Motha. Raising Issues of Mental Health Care for Female Inmates in South Africa. Policy brief 20 [Internet]. Commission for Gender Equality. 2018 [cited 2021 Oct 28]. Available from http://cge.org.za/wp-content/uploads/2021/01/raising-issues-of-mental-health-care-for-female-inmates-in-south-africa.pdf

31. Lovett A, Kwon HR, Kidia K, Machando D, Crooks M, Fricchione G et al. Mental health of people detained within the justice system in Africa: systematic review and meta-analysis. Int J Ment Health Syst. 2019;13:31

32. Peters RH, Strozier AL, Murrin MR, Kearns WD. Treatment of substance-abusing jail inmates. Examination of gender differences. J Subst Abuse Treat. 1997;14(4):339-49.

33. Harris M, Fallot RD, eds. Using Trauma Theory to Design Service Systems. New Directions for Mental Health Services. San Francisco: Jossey-Bass. 2001.

34. Morgan RD, Kroner DG, Mills JF. Group Psychotherapy in Prison: Facilitating Change Inside the Walls. J Contemp Psychother. 2006;36:137-144

35. Rathmell M. Double punishment: The situation, challenges and adversities faced by mothers in prison around the world [Internet]. 2021 [cited 2021 Oct 22]. Available at https://www.penalreform.org/blog/double-punishment-the-situation-challenges-and-adversities-faced-by-mothers-in-prison-around-the-world/

36. Celinska K, Siegel JA. Mothers in Trouble: Coping With Actual or Pending Separation From Children due to Incarceration. The Prison Journal. 2010;90(4):447-474.

37. Juma JO. African worldviews: their impact on psychopathology and psychological counselling. UNISA Institutional Repository. 2011 [cited 2021 Sep 24]. Available from https://uir.unisa.ac.za/handle/10500/5760

38. Thabede D. The African worldview as the basis of practice in the helping professions. Social Work. 2008;44(3):233-45.

39. Sifunda S, Reddy PS, Braithwaite RB, Stephens T, Bhengu S, Ruiter RAC, et al. Social construction and cultural meanings of STI/HIV-related terminology among Nguni-speaking inmates and warders in four South African correctional facilities. Health Educ Res. 2007;22(6):805-14.

40. World Health Organization. Investing in mental health. 2003 [cited 2021 Sep 22]. Available from http://www.who.int/mental_health/media/investing_mnh.pdf.

41. Joiner MN. What is the Impact of Gender-responsive treatment on Women Offenders? [Internet]. College of Professional Studies Professional Projects. Paper 31. 2011 [cited 2021 Sep 22]. Available at http://epublications.marquette.edu/cgi/viewcontent.cgi?article=1026&context=cps_professional

CHAPTER EIGHT: DISCUSSION AND CONCLUSION

8.1. INTRODUCTION

Until recently, the mental health of female inmates was a neglected area of research, both locally and internationally.[228] Women's rights to gender-specific care is recognised in The United Nations Rules for the Treatment of Women Prisoners and Non-custodial Measures for Women Offenders" (also known as the Bangkok Rules).[19] This a set of 70 rules focused specifically on the treatment of female offenders and prisoners, and was adopted by the United Nations in 2010.[19] It is intended to supplement the United Nations Standard Minimum Rules for the Treatment of Prisoners (also known as the Mandela Rules)[14] by providing a guide to decision-makers including legislators, policy-makers, sentencing authorities and correctional officials to minimise the imprisonment of women, and to meet the specific needs of women in cases of eventual incarceration.[19] Gender responsive care refers to understanding that there are significant differences in the life experiences and characteristics of men and women who are in conflict with the law, and accommodating for this in the manner in which we address their needs in the criminal justice system.[229] Women's gender specific needs include a higher prevalence of mental disorders such as post-traumatic stress disorder and substance use disorders; higher rates of suicide and self-harming behaviours; and extensive histories of physical and sexual victimisation.[17] They also have specific physical health needs, for example reproductive health needs, and other needs related to women's care-taking responsibilities with respect to their families and particularly their children.[17]

There remains a dearth of research examining the mental health needs of female inmates in SA and on the African continent, even though almost 70% of the world's prisoners come from LMICs.[59] A systematic review on the mental health of people detained in the justice system in Africa found that despite the burden of mental disorders among forensic populations, research in Africa is grossly lacking.[91] In addition, the systematic review found that there was a dearth of qualitative data on forensic populations and there is a need to include the voices of inmates from LMICs in future forensic research.[91] It also concluded that there has been inadequate

development, or testing of, interventions to address the mental health needs among African forensic populations.[91]

Treatment and rehabilitation programmes in the DCS in SA should be evidence-based and consistent with women's gender specific needs. Research from high-income countries (HICs) cannot be extrapolated to SA or other LMICs due to socio-economic, cultural and other contextual differences.

The aim of this mixed methods sequential, explanatory study, which adopted a transformative framework, was to determine the mental health needs of female inmates in Durban, SA. South Africa has the largest HIV epidemic in the world,[45] and has unacceptably high levels of violent crime, including gender-based violence (GBV).[75] Both trauma and HIV have established associations with mental illness.[41-43] This highlighted the need for an investigation into mental illness, HIV and trauma and their inter-relationships, in this under-researched population. In addition, understanding the diverse cultural backgrounds of female inmates is crucial to understanding their narratives, since cultural beliefs play a pervasive role in the lives of African people, and affects their worldview.[157,158] Thus, firstly, the prevalence of mental illnesses, including AUDs, SUDs, BPD and ASPD, as well as HIV and lifetime trauma were measured in this population. Secondly, the associations between HIV and mental illness; trauma and mental illness; trauma and violent offending; and mental illness and violent offending were investigated. Finally, the qualitative component of this study aimed to provide a context for the quantitative findings, and aimed to give a voice to this marginalised and vulnerable population, by describing in-depth, the lived experiences of HIV, trauma and mental illness among female inmates from diverse cultural backgrounds.

8.2. DISCUSSION

Key findings from this study relating to mental illness, trauma, HIV and their inter-relationships are highlighted in this discussion. A substantial burden of mental illness was present among female inmates at this correctional centre in KZN, SA which included high lifetime prevalence rates of MDD, PTSD, AUD, SUD, BPD and HIV.[230] Some rates were higher than measured rates in the general South African population,[231] and were in keeping with the higher prevalence of mental illnesses

among inmate populations compared to the general population, in a systematic review of LMICs.[59] Higher rates of AUD and most SUDs (with the exception of sedative, hypnotics and anxiolytics) were reported among RDs compared to SOs in this study. This underscores the overwhelming need for substance rehabilitation programmes among RDs. However, currently, RDs are excluded from participating in any rehabilitation programmes. This represents a missed opportunity to provide these women with a port of entry into care, which would contribute to decreased rates of recidivism. This is particularly important since SUDs, among other factors including mental illness and personality disorders, have been associated with elevated rates of recidivism.[232] It is noteworthy that 32% of women in this study were recidivists.[230] The systematic review on forensic populations in Africa also found a high prevalence of SUDs in all settings including prisons and forensic mental health hospitals, thus, highlighting the overwhelming need for substance rehabilitation programmes in forensic populations.[91] The need for substance rehabilitation services was also highlighted by many women in the qualitative phase of this study.[233]

Inmates are a high-risk group for suicide.[234] Past suicidal ideation and attempts were very prevalent among the women in this study. This is an area of concern since South Africa's suicide rate exceeds the global average,[98] South Africa's suicide rate is currently 23.5 per 100 000 of the population, and it has the tenth highest suicide rate globally.[235] Suicide is also the leading cause of death in custody internationally.[98] Suicide rates within prison are substantially elevated compared to suicide rates in the general population, with one study across 12 countries reporting that male prisoners had a crude relative rate of suicide of at least three times higher than that of the general population.[236] A systematic review of risk factors for suicide in prisoners found that criminological and psychiatric risk factors are important. The most robust risk factors were, psychiatric (a previous attempted suicide, recent suicidal thoughts and current psychiatric diagnosis), environmental (being in a single cell) and criminal history (awaiting trial detainees, serving a life sentence, and a history of a violent index offence).[237] The WHO estimates that 40% of all deaths in South African correctional facilities are due to suicide, making suicide the leading cause of unnatural deaths among inmates.[238] Hence, suicide needs to be a targeted area of intervention in this population.

Although the mental health treatment gap was not directly measured in the quantitative phase of this study, the treatment gap may be inferred from the number of women diagnosed with a lifetime mental illness (90.4%) versus the number of women diagnosed with and/or treated for a mental illness previously (16.7%).[230] In further support of this, participants in the qualitative phase described the shortage of mental health care providers and services in the DCS.[233] This resulted in correctional service officers serving as surrogate therapists due to the overwhelming need for mental health care services. This treatment gap is likely to exist in other correctional centres in SA, since studies in the Cape and Gauteng province correctional centres in SA have reported similar staff shortages in mental health care provision.[30,31,239]

The HIV prevalence of female inmates was also measured in phase one.[230] The estimated overall HIV prevalence rate in SA is approximately 13%.[38] In the age group 15-49 years, an estimated 18,7% of the population is living with HIV.[38] KZN has the highest prevalence of HIV in SA, and in the world.[45] Studies have consistently shown a higher prevalence of HIV among women than men in SA, particularly in KZN.[240] More than 64% of women in the current study were found to be living with HIV,[230] which is consistent with a rate of 60% of women being HIV-infected in some rural communities in KZN.[45] Gender-based violence, women's low socio-economic status and cultural practices are some of the reasons that have been cited to account for this.[241] A review of HIV among prisoners in sub-Saharan Africa found prevalence rates ranging from 2.3% to 34.9%, which was almost always higher than that of the general population in the same country.[107] Although the findings in the current study are in keeping with the literature from sub-Saharan Africa with respect to prison populations having higher rates of HIV than the general population, the HIV prevalence of 64.3% is almost double the highest prevalence found in other sub-Saharan countries. This is a cause for concern and should be a focus of targeted interventions in this female inmate population. In addition, significant associations were found between HIV and mental illnesses such as PTSD and AUD. There is substantial variation in the rates of PTSD among PLWHA. However, the evidence suggests that the rate of PTSD among PLWHA is elevated.[242-245] A 2012 meta-analysis demonstrated highly disproportionate rates of trauma exposure and recent PTSD in HIV-infected women compared to the general population.[246] PLWHA and PTSD are less likely to adhere to their medication regimens and are less likely to practice safe sex, resulting in

negative health outcomes.[247] In addition, a 2019 systematic review found that PLWHA and AUD are also at a higher risk of unsafe sex practices, poor medication adherence and poor quality of life.[248] Although it did not reach the level of statistical significance, other non-significant trends observed in WLWH in the current study were depressive disorders, substance use disorders and psychotic disorders, which is consistent with the literature.[249] However, these apparent associations could have occurred by chance, and would therefore require a larger study to confirm.

Phase one of this study also investigated the prevalence of lifetime trauma in this population and the findings contributed to the emerging literature on adverse childhood experiences (ACEs) and its associations with mental illness among incarcerated female populations. This study found that female inmates in Durban, SA are a highly traumatised population, as evidenced by the elevated rates of childhood adversities compared to studies in the South African general population, and international studies on general populations as measured by the World Mental Health Survey across HICs and LMICs.[137] High rates of abuse in adulthood including physical, sexual and emotional abuse were also reported in the current study, in keeping with the elevated rates of GBV in South Africa.[33,34,250,251] With respect to adverse childhood experiences, the binary scores and frequency scores on the WHO ACE-IQ were elevated, confirming not just the presence of these adversities, but also their severity. The study also found a significant association between the cumulative effect of ACEs and mental illnesses such as PTSD, SUD, AUD and BPD. Thus, it highlighted the risk that cumulative ACEs impose on the mental health of female inmates, and adds support to the dose-response relationship between ACEs and mental illnesses, which is consistent with extant literature.[29] Notably, higher cumulative ACE scores have been associated with an increased risk of mortality at least 20 years earlier compared to individuals without ACEs.[252] Thus, the finding that the majority of women in the current study reported very high cumulative ACE scores is concerning, and this should be prioritised as an area for urgent intervention to prevent premature mortality. In addition, the study found a significant association between cumulative ACEs and HIV. ACEs may have an effect on sexual risk behaviours which increase the risk of sexually transmitted diseases such as HIV.[253] In addition, among PLWHA, trauma is associated with mental illnesses, poor quality of

life, poor medication adherence, faster disease progression and higher mortality rates.[254-260]

Quantitative studies often decontextualise experiences of trauma, mental illness and HIV, and fail to fully capture the impact of these experiences in the lives of female inmates. Hence, the aim of the qualitative phase was to extend beyond measuring the prevalence of these variables and to explore in-depth, the lived experiences of trauma, HIV and mental illness among female inmates, in a LMIC, African cultural setting. The qualitative phase of this study underscored the pervasive and enduring impact that trauma has on the lives of female inmates. The major themes that were developed with respect to trauma were: abuse was common; women endured many different types of abuse; they often suffered multiple traumas during their lifetime; abuse was experienced as a cycle which was difficult to escape; and the context in which the abuse occurred was described. They also narrated the lasting emotional, psychological, interpersonal and behavioural impact of the abuse. Quantitative research, such as the ACE study in the USA, found a dose-response relationship between childhood adversity and health risk behaviours, which may ultimately contribute to morbidity (including mental health disorders) and mortality.[29] Trauma findings from the second phase, as well as extant literature, provide the qualitative evidence for the quantitative research into the effect of cumulative trauma on mental health and related consequences (which in this study included offending) in female inmates.[261] Furthermore, this study highlighted the dominant social patriarchal system in SA which perpetuates gender inequality. It also emphasised certain cultural beliefs which further maintain this unrelenting cycle of abuse against women. The women reported that their experiences of trauma contributed to their development of mental illnesses including SUDs, as well as to their trajectories into crime. Their stories helped to expose ills in society, gaps in preventative and rehabilitative efforts, and highlighted a desperate need for healing.

The qualitative phase also situated another quantitative finding from the first phase of the study, that is, the high prevalence of HIV among female inmates, in a South African cultural context. It explored the impact of this illness on the lives of the women, both before and during incarceration.[262] Themes relating to contracting the virus were those of intimate partner betrayal, gender differences in sexual

behaviours, the fear associated with HIV and the importance of pre-and post-test counselling. The numerous challenges WLWH are confronted with, particularly in their communities of origin, were highlighted. These findings contrasted with the acceptance and support participants received in the correctional setting, and the positive influence this had on their psychological and treatment outcomes. The study also reinforced the need for continued HIV education in SA, to prevent the perpetuation of misconceptions, stigma and discrimination.[262] This will encourage disclosure and help to remove barriers to accessing treatment for PLWHA.[262]

In keeping with the transformative framework adopted in this study, and using a collaborative approach, the study sought to elicit from the women themselves, recommendations on how the DCS could improve the rehabilitation services currently offered, to address their complex mental health needs more comprehensively.[230] Female inmates identified gaps both within correctional services and in the greater system, that is, government and society as a whole, which could better address their extensive mental health needs. They described the challenges they experienced in the correctional facility with mental health not being prioritised, shortages of mental health care providers, and the urgent need for current rehabilitation programmes to be re-evaluated in order for them to be made more inclusive of all inmates, not only medium- and long-term sentenced offenders. They expressed the need for integrated holistic psychiatric, psychological and substance rehabilitation programmes. Group therapy was highlighted by the women as an efficient and pragmatic mode of therapy in an under-resourced environment such as correctional facilities. Upscaling skills development programmes which would assist the women in securing employment post-release, was also emphasised. This would aid in allaying economic pressure on women, which would assist in preventing recidivism. Participants also described the challenges they faced upon release, and the need for better continuity of care to prevent recidivism. Finally, they remained hopeful and eager to improve their own lives and that of their fellow inmates, in spite of their extensive trauma histories and current difficult circumstances. Incarceration thus presents an opportunity to address their desperate unmet mental health needs.

Underlying their painful narratives, was a dominant spirit of optimism, hope and triumph which the women retained, despite the multitude of stressors they faced

during their lifetime. Participants displayed resilience in the face of adversity, and the tenacity to overcome their current circumstances.

Encompassed in all their accounts, a pervasive and strong sense of ubuntu existed among inmates. Ubuntu, a term derived from the Nguni language, has complex meanings. The most common conception and understanding of ubuntu is humanity towards others.[263] Ubuntu is a worldview that emphasises collectiveness and interdependence.[264] It is sometimes translated as "I am because we are" or "I am because you are" and is used in a more philosophical manner to mean "a universal bond of sharing that connects all humanity." It was described by the late Archbishop Desmond Tutu, a prominent South African human rights activist and Nobel Peace prize laureate, as "My humanity is caught up, is inextricably bound up, in what is yours."[265] The women described a shared sense of responsibility for caring for each other and wanting what was best for themselves and for each other. This was evident in examples such as, women who had negative experiences when they received their HIV diagnosis (since they did not receive pre- and post-test counselling), who expressed the desire to be educated and trained to become HIV counsellors so that they could positively impact the lives of other inmates who received the diagnosis during incarceration. It was also manifest in the women supporting and encouraging each other to adhere to ART regimens, as well as assisting each other with food and other essential items if any of them were lacking.

8.3. CONCLUSION AND RECOMMENDATIONS

8.3.1. Implications for future research

There remains a hiatus in the literature on the mental health needs of female inmates in SA and other LMIC settings, particularly in Africa. It is recommended that further research be conducted on female inmates at other correctional centres nationally, to compare findings and to build an evidence base, which can inform future policy development and practice in correctional services in SA.

Future research should be inclusive of all inmates, that is, remand detainees and all categories of sentenced offenders. Planned future research should also include larger sample sizes since some trends (although they did not reach the level of statistical

significance) were found between HIV and mental illnesses such as depression, psychotic disorders and SUDs. Future studies should also employ a mixed methodology since the qualitative component allows for a deeper understanding of the lived experiences and the inter-relationships of these phenomena.

In addition, qualitative research in this area should include perspectives of correctional service officers and mental health care providers at correctional services, which was not included in this study. Their experiences of current services being offered and the inmates' needs should also be taken into account in future policy formulation. As was alluded to in our study, correctional service officers can play a crucial role in screening for, and identification of, those with mental health needs. Correctional service officers also carry a huge burden by serving as surrogate therapists and counsellors for female inmates and thus, their contribution would be vital.

Prospective researchers should also aim at the formulation of tools designed to screen for mental illness and trauma on admission to correctional facilities. Screening tools should be brief and easy to administer by correctional service officers, in order for them to be user-friendly and widely implemented nationally. Such instruments can be benchmarked against screening tools used internationally in HICs. However, these will have to be adapted to the needs of the South African population.

8.3.2. Implications for policy and practice in the DCS

The findings of this study underscore the critical need to improve mental health screening, treatment, care and rehabilitation services for female inmates in Durban, SA. The significant mental health treatment gap, which was inferred from the study, is likely to exist in other correctional centres in SA, and will need to be addressed if the DCS is to achieve optimal mental health outcomes and decreased rates of recidivism.

Mental health should be prioritised, both by the DCS and government, with greater investment, namely budgetary allocations, to enable better provision of services. This would entail, inter alia, increasing the number of mental health care providers including psychiatrists, psychologists, social workers and other allied disciplines to increase the

ratio of mental health care workers to inmates. This will ensure adequate service provision to address the extensive mental health needs of this population.

Screening for, and identification of, mental illnesses should ideally be conducted on admission to, and discharge from, correctional services. Instruments to screen for mental illness and trauma need to be designed for the South African inmate population.

Staff training, particularly correctional services officers, with regards to initial thorough screening on admission to correctional services, as well as identification and referral of inmates exhibiting mental health symptoms during incarceration, is vital. The majority of women in this study reported suffering from lifetime trauma in phase one, and described the impact trauma had on their development of mental illnesses and trajectories into crime in phase two. Hence, training of correctional staff to deliver mental health care services within a trauma-informed framework is also crucial. Ideally, this should also entail the DCS reviewing policies which re-traumatise women.

Furthermore, understanding the cultural background of female inmates is pivotal to facilitating meaningful engagement with, and providing appropriate care for them. All interventions must take cognisance of the fact that a large proportion of women in correctional services subscribe to the African culture, and that their cultural beliefs play a significant role in their lives. Thus, all rehabilitation programmes should to be implemented within a culturally-informed and acceptable framework to facilitate maximum engagement with inmates.

Due to the high prevalence of, and associations between mental illnesses (including AUD, SUDs and BPD), HIV and trauma, integrated mental health rehabilitation programmes, which are inclusive of substance rehabilitation, trauma-focused care and HIV, should be formulated and implemented in the DCS.

Individualised programmes should be tailored to meet the needs of inmates, with ongoing monitoring during incarceration. Treatments should be holistic, biopsychosocial and multi-disciplinary. The focus should not be limited to pharmacological therapies, as this is only one arm of the multi-pronged approach to the integrated management of mental illnesses, SUDs, trauma and HIV. While biological treatments such as anti-retroviral medication (which is the mainstay in the fight against the spread of HIV) and psychotropic medications (for the treatment of

mental illnesses) are important components of management, psychosocial therapies are also fundamental to providing comprehensive mental health care, in order to improve physical and mental health outcomes. Effective psychological treatments have been reported for incarcerated populations in HICs[93] and some might be transferable, with cultural adaptation, to resource-constrained settings like SA.

Providing health literacy programmes to female inmates in the form of psychoeducation, on diverse issues pertaining to their mental health such as HIV/AIDS (with regards to the aetiology, transmission and treatment modalities available), trauma and substance abuse, is imperative. In addition to providing psychoeducation about HIV, WLWH should be trained to provide HIV counselling and care to others.

Furthermore, providing female inmates with group psychotherapy (within an ethically sound context), to address issues of mental illness, SUDs, trauma and HIV is a pragmatic mode of therapy in a resource-constrained setting such as correctional services. This will enable them to develop insight into their behaviour, and will hopefully result in contemplation of change. It will also provide female inmates with a sense of agency and control over their lives and their future. Psychotherapeutic interventions should also focus on enhancing women's strengths, for example highlighting their resilience in the face of adversity. Focusing on their strengths should be done in conjunction with helping them to develop better coping skills. This will provide a strong foundation for inmates to fall back on, when they eventually terminate the use of psychosocial services.[266] The ultimate goal would be to facilitate peer-led support groups (within an ethically sound context) which women can be taught to conduct, over the extended period of time that they are incarcerated. These skills can then be transferred to their communities of origin upon release, and will serve as networks of support for WLWH, women experiencing GBV and women suffering from mental illnesses, including SUDs.

The DCS should also adopt a more collaborative approach in the rehabilitation of female inmates by engaging with inmates regarding the evaluation of current rehabilitation programmes, so that they can improve upon, or extend current services offered. Experts in the field as well as ex-offenders should be included in the provision of mental health rehabilitation programmes. Ex-offenders, who inmates can identify

with, and who can serve as mentors or role models of successful re-integration into society, should be considered as facilitators.

The high levels of crime and recidivism in SA are areas of great concern. There is sufficient evidence to show that inmates with SUDs re-offend at a higher rate than inmates without SUDs, and inmates with both mental illness and SUDs recidivate at an even higher rate.[267] Hence, directing intervention efforts at this high-risk group will help to mitigate factors associated with recidivism. Both remand detainees and sentenced offenders (short and medium term) should be included in substance rehabilitation programmes.

The social realities of women in SA, and the impact this has on their trajectories into crime, cannot be ignored. High levels of unemployment and poverty are prevalent in SA,[38] therefore, upscaling current skills development programmes, to enable women to increase their chances of securing employment post-release, is crucial. This will help to prevent recidivism due to financial need, and should be a focus in the services offered by the DCS. Research has shown that participating in vocational, educational, and substance abuse programming during incarceration decreases the chances of re-offending.[18]

In keeping with the Bangkok Rules,[19] attempts should be made by the criminal justice system to prevent women, particularly mothers, from being detained in custodial settings. This would help to decrease the female inmate population and enable better service provision for those that do eventually require custodial care. This can be achieved by, interalia, diversion programmes and community sentences specifically for mothers who commit non-violent crimes.

Special consideration for mothers with minor children to allow them more access to their children will enable them to parent better, and help prevent this from being a further stressor during incarceration. Mothers need to be incarcerated as close to home as possible to increase contact opportunities with their children. Facilitating innovative and adaptive opportunities for mothers to connect with their children such as via video calls, in cases where women do not qualify for contact visits or for those whose families are unable to visit due to long distances, will help to bridge this gap, and will positively impact both the women's and children's mental health.

It is crucial that interventions offered must be done in a coordinated manner, and services designed for women must be user-friendly and accessible so that they support women as they transition from one system to the next. Prior to discharge from correctional services, inmates should be re-assessed and their need for follow-up care should be determined. Strict follow-up plans should be ensured as part of the parole stipulations. Liaison with, and referral to, community-based mental health organisations should be instituted prior to release so that inmates are not lost to follow-up. These community-based mental health organisations will also serve as support networks for women should they be confronted with mental health issues, or other challenges while on parole, or when they are released unconditionally into the community. This will prevent them from resorting to substances as a coping mechanism, re-offending and recycling back into the correctional system.

Although incarceration represents an unwelcome period of deprivation of an individual's freedom and autonomy, and is fraught with a multitude of challenges, attempts should be made during this time to rehabilitate inmates optimally and comprehensively. If correctional centres can be transformed into institutions in which health literacy and other related work such as mental health treatments and substance rehabilitation programmes can be provided, enormous strides can be made during incarceration.

8.3.3. What can society do to improve the status quo for female inmates?

Continued awareness and education interventions about mental illness, abuse and HIV to eradicate, or at least reduce stigma, misconceptions and discrimination (including self-stigma) are greatly needed in communities in SA. Gender based violence and HIV are driven by gender inequity and are linked to the dominant patriarchal system in SA. This needs to be addressed at all levels, not only by the legislature, the Constitution and government but also by individuals, communities and society. This includes but is not limited to, starting at grassroots level with respect to the way children are raised. In the family system, the importance of gender equality needs to be inculcated in children and households, and this should be reinforced in the educational system**.** Society needs to ensure that gender inequality, which is a

major contributing factor to GBV and HIV, is not tolerated in any way or form in the home, work or social environments.

There needs to be greater collaboration between government, non-governmental organisations and the private sector to provide holistic care to female inmates both within correctional services, and when they are released back into communities. Actively engaging the assistance of more faith-based organisations, community-based rehabilitation services, private mental health practitioners, and other relevant care providers to volunteer their services and assist in the rehabilitation of female inmates is needed due to current resource constraints within correctional services and government.

In keeping with the transformative framework adopted by this study, these research findings are being presented at academic conferences locally and internationally. Publications emanating from this doctoral study will assist in creating an awareness of the needs of this marginalised, vulnerable and under-researched population. The three unpublished manuscripts will be submitted for publication shortly after thesis submission. Publications will hopefully serve as an evidence base for future research nationally and internationally. In addition, findings will be forwarded and presented to major stakeholders including the DCS to inform them about the mental health needs and challenges of female inmates, and to make recommendations for future policy development.

There is a need for coordinated and unified advocacy for the recognition of, and integrated, comprehensive management of mental illnesses, trauma and HIV among female inmates both within, and outside of the DCS. For far too long this population has been “hidden away” and ignored by society. Such transformation will require a genuine and lasting commitment from multiple stake-holders including politicians and legislators, officials in the entire criminal justice system (with regards to gender sensitivity awareness and training) and lastly, society. These reforms will not only benefit inmates, but society as a whole because of the revolving door effect, that is, inmates cycling into and out of correctional facilities.

Nelson Mandela, the late iconic African leader and ex-South African President, who spent more than 27 years in correctional facilities for his human rights activism stated, “It is said that no one truly knows a nation until one has been inside its jails. A nation

should not be judged by how it treats its highest citizens, but its lowest citizens."[14] This sentiment resonates with the aim and findings of this study.

Finally, this thesis is concluded with feedback unexpectedly received from an inmate who participated in both phases of the study. This feedback was received almost two years after the data collection was completed. It highlights the impact the research (which was not an intervention) had on incarcerated females. This correspondence was received after the inmate had been released, and gives some indication of how desperately female inmates seek and appreciate any form of intervention to address their mental health needs. It also illustrates how these interventions could improve their mental health outcomes and trajectories post-incarceration. It reads as follows:

"Good morning

Hope you are well...just found your contact details and thought I would just say hi...my baby and I were released in April 2020 and are at home with his big brother, happy and blessed.

Thank you for your program it helped to resolve some of my past queries and helped to motivate me for my future.

P.S. Keep up the good work...it is not in vain"

8.4. REFLECTIONS ON MY PHD JOURNEY

This PhD study has been an intense and arduous journey. Data collection was conducted in a province, 600 kilometres away from my home, as this was an under-researched province. This translated into spending three months away from my children and family which was physically, emotionally and financially challenging.

I spent over three months engaging with the women inmates, and in many ways, I felt privileged to be privy to their narratives, some of which they had not shared with anyone before. Many women also expressed how cathartic the interviews were for them despite no intervention being offered during the research process.

During the three months I spent with the female inmates, I experienced moments of helplessness and empathy for their current predicaments. At times I was also overwhelmed by their narratives, and by the tragic circumstances of their lives. In addition, working in the DCS environment over the three month period proved to be a challenging experience.

Being a female researcher was however an advantage in this setting. Participants felt they could engage with, and share their experiences and vulnerabilities with a female researcher. I displayed empathy and warmth in my approach during the interviews, which was comforting to the participants, and encouraged further disclosures. I felt immense sadness on listening to the numerous accounts of women being violated, and abused. I felt the need to give a voice to the women's silenced traumatic experiences. This motivated me to complete the formidable task of writing up the women's experiences in the form of multiple manuscripts. It also spurred me on to publish and present papers on national and international platforms so that their stories would not go untold.

Overall, the entire PhD experience has been very stressful but rewarding. It has now capacitated me to assist others in embarking on this mammoth journey. It has also inspired me to pursue work with female inmates, as well as to engage in advocacy work for this marginalised population.

REFERENCES

1. World Health Organisation. Mental health: Strengthening our response. World Health Organisation. 2018 [cited 2021 Oct 10]. Available from https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response
2. U.S. Department of Health & Human Services. What is Mental Health? [Internet]. Washington. 2020 May 28 [cited 2021 Oct 10]. Available from https://www.mentalhealth.gov/basics/what-is-mental-health
3. Ohrberger J, Fichera E, Sutton M. The relationship between physical and mental health: A mediation analysis. Soc Sci Med. 2017;195:42-49.
4. Fazel S, Danesh J. Serious mental disorders in 23000 prisoners: a systematic review of 62 surveys. Lancet. 2002;359(9306):545-50.
5. Fazel S, Seewald K. Severe mental illness in 33588 prisoners worldwide: a systematic review and meta-regression analysis. Br J Psychiatry. 2012;200(5):364-73.
6. Baranyi G, Cassidy M, Fazel S, Priebe S, Mundt AP. Prevalence of Posttraumatic Stress Disorder in Prisoners. Epidemiol Rev. 2018;40(1):134–45.
7. Mundt AP, Baranyi G, Gabrysch C, Fazel S. Substance use during imprisonment in low- and middle-income countries. Epidemiol Rev 2018;40(1):70–81.
8. Moloney KP, Moller LF. Good practice for mental health programming for women in prison: Reframing the parameters. Public Health. 2009;123(6):431-3.
9. Almanzar S, Katz CL, Harry B. Treatment of mentally ill offenders in nine developing Latin American countries. J Am Acad Psychiatry Law. 2015; 43(3):340–9.
10. Fazel S, Hayes AJ, Bartellas K, Clerici M, Trestman R. Mental health

of prisoners: prevalence, adverse outcomes, and interventions. Lancet Psychiatry. 2016;3(9):871–81

11. Jack HE, Fricchione G, Chibanda D, Thornicroft G, Machando D, Kidia K. Mental health of incarcerated people: a global call to action. Lancet Psychiatry. 2018;5(5):391–2.
12. Department of Justice and Constitutional Development of South Africa. The Constitution of the Republic of South Africa [Internet]. South Africa. 1996 Oct 11 [cited 2020 Aug 20]. Available from https://www.justice.gov.za/legislation/constitution/saconstitution-web-eng.pdf
13. United Nations. Universal Declaration of Human Rights [Internet]. Available from https://www.un.org/en/about-us/universal-declaration-of-human-rights [cited 2020 Aug 08]
14. United Nations Office on Drugs and Crime. The United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules). Available from https://www.unodc.org/documents/justice-and-prison-reform/Nelson_Mandela_Rules-E-ebook.pdf [cited 201 Oct 10]
15. Walmsley R. World female Imprisonment List Fourth edition [Internet]. Institute for Crime and Justice Policy Research. Available from https://www.prisonstudies.org/sites/default/files/resources/downloads/world_female_prison_4th_edn_v4_web.pdf [cited 2021 Mar 2]
16. Institute for Crime and Justice Policy Research, Birbeck College, University of London. World Prison Brief Data [Internet]. 2020 [cited 2021 Mar 12]. Available from https://www.prisonstudies.org/world-prison-brief
17. World Health Organisation. Women's Health in Prison: Correcting Gender Inequity in Prison Health [Internet]. Copenhagen. 2009 [cited 2020 Oct 12]. Available from https://www.euro.who.int/en/health-topics/health-determinants/prisons-and-health/publications/2009/womens-health-in-prison.-correcting-gender-inequity-in-prison-health
18. Joiner MN. What is the Impact of Gender-responsive treatment on Women Offenders? [Internet]. Wisconsin: Marquette University. 2011 [cited 2021 Sept 10]. Available at

http://epublications.marquette.edu/cgi/viewcontent.cgi?article=1026&context=cps_professional

19. United Nations Office on Drugs and Crime. The United Nations Rules for the Treatment of Women Prisoners and Non-custodial Measures for Women Offenders (The Bangkok Rules) [Internet]. 2011 [cited 2021 Oct 01]. Available from https://www.unodc.org/documents/justice-and-prison-reform/Bangkok_Rules_ENG_22032015.pdf
20. Bloom B, Owen B, Covington S. Women offenders and the gendered effects of public policy. Review of Policy Research. 2004;21(1):31-48
21. Equal Justice Initiative. Incarceration of Women is Growing Twice as Fast as that of Men [Internet]. Montgomery, AL. 2018 Nov 05 [cited 2021 Oct 2]. Available from https://eji.org/news/female-incarceration-growing-twice-as-fast-as-male-incarceration/
22. Celinska K, Siegel JA. Mothers in Trouble: Coping with actual or pending separation from children due to incarceration. The Prison Journal. 2010;90(4):447-74.
23. Bloom BE, Covington SS. Addressing the Mental Health Needs of Women Offenders: Women's Health Issues Across the Criminal Justice System. 2008 [cited 2020 Aug 21]. Available from https://www.researchgate.net/publication/347943244_Addressing_the_Mental_Health_Needs_of_Women_Offenders
24. Messina N, Burdon W, Hagopian G, Prendergast M. Predictors of prison-based treatment outcomes: A comparison of men and women participants. Am J Drug Alcohol Abuse. 2006;32(1):7-28.
25. Tripodi SJ, Pettus-Davis C. Histories of Childhood Victimization and Subsequent Mental Health Problems, Substance Use, and Sexual Victimization for a Sample of Incarcerated Women in the US. Int J Law Psychiatry. 2013;36(1):30–40.
26. Matheson FI, Brazil A, Doherty S, Forrester P. A Call for Help: Women Offender's Reflections on Trauma care. Women and Criminal Justice. 2015; 25:241-55.

27. Belknap J. The invisible woman: Gender, crime, and justice. Belmont, CA:Wadsworth. 2001.

28. DeHart DD. Pathways to Prison: impact of victimization in the lives of incarcerated women. Violence against Women. 2008;14(12):1362-81.

29. Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, et al. Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences Study. Am J Prev Med. 1998;14(4):245-58.

30. Dastile NP. Women's routes to crime and incarceration in South African correctional centres: implications for rehabilitation. Acta Criminol: S Afr J Criminol. 2014;27(1):1-12.

31. Artz L, Hoffman-Wanderer Y, Moult K. Hard times: Women's pathways to crime and incarceration [Internet]. Cape Town: Gender, Health and Research Unit. University of Cape Town. 2012 [cited 2020 May 15]. Available from http://www.ghjru.uct.ac.za/sites/default/files/image_tool/images/242/documents/hard_times.pdf

32. Nagdee, M, Artz L, Corral C, Heath A, Subramaney U, De Clerq HG, et al. The psycho-social and clinical profile of women referred for psycho-legal evaluation to forensic mental health units in South Africa. S Afr J Psychiatr. 2019;25:1230.

33. Safer Spaces. Gender-based violence in South Africa [Internet]. 2021 [cited 2021 Oct 20]. Available from https://www.saferspaces.org.za/understand/entry/gender-based-violence-in-south-africa

34. World Population Review. Rape Statistics by Country 2021 [Internet]. 2021 [cited 2021 Oct 20] Available from https://worldpopulationreview.com/country-rankings/rape-statistics-by-country

35. Parliament of the Republic of South Africa. National Assembly passes Gender-based violence Bills and approves names of commissioners for the South African Human Rights Commission [Internet]. 2021 [cited 2021 Sep 10]. Available from https://www.parliament.gov.za/press-releases/national-

assembly-passes-gender-based-violence-bills-and-approves-names-commissioners-south-african-human-rights-commission

36. Moloney KP, van den Bergh BJ, Moller LF. 2009. Women in prisons: The central issues of gender characteristics and trauma history. Public Health. 2009;123(6):426-30.

37. World Health Organisation. HIV/AIDS [Internet]. 2021 [cited 2020 Jul 28]. Available from https://www.who.int/news-room/fact-sheets/detail/hiv-aids

38. Stats SA. Midyear Population estimates 2021 [Internet]. Pretoria, SA: Department of Statistics South Africa. 2021 [cited 2021 Aug 28]. Available from http://www.statssa.gov.za/publications/P0302/P03022021.pdf

39. UN AIDS. Aids Info [Internet]. 2020 [cited 2020 Mar 28] Available from https://aidsinfo.unaids.org/

40. Dolan K, Wirtz AL, Moazen B, Ndeffo-mbah M, Galvani A, Kinner SA, et al. Global burden of HIV, viral hepatitis and tuberculosis in prisoners and detainees. Lancet. 2016;388(10049):1089-1102.

41. Ciesla JA, Roberts JE. Meta-analysis of the relationship between HIV infection and risk for depressive disorders. Am J Psychiatry. 2001;158(5):725-30.

42. Spudich S, Gonzálex-Scarano F. HIV-1-related central nervous system disease: current issues in pathogenesis, diagnosis and treatment. Cold Spring Harb Perspect Med. 2012;2(6):a007120.

43. Minager A, Commins D, Alexander JS, Hoque R, Chiappelli F, Singer EJ, et al. NeuroAids: Characteristics and diagnosis of the neurological complications of AIDS. Mol Diagn Ther. 2008;12(1):25-43.

44. Zuma K, Manzini K, Mohlabane N. HIV epidemic in SA: A comparison of HIV epidemic patterns of two extreme provinces in South Africa. Health SA Gesondheid. [Internet]. 2014 [cited 2021 Jul 6]. Available from https://hsag.co.za/index.php/hsag/article/view/716.

45. Epicentre Health Research. HIV Incidence Provincial Surveillance System (HIPPS). A longitudinal study to monitor HIV prevalence and incidence trends

in KwaZulu-Natal, South Africa. Report on the baseline findings June 2018. South Africa. 2018.

46. Essien ED. Notions of healing and transcendence in the trajectory of African traditional religion: Paradigm and strategies. Int Rev Miss. 2013;102(2):236–48.

47. South African History Online. African Traditional Religion. [Internet]. 2019 [cited 2022 Jul 15]. Available from https://www.sahistory.org.za/article/african-traditional-religion

48. Penal Reform International. Women in Prison: incarcerated in a man's world. Penal Reform Briefing no. 3[Internet]. 2008 [cited 2021 Sep 10]. Available from https://cdn.penalreform.org/wp-content/uploads/2013/06/brf-03-2008-women-in-prison-en.pdf.

49. Forsythe L, Gaffney A. Mental disorder prevalence at the gateway to the criminal justice system. Trends & Issues in Crime and Criminal Justice. 2012;438:1-8.

50. Prinsloo J, Hesselink A. A quantitative analysis of female crime trends in Gauteng, South Africa. Acta Criminol: Afr J Criminol & Victimol. 2015;28(1):67-76.

51. Steyn F, Hall B. Depression, Anxiety and Stress among incarcerated female offenders. Acta Criminol: S Afr J Criminol. 2015; special edition 1:82-100.

52. Hesselink A, Mostert W. Female economic offenders: A literature overview and case analysis. Acta Criminol: S Afr J Criminol. 2014; special edition 2:36-49.

53. Department of Correctional Services of South Africa. Correctional Services Act 111 of 1998 of South Africa [Internet]. 1998 [cited 2021 Aug 30]. Available from https://www.dcs.gov.za/documents/correctional-services-act

54. National Institute of Justice. Recidivism [Internet]. Washington: US Department of Justice. Available from https://nij.ojp.gov/topics/corrections/recidivism [cited 2020 Sept 1]

55. National Institute of Justice. Violent crime [Internet]. Oxford University Press. 2017 [cited 2021 Jul 10]. Available from https://nij.ojp.gov/topics/crimes/violent-crime

56. Rosenfeld R. Violent crime [Internet]. Oxford University Press. 2017 [cited 2021 Jul 10]. Available from https://www.oxfordbibliographies.com/view/document/obo-9780195396607/obo-9780195396607-0001.xml

57. Daly K. 1993. Women's pathways to felony court: feminist theories of lawbreaking and problems of representation. S Cal Rev Law & Women's Stud. 1992;2(1):11-52.

58. Prison Insider. Global Prison Trends Report 2020 [Internet]. Penal Reform International. 2020 [cited 2021 Oct 10] Available from https://www.prison-insider.com/en/articles/global-prison-trends-2020

59. Baranyi G, Scholl C, Fazel S, Patel V, Priebe S, Mundt AP. Severe mental illness and substance use disorders in prisoners in low-income and middle-income countries: a systematic review and meta-analysis of prevalence studies. Lancet Glob Health. 2019;7(4):e461–71.

60. Geldenhuys, K. Overcrowded prisons- An unofficial death sentence? Servamus. 2017;110(4):14-21.

61. Khumalo V. Lists of female prisons in South Africa [Internet]. South Africa Lists. 2021 [cited 2021 Sep 10]. Available from https://southafricalists.com/female-prisons-in-south-africa/

62. Jali TSB. Commission of Inquiry into Alleged Incidents of Corruption, Maladministration, Violence or Intimidation, at The Department of Correctional Services, as Appointed by Order of The President of The Republic of South Africa in Terms of Proclamation No. 135 Of 2001, as Amended ("the Jali Commission") [Internet]. Pretoria. 2005 [cited 2021 Oct 20]. Available at: http://pmg-assets.s3-website-eu-west-1.amazonaws.com/docs/061016jalireport_0.pdf

63. Makou G, Skosana I, Hopkins R. Factsheet: The state of South Africa's prisons [Internet]. Africacheck. 2017 [cited 2020 May 3]. Available from

https://africacheck.org/fact-checks/factsheets/factsheet-state-south-africas-prisons

64. South African Government. White Paper on Corrections in South Africa. Pretoria, Republic of South Africa. 2005 [cited 2020 Aug 16]. Available from https://www.gov.za/documents/white-paper-corrections-south-africa-27-may-2005-0000

65. Prison Insider. Prisons in South Africa. Penal Reform International. 2017 [cited 2021 Oct 20]. Available from https://www.prison-insider.com/countryprofile/prisonsinsouthafrica

66. Jules-Macquet, R. The State of South African Prisons [Internet]. National Institute for Crime Prevention and the Reintegration of Offenders Public Education Series, Edition one. 2014 [cited 2021 Oct 20]. Available from http://press.nicro.org.za/images/PDF/Public-Education-Paper-The-State-of-South-African-Prisons-2014.pdf

67. Jules-Marquet R. Exploring female offender profiles and social reintegration service delivery [Internet]. National Institute for Crime Prevention and the Reintegration of Offenders. 2016 [cited 2021 Aug 16]. Available from http://press.nicro.org.za/images/PDF/Exploring-Female-Offender-Trends-and-Dynamics.pdf

68. Geldenhuys K. When mommy goes to prison. Servamus. 2015;108(8):24-8.

69. Kjellstrand JM, Eddy JM. Parental Incarceration During Childhood, Family Context, and Youth Problem Behavior across Adolescence. J Offender Rehabil. 2011;50(1):18-36.

70. Savage L. Female offenders in Canada, 2017. Statistics Canada. 2019 [cited 2021 Oct 28]. Available from https://www150.statcan.gc.ca/n1/pub/85-002-x/2019001/article/00001-eng.htm

71. Rossegger A, Wetli N, Urbaniok F, Elbert T, Cortoni F, Endrass J. Women convicted for violent offenses: Adverse childhood experiences, low level of education and poor mental health. BMC Psychiatry. 2009;9:81.

72. Van Dieten M, Jones J, Rondon M. Working with Women Who Perpetrate Violence: A Practice Guide [Internet]. National Resource Center on Justice Involved Women. 2014 [cited 2021 Sep 8]. Available from https://cjinvolvedwomen.org/wp-content/uploads/2015/09/Working-With-Women-Who-Perpetrate-Violence-A-Practice-Guide6-23.pdf

73. Department of Justice and Correctional Services of South Africa. Rehabilitation and re-integration programme challenges: Correctional Services Briefing [Internet]. Parliamentary Monitoring Group. 2014 [cited 2021 Nov 03]. Available at https://pmg.org.za/committee-meeting/17574/

74. Department of Correctional Services of South Africa. Correctional programmes targeting offender behaviour [Internet]. Available from https://www.gov.za/sites/default/files/gcis_document/201409/correctionalprogrammestargetingoffending-behaviour.pdf

75. Department of Correctional Services of South Africa. Department of Correctional Services Annual Performance Plan 2019/2020 [Internet]. 2020 [cited 2021 Oct 20] Available from http://www.dcs.gov.za/?page_id=665

76. Sorbello L, Eccleston L, Ward T, Jones R. Treatment needs of female offenders: A review. Australian psychologist. 2002;37(3):198-205.

77. Brinded PMJ, Simpson AI, Laidlaw TM, Fairley N, Malcolm F. Prevalence of psychiatric disorders in New Zealand prisons: A national study. Aust N Z J Psychiatry. 2001;35(2):166-73.

78. Zlotnick C. Post-traumatic stress disorder (PTSD), comorbidity and childhood abuse among incarcerated women. J Nerv Ment Dis. 1997;185:(12)761-3.

79. Goff A, Rose E, Rose S, Purves D. Does PTSD occur in sentenced prison populations? A systematic literature review. Crim Behav Ment Health. 2007;17(3):152-62.

80. Fazel S, Yoon IA, Hayes AJ. Substance use disorders in prisoners: an updated systematic review and meta-regression in recently incarcerated men and women. Addiction. 2017;112(10):1725-39.

81. Montanari L, Royuela L, Pasinetti M, Giraudon I, Wiessing L, Vicente J. Drug use and related consequences among prison populations European countries

[Internet]. World Health Organisation. Available from https://www.euro.who.int/__data/assets/pdf_file/0019/249202/Prisons-and-Health,-13-Drug-use-and-related-consequences-among-prison.pdf

82. Mir J, Kastner S, Priebe S, Konrad N, Ströhle A, Mundt AP. Treating substance abuse is not enough: comorbidities in consecutively admitted female prisoners. Addict Behav. 2015;46:25-30.

83. Faraone SV, Biederman J, Mick E. The age-dependent decline of attention deficit hyperactivity disorder: a meta-analysis of follow-up studies. Psychol Med. 2006;36(2):159–65.

84. Shaw M, Hodgkins P, Caci H, Young S, Kahle J, Woods AG, Arnold LE. A systematic review and analysis of long-term outcomes in attention deficit hyperactivity disorder: effects of treatment and non-treatment. BMC Med. 2012;10:99.

85. Willcut EG. The Prevalence of DSM-IV attention-deficit/hyperactivity disorder: A meta-analytic review. Neurotherapeutics. 2012;9(3):490-9.

86. Young S, Moss D, Sedgwick O, Fridman M, Hodgkins P. A meta-analysis of the prevalence of attention deficit hyperactivity disorder in incarcerated populations. Psychol Med. 2015;45(2):247-58.

87. Mohr-Jensen C, Steinhausen HC. A meta-analysis and systematic review of the risks associated with childhood attention-deficit hyperactivity disorder on long-term outcome of arrests, convictions and incarcerations. Clin Psychol Rev. 2016;48:32-42.

88. Matthies S, Philipsen A. Comorbidity of Personality Disorders and Adult Attention Deficit and Hyperactivity Disorder (ADHD) – Review of recent findings. Curr Psychiatry Rep. 2016;18(4):33.

89. Black DW, Gunter T, Allen J, Blum N, Arndt S, Wenman G, et al. Borderline personality disorder in male and female offenders newly committed to prison. Compr Psychiatry. 2007;48(5):400-5.

90. Nee C, Farman S. Female prisoners with borderline personality disorder: some promising treatment developments. Crim Behav Ment Health. 2005;15(1):2-16.

91. Lovett A, Kwon HR, Kidia K, Machando D, Crooks M, Fricchione G et al. Mental health of people detained within the justice system in Africa: systematic review and meta-analysis. Int J Ment Health Syst. 2019;13:31.

92. Fazel S, Bains P, Doll H. Substance abuse and dependence in prisoners: a systematic review. Addiction. 2006;101(2):181-91.

93. Yoon IA, Slade K, Fazel S. Outcomes of psychological therapies for prisoners with mental health problems: a systematic review and meta- analysis. J Consult Clin Psychol. 2017;85(8):783–802.

94. Goomany A, Dickinson T. The influence of prison climate on the mental health of adult prisoners: a literature review. J Psychiatr Ment Health Nurs. 2015;22(6):413–22.

95. Naidoo S, Mkize DL. Prevalence of mental disorders in a prison population in Durban, South Africa. Afr J Psychiatry. 2012;15(1):30-5.

96. Prinsloo J, Hesselink A. Mental health disorders and crime: An international comparison. Acta Criminol: S Afr J Criminol. 2015; 28(1):1-11.

97. Steyn F, Booyens K. A profile of incarcerated female offenders: implications for rehabilitation, policy and practice. Acta Criminol: S Afr J Criminol. 2017;30(4):33-54.

98. Richie H, Roser M, Ortiz-Ospina E. Suicide. Our World in Data. 2015 [cited 2020 Aug 20]. Available from https://www.ourworldindata.org/suicide

99. Butler A, Young JT, Kinner SA, Borschmann R. Self-harm and suicidal behaviour among incarcerated adults in the Australian Capital Territory. Health Justice. 2018;6:13.

100. UNAIDS. UNAIDS Data 2020. 2020 [cited 2021 Oct 20] Available at https://www.unaids.org/sites/default/files/media_asset/2020_aids-data-book_en.pdf

101. Nordling L. South Africa ushers in a new era for HIV. Nature. 2016; 535(7611):214-7.

102. Shisana O, Rehle T, Simbayi LC, Zuma K, Jooste S, Zungu N, et al. South African National HIV Prevalence, Incidence and Behaviour Survey, 2012 [Internet]. Human Science Research Council. 2014 [cited 2020 Mar 10]. Available at http://www.hsrc.ac.za/en/research-outputs/view/6871

103. Jewkes RK, Dunkle K, Nduna M, Shai N. Intimate partner violence, relationship power inequity, and incidence of HIV infection in young women in South Africa: a cohort study. Lancet. 2010;376(9734):41-8.

104. UNAIDS. HIV-Related Stigma, Discrimination and Human Rights Violations [Internet]. Geneva, Switzerland: UNAIDS. 2005 [cited 2021 Oct 27]. Available at https://data.unaids.org/publications/irc-pub06/jc999-humrightsviol_en.pdf

105. Avert. HIV Stigma and Discrimination [Internet]. 2019 [cited 2021 Oct 27] Available at https://www.avert.org/professionals/hiv-social-issues/stigma-discrimination

106. UNAIDS. Discriminatory attitudes towards people living with HIV declining in some regions, rebounding in others [Internet]. 2021 [cited 2021 Oct 20]. Available at https://www.unaids.org/en/resources/presscentre/featurestories/2021/january/20210125_discriminatory-attitudes

107. Telisinghe L, Charalambous S, Topp SM, Herce ME, Hoffmann CJ, Barron P, et al. HIV and tuberculosis in prisons in sub-Saharan Africa. Lancet. 2016;388(10050):1215-27.

108. Kamarulzaman A, Reid SE, Schwitters A, Wiessing L, El-Bassel N, Dolan K, et al. Prevention of transmission of HIV, hepatitis B virus, hepatitis C virus, and tuberculosis in prisoners. Lancet. 2016;388(10049):1115-26.

109. Dolan K, Kite B, Black E, Aceijas C, Stimson GV, Reference group on HIV/AIDS Prevention and Care among Injecting Drug Users in Developing and Transitional Countries. HIV in prison in low-income and middle-income countries. Lancet Infect Dis. 2007;7(1):32–41.

110. Luyt W, Du Preez N. Managing incarcerated women after establishing their knowledge levels of HIV and AIDS: A case study of the Johannesburg female correctional centre. Acta Criminol: S Afr J Criminol. 2015;special edition 2:106-24.

111. Telisinghe L, Fielding KL, Malden JL, Hanifa Y, Churchyard GJ, Grant AD, et al. High tuberculosis prevalence in a South African prison: the need for routine tuberculosis screening. PLoS One. 2014;9(1):e87262.

112. Freeman M, Nkomo N, Kafaar Z, Kelly K. Mental disorder in people living with HIV/AIDS in South Africa. S Afr J Psychol. 2008; 38(3):489-500.

113. Van der Merwe H. Violence as a form of communication: Making sense of violence in South Africa. Afr J Conflict Resolution. 2013;13(3):65-83.

114. Breetzke G. Understanding the magnitude and extent of crime in post-apartheid South Africa. Social identities: J for the Study of Race, Nation and Culture. 2012;18:3,299-315.

115. Africa Check. Factsheet: South Africa's crime statistics for 2019/2020 [Internet]. 2020 [cited September 2021]. Available from https://africacheck.org/fact-checks/factsheets/factsheet-south-africas-crime-statistics-201920

116. South African Police Services. Crime statistics. [Internet]. 2021. [cited 2022 Jul 17]. Available from https://www.saps.gov.za/services/april_to_march_2019_20_presentation.pdf

117. United Nations High Commissioner for Refugees. Gender-based violence. [Internet]. [cited 2022 Jul 17]. Available from https://ww.unhcr.org/gender-based-violence.html

118. Collins A. Violence is not a crime: The impact of 'acceptable' violence on South African society. S Afr Crime Q. 2013;43:29-37.

119. Faull A. Fighting for respect: Violence, masculinity and legitimacy in the SAPS. S Afr Crime Q. 2013;44:5-14.

120. Gracia E, Herrero J. Acceptability of domestic violence against women in the European Union: A multi-level analysis. J Epidemiol Community Health. 2006;60(2):123-9

121. Abrahams N, Mathews S, Martin LJ, Lombard C, Jewkes R. Intimate partner femicide in South Africa in 1999 and 2009. PLoS Med [Internet]. 2013 [cited 2021 Oct 21];10(4):e1001412. Available from https://doi.org/10.1371/journal.pmed.1001412

122. Jewkes R, Sikweyiya Y, Morrell R, Dunkle K. Understanding men's health and use of violence: Interface of rape and HIV in South Africa (Policy Brief) [Internet]. South African Medical Research Council. 2009 [cited 2021 Oct 29]. Available from http://www.ci.uct.ac.za/sexual-violence/briefs/understanding-mens-health-and-use-of-violence-interface-of-rape-and-HIV-in-SA

123. Mathews S, Abrahams N, Jewkes R, Martin LJ, Lombard C, Vetten L. Intimate femicide-suicide in South Africa: a cross-sectional study. Bull World Health Organ. 2008;86(7):552-8.

124. Langa-Mlambo L, Soma-Pillay P. Violence against women in South Africa. Obstetrics and Gynaecology Forum. 2014;24:17-21.

125. Abrahams N, Jewkes R, Mathews S. Guns and gender-based violence in South Africa. S Afr Med J. 2010;100(9):586-8.

126. Joyner K, Mash R. Recognizing intimate partner violence in primary care: Western Cape, South Africa. PLoS ONE [Internet]. 2012 [cited 2021 Oct 20];7(1):e29540. Available from https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0029540

127. Green BL, Miranda J, Daroowalla A, Siddique J. Trauma exposure, mental health functioning, and program needs of women in jail. Crime Delinquency. 2005;51(1):133–51.

128. James DJ, and Glaze LE. Mental Health Problems of Prison and Jail Inmates. Washington, DC: U.S. Bureau of Justice Statistics, Department of Justice. 2006. 12p.

129. Lynch SM, Fritch AM, Heath NM. Looking beneath the surface: The nature of incarcerated women's experiences of interpersonal violence, treatment needs, and mental health. Feminist Criminol. 2012;7:381-400.
130. Davidson J, Chesney-Lind M. Gender and crime. In: Miller JM, editor. 21st Century Criminology: A Reference Handbook. Thousand Oaks, CA: Sage Publications Inc; 2009. p.76-84.
131. Meyer S. Women in prison: histories of trauma and abuse highlight the need for specialised care [Internet]. The Conversation. 2016 [cited 2021 Sep 10]. Available from https://theconversation.com/women-in-prison-histories-of-trauma-and-abuse-highlight-the-need-for-specialised-care-68668
132. Agboola CA. A qualitative analysis of women's experiences before, during and after imprisonment in South Africa. Unpublished thesis. DLitt et Phil in Sociology [Internet]. Pretoria: University of South Africa. 2014 [cited 2021 Oct 2] Available from https://uir.unisa.ac.za/handle/10500/18327
133. Haffejee S, Vetten L, Greyling M. Exploring violence in the lives of women and girls incarcerated at three prisons in Gauteng Province, South Africa. Agenda. 2005;19(66):40-47.
134. Anda RF, Butchart A. Felitti VJ, Brown DW. Building a framework for global surveillance of the public health implications of adverse childhood experiences. Am J Prev Med. 2010;39(1):93-8.
135. Shonkoff JP, Garner AS; Committee on Psychosocial Aspects of Child and Family Health; Committee on Early Childhood, Adoption, and Dependent Care; Section on Developmental and Behavioral Pediatrics. The lifelong effects of early childhood adversity and toxic stress. Pediatrics. 2012;129:e232–46.
136. Centers for Disease Control and Prevention. Adverse Childhood Experiences (ACE) Study. Available from https://www.cdc.gov/violenceprevention/aces/about.html [cited 2020 May 23]
137. Kessler RC, McLaughlin KA, Green JG, Gruber MJ, Sampson NA, Zaslavsky AM, et al. Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys. Br J Psychiatry. 2010;197(5):378-85

138. Hughes K, Bellis MA, Hardcastle KA, Sethi D, Butchart A, Mikton C et al. The effect of multiple adverse childhood experiences on health: a systematic review and meta-analysis. Lancet Public Health. 2017;2(8):e356–e366.
139. Manyema M, Richter LM. Adverse childhood experiences: prevalence and associated factors among South African young adults. Heliyon [Internet]. 2019 [cited 2020 Oct 23];5(12):e03003. Available at https://doi.org/10.1016/j.heliyon.2019.e03003
140. Dierkhising CB, Ko SJ, Woods-Jaeger B, Briggs EC, Lee R, Pynoos RS. Trauma histories among justice-involved youth: Findings from the national child traumatic stress network. Eur J Psychotraumatol. 2013;4(1):20274.
141. Baglivio MT, Epps N, Swartz K, Huq MS, Sheer A, Hardt NS. The prevalence of adverse childhood experiences (ACE) in the lives of juvenile offenders. J Juvenile Justice. 2014;3(2):1-23.
142. Wolff N, Shi J, Siegel JA. Patterns of victimization among male and female inmates: Evidence of an enduring legacy. Violence and Victims. 2009;24(4):469–84.
143. Sadeh N, McNiel N. Posttraumatic stress disorder increases risk of criminal recidivism among justice-involved persons with mental disorders. Crim Justice Behav. 2015;42(6):573–86.
144. Bowen K, Jarrett M, Stahl D, Forrester A, Valmaggia L. The relationship between exposure to adverse life events in childhood and adolescent years and subsequent adult psychopathology in 49,163 adult prisoners: A systematic review. Personality and Individual Differences. 2018;13:74-92.
145. Wolff KT, Baglivio MT, Piquero AR. The Relationship Between Adverse Childhood Experiences and Recidivism in a Sample of Juvenile Offenders in Community-based Treatment. Int J Offender Ther Comp Crim. 2017;61(11):1210-42.
146. Ardino V. Offending behavior: the role of trauma and PTSD. Eur J Psychotraumatol. 2012; 3(s1):1-4

147. Salisbury EJ, Van Voorhuis P. Gendered pathways: A quantitative investigation of women probationers paths to incarceration. Crim Justice Behav. 2009;36(6):541-66.

148. Reckdenwald A, Mancini C, Beauregard E. The Cycle of Violence: Examining the Impact of Maltreatment Early in Life on Adult Offending. Violence Vict. 2013;28(3):466-82.

149. Widom CS. The Cycle of Violence. Washington, DC: National Institute of Justice, US Department of Justice. 1992.

150. Widom CP, Ames AM. Criminal consequences of childhood sexual victimization. Child Abuse and Negl. 1994;18(4):303-18.

151. Messina N, Grella C. Childhood trauma and Women's Health Outcomes in a California Prison Population. Research and Practice. 2006;96(10):1842-48

152. Anda RF, Felitti VJ, Bremner JD, Walker JD, Whitfield C, Perry BD, et al. The enduring effects of abuse and related adverse experiences in childhood. Eur Arch Psychiatry and Clin Neurosci. 2006;256(3):174-86.

153. Augsburger M, Basler K, Maercker A. Is there a cycle of violence after exposure to childhood maltreatment? A meta-analysis. Psychol Med. 2019;49(11):1776-86.

154. Trauffer MA, Widom CS. Child Abuse and Neglect, and Psychiatric Disorders in Non-violent and Violent Female Offenders. Violence and Gender. 2017;4(4):137-43.

155. UNESCO Institute for Statistics. UNESCO Framework for Cultural Statistics [Internet]. Montreal, Quebec. 2009 [cited 2021 June 10]. Available from http://uis.unesco.org/sites/default/files/documents/unesco-framework-for-cultural-statistics-2009-en_0.pdf

156. South African History Online. Race and ethnicity in South Africa [Internet]. 2019 [cited 2021 June 10]. Available from https://www.sahistory.org.za/article/race-and-ethnicity-south-africa

157. Thabede D. The African worldview as the basis of practice in the helping professions. Social Work. 2008;44(3):233-45.

158. Juma JO. African worldviews: their impact on psychopathology and psychological counselling. UNISA Institutional Repository. 2011 [cited 2021 Oct 20]. Available from https://uir.unisa.ac.za/handle/10500/5760

159. Sifunda S, Reddy PS, Braithwaite RB, Stephens T, Bhengu S, Ruiter RAC, et al. Social construction and cultural meanings of STI/HIV-related terminology among Nguni-speaking inmates and warders in four South African correctional facilities. Health Educ Res. 2007;22(6):805-14.

160. Balhara YP. Culture-bound Syndrome: Has it Found its Right Niche? Indian J Psychol Med. 2011;33(2):210-15.

161. Niehaus DJS, Oosthuizen P, Lochner C, Emsley RA, Jordaan E, Mbanga NI, Keyter N, Laurent C, Deleuze JF, Stein DJ. A Culture-Bound Syndrome “Amafufunyana” and a Culture-Specific Event “Ukuthwasa”: Differentiated by a Family History of Schizophrenia and other Psychiatric disorders. Psychopathol. 2004;37:59-63.

162. Ensink K, Robertson B. Indigenous Categories of Distress and Dysfunction in South African Xhosa Children and Adolescents as Described by Indigenous Healers. Transcultural Psychiatric Research Review. 1996;33(2):137-172.

163. Shezi EN, Uys LR. Culture bound syndromes in a group of Xhosa with psychiatric disorders. Curationis. 1997;20(2):83-6.

164. Campbell MM, Sibeko G, Mall S, Baldinger A, Nagdee M, Susser E, Stein DJ. The content of delusions in a sample of South African Xhosa people with Schizophrenia. BMC Psychiatry. 2017; 17, Article number 41.

165. Nortje N, Albertyn R. The cultural language of pain: a South African study. S Afr Fam Pract. 2015; 57(1):24-27.

166. Hesselink A, Dastile NP. A criminological assessment on South African women who murdered their intimate male partners. J Psychol Afr. 2015; 25(4):335-344.

167. Labuschagne G. Features and Investigative Implications of Muti Murder in South Africa. J Investig Psychol Offender Profiling. 2004;1:191-206.

168. Steyn M. Muti murders from South Africa: A case report. Forensic Science International. 2005;151(2-3):279-87.

169. Roelofse CJ. Ritual and muti murders amongst the vha-Venda people of South Africa: an ethno-criminological assessment of the phenomenon and development of a new typology. Acta Criminologica. 2014;Special edition: Research and application in Criminology & Criminal Justice/1/2014.

170. Guba EG, Lincoln YS. Paradigmatic controversies, contradictions, and emerging confluences. In Denzin NK and Lincoln YS, editors. Handbook of qualitative research. 3rd ed. Thousand Oaks, CA: Sage. 2005. p.191–215.

171. Creswell JW. Research design: Qualitative, quantitative and mixed methods approaches. 2nd ed. Thousand Oaks, CA: Sage. 2003.

172. Sandelowski M. Whatever happened to qualitative description? Res Nurs Health. 2000;23(4):334-40.

173. Creswell JW, Plano Clark VL. Designing and conducting mixed methods research. 2nd ed. Los Angeles: Sage. 2011.

174. Greene JC, Caracelli VJ, Graham WF. Toward a Conceptual Framework for Mixed-Method Evaluation Designs. Educational Evaluation and Policy Analysis. 1989;11(3):255–274.

175. Plano Clark VL, Ivankova NV. Mixed methods research: A guide to the field. Thousand Oaks, CA: Sage. 2016.

176. Silverman D. Doing Qualitative Research. 2nd edition. London: Sage. 2005.

177. Dawadi S, Shrestha S, Giri RA. Mixed-methods research: a discussion on its types, challenges, and criticisms. J of Practical Studies in Educ. 2021;2(2):25-36.

178. Rehman AA, Alharthi K. An introduction to research paradigms. International Journal of Educational Investigations. 2016 Oct;3(8):51-9.

179. Roomaney R, Coetzee B. Introduction to and application of mixed methods research designs. In Kramer S, Laher S, Fynn A, Janse van Vuuren HH, editors. Online Readings in Research Methods. Johannesburg: Psychological Society of South Africa. Available from https://www.psyssa.com/newsroom/publications/orim/ [cited 2021 Aug 23]

180. Feilzer YM. Doing mixed methods research pragmatically: Implications for the rediscovery of pragmatism as a research paradigm. J Mixed Methods Res. 2010; 4(1):6-16.

181. Creswell JW, Plano Clark VL, Gutmann ML, Hanson WE. Advanced mixed methods research designs. In Tashakkori A, Teddlie C, editors. Handbook of mixed methods in social and behavioral research. Thousand Oaks, CA: Sage. 2003. p. 209–240.

182. Mason J. Mixing methods in a qualitatively driven way. Qual Res. 2006;6(1):9-25.

183. Stange KC. Publishing multimethod research. Ann Fam Med. 2006;4(4):292-294.

184. Pailthorpe BC. Emergent design. Wiley Online Library [Internet]. 2017 [cited 2021 Sep 10]. Available at https://onlinelibrary.wiley.com/doi/abs/10.1002/9781118901731.iecrm0081

185. Setia MS. Methodology Series Module 3: Cross-sectional Studies. Indian J Dermatol. 2016;61(3):261-264.

186. Levin KA. Study design III: Cross-sectional studies. Evid Based Dent. 2006;7:24–25.

187. Manen MV. Researching lived experience: Human science for an action sensitive pedagogy. London and New York: Routledge Taylor and Francis Group. 1997.

188. Teherani A, Martimianakis T, Stenfors-Hayes T, Wadhwa A, Varpio L. Choosing a qualitative research approach. J Grad Med Educ. 2015;7(4):669–70.

189. Creswell JW. Qualitative Inquiry & Research Design: Choosing Among the Five Approaches. 3rd ed. Thousand Oaks, CA: Sage. 2013:77-83.

190. Neubauer BE, Witkop CT, Varpio L. How phenomenology can help us learn from the experiences of others. Perspect Med Educ. 2019;8**:**90-97.

191. Laverty SM. Hermeneutic phenomenology and phenomenology: A comparison of historical and methodological considerations. Int J Qual Methods. 2003;2:1-29.

192. Ellis P. The language of research (part 8): phenomenological research. Decoding Science. Wounds UK. 2016;12(1):128-9

193. Qutoshi SB. Phenomenology: A philosophy and method of enquiry. J Education & Educational Development. 2018;5(1):215-222

194. Sloane A, Bowe B. Phenomenology and hermeneutic phenomenology: the philosophy, the methodologies and using hermeneutic phenomenology to investigate lecturer's experiences of curriculum design. Quality & quantity. 2014;48(3):1291-1303.

195. Pietkiewicz I. A practical guide to using interpretative phenomenological analysis in qualitative research psychology. Psychological Journal. 2014;

196. Braun V, Clarke V. Can I use TA? Should I use TA? Should I not use TA? Comparing reflexive thematic analysis and other pattern-based qualitative analytic approaches. Couns Psychother Res. 2021;21:37-47.

197. Halcomb EJ. Mixed Methods Research: The issues beyond combining methods. JAN Leading Global Nursing Research. 2019;75(3):499-501.

198. Creswell JW, Klassen AC, Plano Clarke VL, Smith KC. Best Practices for Mixed Methods Research in the Health Sciences. Office of Behavioural and Social Sciences Research. 2011.p.1-37.

199. Azevedo V, Carvalho M, Fernandes-Costa F, Mesquita S, Soares J, Teixeira F et al. Interview transcription: conceptual issues, practical guidelines and challenges. Revista de Enfermagem Referência. 2017;4(14):159-168

200. Korstjens I, Moser A. Series: Practical guidance to qualitative research. Part 4. Eur J Gen Pract. 2018;24(1):120-124.

201. VERBI Software. MAXQDA 2020 [computer software]. Berlin, Germany: VERBI Software. Available at www.maxqda.com [cited 2020 Oct 21]

202. Mertens DM. Transformative research and evaluation. New York: Guilford Press. 2008.

203. Mertens DM. Transformative research: personal and societal. Int J Transformative Res. 2017;4(1):18-24.

204. Sweetman D, Badiee M, Creswell JW. Use of the transformative framework in mixed methods. Qual Inquiry. 2010;16(6):441-454.

205. The Harvard Clinical and Translational Science Centre. Cultural competence in research. [Internet]. 2009. [cited 2022 Jul 23]. Available at https://skilledwork.org/wp-content/uploads/2017/08/CCR-annotated-bibliography-10-12-10ver2-FINAL.pdf

206. Mertens DM. Research methods in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods. 4th ed. Thousand Oaks, CA: Sage. 2015

207. Mertens DM. Transformative paradigm: Mixed methods and social justice. J Mixed Methods Res. 2007;1(3):212-25.

208. Mertens DM. Transformative Mixed Methods: Addressing Inequities. American Behavioral Scientist. 2012;56(6):802-13.

209. Moloney KP, Van den Bergh BJ, Moller LF. Women in Prison: The central issues of gender characteristics and trauma history. Public Health. 2009; 123(6):426-430.

210. Oxford English Dictionary. [Internet]. [cited 2022 Jul 23]. Available at https://www.oed.com/oed2/00083535

211. Brayton J. Ollivier M, Robbins W. Introduction to feminist research. PAR-L[Internet]. [cited 2022 Jul 23]. Available at https://www2.unb.ca/parl/research.htm

212. Erdfelder E, Faul F, Buchner A. G POWER: A general power analysis program. Behavior Research Methods, Instruments & Computers. 1996;28:1-11.

213. Cohen J. A power primer. Psychol Bull. 1992;112(1):155-9.

214. Fryer CE. An Approach to Conducting Cross-Language Qualitative Research with People from Multiple Language Groups. In: Liamputtong P, editor. Handbook of Research Methods in Health Social Sciences. Singapore: Springer. 2019.

215. Baker SE, Edwards R. How many qualitative interviews is enough? Expert voices and early career reflections on sampling and cases in qualitative research. National Centre of Research Methods. 2012 [cited 2022 Aug 31]. Available from http://eprints.ncrm.ac.uk/2273

216. Kolar K, Ahmad F, Chan L, Erikson PG. Timeline mapping in qualitative interviews: A study of resilience with marginalized groups. International J of Qual Methods. 2015;14(3):13-32.

217. Berends L. Embracing the visual: Using timelines with in-depth interviews on substance use and treatment. The Qualitative Report. 2011; 16(1):1-9.

218. Columbia University Irving Medical Center. Structured Clinical Interview for DSM Disorders (SCID) [Internet]. Available from https://www.columbiapsychiatry.org/research/research-labs/diagnostic-and-assessment-lab/structured-clinical-interview-dsm-disorders-12#faq-What-is-the-SCID-5? [cited 2021 Mar 03]

219. First MB. Structured Clinical Interview for the DSM (SCID) [Internet]. Wiley Online Library. 2015 [cited 2021 Oct 29]. Available from https://doi.org/10.1002/9781118625392.wbecp351

220. World Health Organisation. Adverse Childhood Experiences International Questionnaire. Geneva: WHO, 2020 [cited 2020 Mar 28]. Available from https://cdn.who.int/media/docs/default-source/documents/child-maltreatment/ace-questionnaire.pdf?sfvrsn=baed215c_2

221. Kazeem OT. A Validation of the Adverse Childhood Experiences Scale in Nigeria. Res Human Soc Sci. 2015;5(11):18-23.

222. Harris PA, Taylor R, Thielke R, J Payne, Gonzalez N, Conde JG. Research electronic data capture (REDCap)-A metadata-driven methodology and workflow process for providing translational research informatics support**.** J Biomed Inform. 2009;42(2):377-81.

223. Harris PA, Taylor R, Minor BL, Elliott V, Fernandez M, O'Neal L, et al. The REDCap consortium: Building an international community of software partners**.** J Biomed Inform. 2019 [cited 2020 Mar 23]*;95:103208.* Available from https://doi.org/10.1016/j.jbi.2019.103208

224. IBM Corp. IBM SPSS Statistics for Windows, version 26.0. Armonk, New York: IBM Corp. 2019.

225. Holloway I, Todres L. The status of method: flexibility, consistency and coherence. Qual Res. 2003:3(3):345-357.

226. Boyatzis RE. Transforming qualitative information: Thematic analysis and code development. Thousand Oaks, CA: Sage. 1998.

227. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3(2):77-101.

228. Van den Bergh BJ, Gatherer A, Moller LF. Women's health in prison: urgent need for improvement in gender equity and social justice. Bull World Health Organ. 2009;87(6):406. Available from https://doi.org/10.2471/BLT.09.066928 [Accessed on 25/10/2021]

229. Bloom B, Owen B, Covington S. Gender-Responsive Strategies: Research, Practice, and Guiding Principles for Women Offenders. Washington, DC: U.S. Department of Justice, National Institute of Corrections. 2003. Available from http://static.nicic.gov/Library/018017.pdf [Accessed 03/10/2021]

230. Naidoo S, Subramaney U, Paruk S, Ferreira L. Mental illness and HIV amongst female inmates in Durban, South Africa. S Afr J Psychiatry. 2022. Available from http://doi.org/10.4102/sajpsychiatry.v28i0.1628 [Accessed 20/02/2022]

231. Herman AA, Stein DJ, Seedat S, Heeringa SG, Moomal H, Williams DR. The South African Stress and Health (SASH) study: 12-month and lifetime prevalence of common mental disorders. S Afr Med J. 2009;99(5 Pt 2):339-44.

232. Taxman FS, Mun M. Recidivism: The Impact of Substance Abuse on Continued Involvement in the Justice System. Oxford Medicine Online. 2018 [cited 2021 Oct 01] Available from https://oxfordmedicine.com/view/10.1093/med/9780199374847.001.0001/med-9780199374847-chapter-13

233. Naidoo S, Ferreira L, Paruk S, Subramaney U. What women want: A qualitative exploration addressing the unmet mental health needs of female inmates in Durban, South Africa. Unpublished.

234. Hawton K, van Heeringen K. Suicide. Lancet. 2009;373:1372-81.

235. World Population Review. Suicide Rate by Country 2021 [Internet]. 2021 [cited 2021 Oct 29]. Available at https://worldpopulationreview.com/country-rankings/suicide-rate-by-country

236. Fazel S, Grann M, Kling B, Hawton K. Prison suicide in 12 countries: an ecological study of 861 suicides during 2003–2007. Soc Psychiatry Psychiatr Epidemiol. 2011;46:191–5.

237. Fazel S, Cartwright J, Norman-Nott A, Hawton K. Suicide in prisoners: a systematic review of risk factors. J Clin Psychiatry. 2008;69:1721-31.

238. Mohlakoana-Motopi L, Selebano N, Bazola L, Motha. Raising Issues of Mental Health Care for Female Inmates in South Africa. Policy brief 20 [Internet]. Commission for Gender Equality. 2018 [cited 2021 Oct 28]. Available from http://cge.org.za/wp-content/uploads/2021/01/raising-issues-of-mental-health-care-for-female-inmates-in-south-africa.pdf

239. Gaum G, Hoffman S, Venter JH. Factors that influence adult recidivism: an exploratory study in Pollsmoor prison. S Afr J Psychol. 2006;36(2):407–24.

240. Huerga H, Van Cutsem G, Ben Farhat J, Puren A, Bouhenia M, Wiesner L, et al. Progress towards the UNAIDS 90-90-90 goals by age and gender in a rural area of KwaZulu-Natal, South Africa: a household-based community cross-sectional survey. BMC Public Health [Internet]. 2018 [cited 2021 Sep 12];18(1):303. Available from https:// doi.org/10.1186/s12889-018-5208-0

241. Shisana O, Davids A. Correcting gender inequalities is central to controlling HIV/AIDS. Bull World Health Organ. 2004;82(11):812.

242. Kelly B, Raphael B, Judd F, Perdices M, Kernutt G, Burnett P, Dunne M, et al. Posttraumatic stress disorder in response to HIV infection. Gen Hosp Psychiatry. 1998;20(6):345-52.

243. Kimerling R, Calhoun KS, Forehand R, Armistead L, Morse E, Morse P, et al. Traumatic stress in HIV-infected women. AIDS Educ Prev. 1999;11(4):321–30.

244. Safren SA, Gershuny BS, Hendriksen E. Symptoms of post-traumatic stress and death anxiety in persons with HIV and medication adherence difficulties. AIDS Patient Care STDS. 2003;17(12): 657–64.

245. Olley BO, Seedat S, Stein DJ. Persistence of psychiatric disorders in a cohort of HIV/AIDS patients in South Africa. J Psychosom Res. 2006;61(4):479–84.

246. Machtinger EL, Wilson TC, Haberer JE, Weiss DS. Psychological Trauma and PTSD in HIV-Positive Women: A Meta-Analysis. AIDS Behav. 2012;16(8):2091-100.

247. Boarts JM, Sledjeski EM, Bogart LM, Delahanty DL. The differential impact of PTSD and depression on HIV disease markers and adherence to HAART in people living with HIV. AIDS Behav. 2006;10(3):253–61.

248. Duko B. Ayalew M, Ayano G. The prevalence of alcohol use disorders among people living with HIV/AIDS: a systematic review and meta-analysis. Subst Abuse Treat Prev Policy. 2019;14(1):52. Available from https://doi.org/10.1186/s13011-019-0240-3

249. Remien RH, Stirratt MJ, Nguyen N, Robbins RN, Pala AN, Mellins CA. Mental health and HIV/AIDS: the need for an integrated response. AIDS. 2019;33(9):1411-20.

250. Stats SA- Parliament of South Africa. Crimes against women in South Africa, an analysis of the phenomena of GBV and femicide. 2020 [cited 2021 Oct 23]. Available from https://www.parliament.gov.za/storage/app/media/1_Stock/Events_Institutional/2020/womens_charter_2020/docs/30-07-2020/A_Statistical_Overview_R_Maluleke.pdf

251. Minisini V. South Africa's Secondary Pandemic: A Crisis of Gender Based Violence. 2021 [cited 2021 Nov 11]. Available from https://globalriskinsights.com/2021/03/south-africas-secondary-pandemic-a-crisis-of-gender-based-violence/

252. Brown DW, Anda RF, Tiemeier H, Felitti VJ, Edwards VJ, Croft JB, et al. Adverse childhood experiences and the risk of premature mortality. Am J Prev Med. 2009;37(5):389-396.

253. Hillis SD, Anda RF, Felitti VJ, Nordenberg D, Marchbanks PA. Adverse childhood experiences and sexually transmitted diseases in men and women: a retrospective study. Pediatrics. 2000;106(1):E11

254. Brezing C, Ferrara M, Freudenreich O. The Syndemic Illness of HIV and Trauma: Implications for a trauma-informed model of care. Psychosomatics. 2015;56(2):107-18.

255. LeGrand S, Reif S, Sullivan K, Murray K, Barlow ML, Whetten K. A review of recent literature on trauma among individuals living with HIV. Curr HIV/AIDS Rep. 2015;12(4):397–405.

256. Leserman J, Pence BW, Whetten K, Mugavero MJ, Thielman NM, Swartz MS, Stangl D. Relation of lifetime trauma and depressive symptoms to mortality in HIV. Am J Psychiatry. 2007;164(11):1707-13.

257. Mugavero MJ, Raper JL, Reif S, Whetten K, Leserman J, Thielman NM, Pence BW. Overload: Impact of incident stressful events on antiretroviral medication adherence and virologic failure in a longitudinal, multisite human immunodeficiency virus cohort study. Psychosom Med. 2009;71(9):920-6.

258. Pence BW, Mugavero MJ, Carter TJ, Leserman J, Thielman NM, Raper JL, et al. Childhood trauma and health outcomes in HIV-infected patients: An exploration of causal pathways. J Acquir Immune Defic Syndr. 2012;59(4):409-16.

259. Bekele T, Collins EJ, Maunder RG, Gardner S, Rueda S, Globerman J, et al. Childhood adversities and physical and mental health outcomes in adults living with HIV: Findings from the Ontario HIV Treatment Network Cohort Study. AIDS Res Treat. 2018;2187232.

260. Pence BW, Reif S, Whetten K, Leserman J, Stangl D, Swartz M, et al. Minorities, the poor, and survivors of abuse: HIV-infected patients in the US deep South. South Med J. 2007;100(11):1114-22.

261. Wood R. The trauma related mental health issues of female prisoners: The need for trauma-specific intervention. A review of the literature. Degree project in Criminology. Malmö University: Faculty of Health and Society, Department of Criminology. 2019 [cited 2021 Oct 29]. Available from https://www.diva-portal.org/smash/get/diva2:1486261/FULLTEXT01.pdf

262. Naidoo S, Ferreira L, Subramaney U, Paruk S. An HIV narrative of female inmates with a lifetime history of mental illness in Durban, South Africa. Front Psychiatry [Internet]. 2021 [cited 2021 Oct 28]. Available from https://doi.org/10.3389/fpsyt.2021.637387

263. Ifejika N. What does ubuntu really mean? The Guardian. 2006 [cited 2021 Oct 10]. Available from https://www.theguardian.com/theguardian/2006/sep/29/features11.g2

264. Van Dyk GAJ, Matoane MC. Ubuntu-oriented therapy: Prospects for counselling families affected with HIV/AIDS in sub-Saharan Africa. J Psychol Afr. 2010;20(2):327-34.

265. Thompsell A. A definition of the Nguni word Ubuntu. ThoughtCo. 2019 [cited 2021 Sep 20]. Available from https://www.thoughtco.com/the-meaning-of-ubuntu-43307

266. Buffalo Centre for Social Research, University at Buffalo. What is trauma-informed care? University at Buffalo, The State University of New York. 2021 [cited 2021 Oct 24]. Available from http://socialwork.buffalo.edu/social-research/institutes-centers/institute-on-trauma-and-trauma-informed-care/what-is-trauma-informed-care.html

267. Zgoba KM, Reeves R, Tamburello A, Debilio L. Criminal Recidivism in Inmates with Mental Illness and Substance Use Disorders. J Am Acad of Psychiatry Law. 2020;48(2):209-15.

APPENDICES

UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

R49 Dr S Naidoo

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
CLEARANCE CERTIFICATE NO. M181026

NAME: (Principal Investigator)	Dr S Naidoo
DEPARTMENT:	School of Clinical Medicine Department of Psychiatry Medical School University
PROJECT TITLE:	*The mental health needs of female inmates in Durban, South Africa*
DATE CONSIDERED:	26/10/2018
DECISION:	Approved unconditionally
CONDITIONS:	Change of study title noted on 2022/02/21
NOTE:	If contact information regarding student study participants is required, please contact the Registrar's office - <Nicoleen.Potgieter@wits.ac.za>
SUPERVISOR:	Professor U Subramaney and Dr S Paruk
APPROVED BY:	Dr CB Penny, Chairperson, HREC (Medical)
DATE OF APPROVAL:	12/03/2019

This Clearance Certificate is valid for 5 years from the date of approval. An extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office secretariat on the 3rd floor, Phillip Tobias Building, Parktown, University of the Witwatersrand, Johannesburg.

I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated from the research protocol as approved, I/we undertake to submit details to the Committee. **I agree to submit a yearly progress report**. When a funder requires annual re-certification, the application date will be one year after the date when the study was initially reviewed. In this case, the study was initially reviewed in and therefore reports and re-certification will be due in the month of each year. Unreported changes to the study may invalidate the clearance given by the HREC (Medical).

Signature of Principal Investigator

Date

correctional services
Department:
Correctional Services
REPUBLIC OF SOUTH AFRICA

Private Bag X136, PRETORIA, 0001 Poyntons Building, C/O WF Nkomo and Sophie De Bruyn Street, PRETORIA
Tel (012) 307 2770

Dr S Naidoo
803 Montello Estates
Tamboti Road
Midrand
1684

Dear Dr Naidoo

RE: APPLICATION TO CONDUCT RESEARCH IN THE DEPARTMENT OF CORRECTIONAL SERVICES ON: "MENTAL HEALTH NEEDS OF FEMALE OFFENDERS IN DURBAN, SOUTH AFRICA (MEHNOFO)"

It is with pleasure to inform you that your request to conduct research in the Department of Correctional Services on the above topic has been approved.

Your attention is drawn to the following:

- This ethics approval is valid from **13 March 2019 to 12 March 2022**.
- The relevant Regional and Area Commissioners where the research will be conducted will be informed of your proposed research project.
- Your internal guide will be **Ms K Bhamjee: Psychologist, Durban Westville.**
- You are requested to contact her at telephone number (031) 204 8947 before the commencement of your research.
- It is your responsibility to make arrangements for your interviewing times.
- Your identity document/passport and this approval letter should be in your possession when visiting the correctional centres.
- You are required to use the terminology used in the White Paper on Corrections in South Africa (February 2005) e.g. "Offenders" not "Prisoners" and "Correctional Centres" not "Prisons".
- You are not allowed to use photographic or video equipment during your visits, however the audio recorder is allowed.
- You are required to submit your final report to the Department for approval by the Commissioner of Correctional Services before publication (including presentation at workshops, conferences, seminars, etc) of the report.
- Should you have any enquiries regarding this process, please contact the DCS REC Administration for assistance at telephone number (012) 307 2770.

Thank you for your application and interest to conduct research in the Department of Correctional Services.

Yours faithfully

ND SIHLEZANA
DC: POLICY COORDINATION & RESEARCH
DATE: 13/03/2019

Appendix C

Participant Information Sheet

Hello,

My name is Dr Samantha Naidoo and I am a psychiatrist. I am registered as a PhD student at the University of the Witwatersrand and I am affiliated with the Department of Psychiatry.

I am interested in the wellbeing of all female prisoners; particularly their emotional and psychological health. There is a lot of evidence that women who commit crimes have experienced abuse during their lives and that they suffer from mental/psychological illnesses more than women in the general population. I am thus working on a research project to find out what the mental health needs of female prisoners at Westville Correctional Centre are. This letter explains the study and will help you decide if you want to take part in the study or not.

What is involved in the study?

I will be interviewing women who are currently at Westville Correctional Centre, either awaiting trial or sentenced prisoners. The study has two phases. In the first phase I will be interviewing about 100 randomly selected women individually for between 1-2 hours to find out about:

1. their demographic details eg age, marital status, employment status, etc.
2. information about the offence for which they are in prison
3. information regarding their medical and psychiatric history and symptoms
4. information regarding any abuse they have experienced in their lives
5. information regarding their cultural beliefs
6. their HIV status. I will use prison records to confirm their HIV status as I will not be doing any blood tests in this study.

In the second phase I will interview approximately ten women from the initial group of 100 women who have certain criteria which the study seeks to investigate in detail. I will conduct in-depth individual interviews for approximately an hour with each of these women. These second round of interviews will be audio-recorded so that it may be written down later for analysis

What are the risks of being involved in the study?

You might become tired or experience discomfort since the interview will last about 1-2 hours. Also some of the questions I will be asking you will be of a very sensitive nature so you might experience distress at discussing this. If you require any emergency psychiatric or psychological assistance during the study, with your consent, I will refer you to a psychiatrist for an emergency consultation. After assessing you, should you require further care he will refer you to the psychiatric/psychological services at Westville Correctional Centre

What are the benefits of being in the study?

At the end of the study all those women who have been diagnosed with a serious mental illness in the study and who would like to receive care, will be referred to Westville Correctional Services for psychological/psychiatric care.

Participation is voluntary

You are not obliged to take part in the study. You have the right to withdraw from the study at any point should you decide to do so and this will not have any impact on you. Participation in this study will also not in any way influence your trial, sentencing or parole procedures.

Will information about me and my participation be kept confidential/private?

The study is anonymous. Should you agree to participate in this study you will be allocated a unique Participation Identification number (PIN) at the start of the study so your identity will not be revealed at any point. This study relies heavily on your honesty therefore all information obtained in this study will remain confidential. It will be disclosed only with your permission, or if required by law or if you are a danger to harm yourself or others. The research documents and audiotapes will be kept in a locked cabinet in a locked office, accessible only to me, the principal investigator. Electronically captured information will be password protected and only accessible by me.

Will I receive any payment if I take part in this study?

If you decide to participate in this study you will not receive any payment but you will receive a hygiene pack containing female sanitary items to the value of R60.

Has approval been granted for this study?

The Wits Faculty Postgraduate Research Committee and the Human Research Ethics Committee (HREC) have granted approval for this study.

Will I get to see the results of the study once it has been completed?

Yes, when the study has been completed you will receive a written report of the summary of the main findings which will be sent to you at Westville Correctional Centre.

Who can answer any questions I have about the study?

If you have any questions, comments or concerns about the research you can contact me, Dr S Naidoo at:

Sterkfontein Psychiatric Hospital

Sterkfontein Street

Krugersdorp

1740

Tel: 082 3454984

Email: drsnaidoo@hotmail.com

If you have any questions regarding your rights as a research participant, or if you have any concerns regarding any aspect of the study and you would like to ask someone other than the researcher, you are welcome to contact:

The Chairperson

University Human Research Committee (Medical)

University of the Witwatersrand

Private Bag 3

Wits

2050

Tel : 011 717 1252/1234/2656/2700

Email: hrec-medical.researchoffice@wits.ac.za

Supervisors:

Professor Ugasvaree Subramaney, Ugasvaree.Subramaney@wits.ac.za, 011 951800.

Dr Saeeda Paruk, paruks4@ukzn.ac.za, 031 2604321.

Appendix D

Informed Consent for Phase one

I …… hereby confirm that I have been informed about the study by …… and I understand what is expected of me and what the study is about.

I have also read the Participant Information Sheet with regard to the study.

I am aware that the results of the study will be anonymously processed.

I understand that the results of the study may be published but that my anonymity and confidentiality will be maintained.

I am aware that my HIV status will be accessed from my prison records.

I am aware that I may at any stage withdraw from the study without prejudice.

I am aware that I may be referred for psychological/psychiatric care if necessary.

Participant:

Name ……

Signature……

Right thumbprint (if illiterate):

Date……

Researcher:

I, Dr Samantha Naidoo, hereby confirm that the above participant has been fully informed about the nature and procedure of the above study.

Signature ……

Date…….

Witness:

Name…….

Signature……..

Date……..

Appendix E

Informed consent for phase two

I …… hereby confirm that I have been informed about the study by …… and I understand what is expected of me and what the study is about.

I have also read the Participant Information Sheet with regard to the study.

I am aware that in this phase of the study the interview will be audio-recorded for use later.

I am aware that the results of the study will be anonymously processed.

I understand that the results of the study may be published but that my anonymity and confidentiality will be maintained.

I am aware that I may at any stage withdraw from the study without prejudice.

Participant:

Name ……

Signature……

Right thumbprint (if illiterate):

Date……

Researcher:

I, Dr Samantha Naidoo, hereby confirm that the above participant has been fully informed about the nature and procedure of phase two of the above study.

Signature ……

Date……

Witness:

Name……

Signature……

Date……..



PROFESSOR DL MKIZE

MB ChB DCH ,MFGP ,Dip For Med), MMed (Psych), FCPsych

SPECIALIST PSYCHIATRIST

PR NO 22-02697

DURBAN MEDICAL CENTRE
8th FLOOR, SUITE 802,
94 CHARLOTTE MAXEKE STREET

HEALING HILLS HOSPITAL
(FORMER INCHANGA HOTEL)
2 INCHANGA DRIVE

PO BOX 217
HILLCREST
3650

Tel: 031-3096676/ 031-7834998 Cell: 0828296077 Email:mkizedl@gmail.com

03/10/2018

Re: Psychological services letter of support

To: Dr Samantha Naidoo

From: Professor Dan L. Mkize

Subject: Psychological Services Support

I, Professor D. L. Mkize, am currently a Specialist Psychiatrist in private practice in Durban, South Africa and I also conduct sessional forensic psychiatric work at Fort Napier Hospital. I have worked as a sessional psychiatrist at Westville Correctional Centre previously. I hold the following qualifications (full CV available on request):

Bachelor of Medicine and Surgery (University of Natal)

Diploma in Forensic Medicine (CMSA)

Fellowship of the College of Psychiatrists (CMSA)

Master of Medicine degree in Psychiatry (University of Natal)

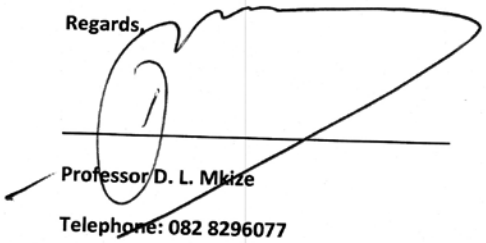
I have been registered with the Health Professions Council of South Africa in the category of Independent Practice: Specialist Psychiatrist since 1991. My registration number is MP 0154741.

With this letter I provide my support to Dr Samantha Naidoo for her research project entitled "The mental health needs of female offenders in Durban, South Africa". I will be available to provide initial psychological interventions to participants in emergency situations.

Upon receiving the referral I will consult with the participant on the same day. My intervention will focus on debriefing and containment of the participant. In cases where the participant will require further intervention, I will refer the participant to the psychological/psychiatric services at Westville Correctional Services.

Any queries in this regard can be directed to me.

Regards,



Professor D. L. Mkize

Telephone: 082 8296077

Email: danmkize@gmail.com

Appendix G

Referral letter for emergency psychological services

To : Professor Dan Mkize

From : Dr Samantha Naidoo

Subject: Referral for emergency psychological services

Date: _____

Dear Professor Mkize

Thank you for your support in my study entitled “The mental health needs of female offenders in Durban, South Africa”.

As per our telephonic conversation at_____(time) on _____(date), Ms_____(participant name) in the female medium at Westville Correctional Centre requires emergency psychological services.

The following issues are of concern:

_____

_____

_____

_____

Kindly assess and manage her in this regard (as stipulated in your letter of support) as soon as possible and refer to correctional services psychological/psychiatric services if further intervention is required.

Thanking you in advance,

_____

Dr Samantha Naidoo (Specialist Psychiatrist)

Telephone: 082 3454984

Email: drsnaidoo@hotmail.com

Appendix H

Non-Disclosure Agreement

I, _____ (name), am employed by Dr Samantha Naidoo, the researcher, as an English-Zulu translator, in her study entitled "The mental health needs of female offenders in Durban, South Africa".

I understand that during the course of the study I will be privy to confidential information of a very sensitive nature. I hereby agree not to disclose any information to any third party regarding the participants' involvement in the study.

_____

Signature:

_____

Date

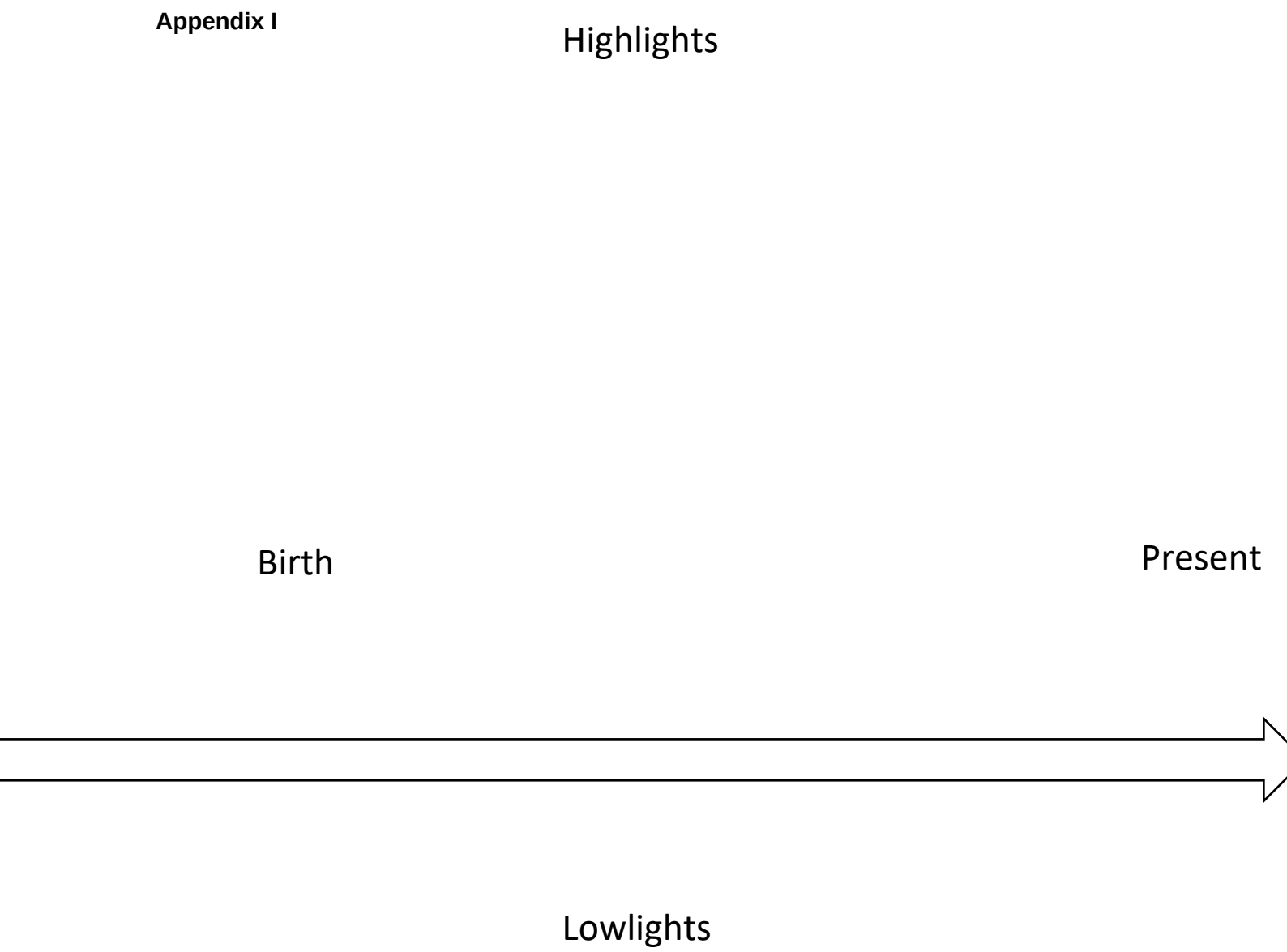
_____

Signature: Dr Samantha Naidoo

_____

Date

Appendix I



Appendix J

SOCIODEMOGRAPHIC, CLINICAL AND FORENSIC QUESTIONNAIRE

Record ID

_____

Socio-demographic

Participation identification number (PIN)

_____

What is your home/first language?

English isiZulu Afrikaans Other (specify)

Please specify other language

_____

What is your nationality

South African Foreigner (specify)

Please specify your foreign nationality

_____

In which area were you living before you came to

prison? _____

What type of area is it? Rural Urban Peri-urban

Other (specify)

Specify other type of area

_____

How many children did you have at the time of current incarceration?

0 1 2 3 4 5 6 7 8 9 10 More than 10

What were the ages of your children at the time of current incarceration?

First child

_____

Second child

_____

Third child

_____

Fourth child

_____

Fifth child

_____

Sixth child

_____

Seventh child

_____

Eighth child

_____

Ninth child

_____

Tenth child

_____

Eleventh child

_____

What is your sexual orientation

Heterosexual Homosexual Bisexual Refused

What was your main source of income prior to incarceration?

Employment Social grant (specify) Other (specify)

Please specify social grant type

Disability Older persons Child support Foster care Care dependency

Other

Specify other grant

_____

Please specify other type of income

_____

What was your total personal monthly income prior to incarceration?

Less than R1,000 (specify) R1, 000 - R2,000 R2, 000 - R5,000 R5, 000 - R10,000

More than R10,000 (specify)

Specify how much less

_____

Specify how much more

_____

What religion do you follow?

Christianity Islam Hinduism Other (specify) None

Specify other religion

_____

Have you ever been placed out of home when you were younger for eg. in foster care or in a children's home?

Yes (specify) No

If yes, where were you placed?

Foster care Children's home Other (specify)

Please specify other

_____

Who were your primary caregivers during childhood?

Mother Father Both parents Grandparents Extended family Other (specify)

Specify other caregivers

_____

Clinical

Do you have a family history of mental illness? Yes (specify) No

Unknown Refused

Do you have a family history of substance abuse? Yes (specify) No

Unknown Refused

Do you have a family history of suicide? Yes (specify) No

Unknown Refused

Specify family mental illness, substance abuse or suicide

Have you ever been diagnosed with a psychiatric disorder in the past?

Yes (details) No Refused

Details of psychiatric disorder (Dates, diagnosis, treatment, admissions, duration)

Have you ever had any previous suicide ideation? Yes (details) No

Refused

Have you ever had any previous attempts? Yes (details) No

Refused

Have you ever had any previous self-harming behaviour? Yes (details) No

Refused

Details of any previous suicide ideation, attempts or self-harming behaviour (Dates, methods, reason and medical intervention required)

Have you ever used any of the following substances in the past?

Yes No Refused

Alcohol

Sedative/Hypnotic/Anxiolytics

Cannabis

Stimulants

Opioids

Hallucinogens

Inhalants

Other (specify)

Please specify other substance

_____

Did you use any substances at the time of the offence? Yes (details) No

Refused

Details of any substances used at the time of offense (Type, amount and effect)

Have you been diagnosed with any medical conditions in the past?

Yes No Refused

Specify which medical conditions you've been treated for in the past?

Diabetes Hypertension Epilepsy Asthma Tuberculosis HIV/AIDS

Other(specify)

Specify other medical condition

_____

How did you contract HIV/AIDS?

_____

If you have HIV/AIDS, has it affected you psychologically or emotionally?

Yes No Refused

If yes, how has HIV/AIDS affected on you psychologically or emotionally??

If you have HIV/AIDS, do you think it played a role in the commission of your offence?

Yes No Refused

If yes, how has HIV/AIDS played a role in the commission of your offence?

Are you currently on any medication (including ARVs)? Yes No

List the medications you are on

Forensic

Awaiting trial or sentenced offender Awaiting trial Sentenced

Previous conviction/s Yes (list all offences)

No

List all dates, offences and sentences

Age at first arrest

_____

(e.g. 23)

Category of current offence

Receiving stolen Property

Theft

Robbery

Robbery with aggravating circumstances

Assault

Sexual Assault

Assault GBH

Murder

Attempted Murder

Culpable homicide

Rape

Attempted Rape

Incest

Bestiality

Perjury

Contempt of court

MITP

Trespassing

Possession of drugs

Dealing in drugs

Forgery & uttering

Defeating or obstructing the course of justice

Public indecency

Arson

Intimidation

Violating grave or dead body

Housebreaking

Kidnapping

Treason

Sedition

Genocide, war crimes, crimes against humanity

Terrorism

Racketeering

Dealing in & possession of firearms, explosive/armament

Fraud

Corruption

Extortion

Public violence

Other (specify)

Specify other offence

_____

Duration of current sentence

_____

Length of time already served

_____

Did you commit the offence you are currently sentenced for?

Yes No Refused

If you answered "yes" to the above, what was your motivation for the offence?

What were the circumstances surrounding the offence/ your version of the offence?

Were you referred for mental/forensic observation before incarceration?

Yes No Unknown Refused

If "yes" to the above, what was the outcome of the observation?

Not fit to stand trial Fit to stand trial Criminally responsible Not criminally responsible Not known

Do you follow the traditional belief system and practices of your culture?

Yes No Refused

If you answered "yes" to the above, how strongly do you follow your cultural beliefs and practices?

I adhere to some beliefs and practices

I adhere to most of the beliefs and practices

I adhere to all the beliefs and practices

Other (specify)

Specify other

_____

Please list some of your cultural beliefs and practices

Have you ever consulted a traditional healer in the past?

Yes No Refused

When and why

Have you consulted a traditional healer regarding your:

Mental illness (if applicable) Yes No Refused

Not Applicable

Please provide details

HIV (if applicable) Yes No Refused

Not Applicable

Please provide details

Offence Yes No Refused

Please provide details

Do you think your mental illness (if applicable) could be related to any cultural beliefs (eg ancestors, bewitchment, etc)?

Do you think your HIV could be related to any cultural beliefs (e.g ancestors, bewitchment, etc)?

Do you think your being in prison could be related to any cultural beliefs (e.g ancestors, bewitchment, etc)?

Did your cultural beliefs play any role in the current/past offence/s?

Yes No Refused Not applicable

If yes, how?

Have you ever been physically assaulted as an adult?

(making reference to your timeline of the low lights and highlights in your life that was completed by you before the

interview)

Yes No Refused

Have you ever been raped or sexually violated as an adult?

(making reference to your timeline of the low lights and highlights in your life that was completed by you before the interview)

Yes No Refused

Have you ever been emotionally abused as an adult?

(making reference to your timeline of the low lights and highlights in your life that was completed by you before the interview)

Yes No Refused

Have you ever experienced any other form of abuse as an adult?

(making reference to your timeline of the low lights and highlights in your life that was completed by you before the interview)

Yes No Refused

Specify type of abuse

_____

If you answered "yes" to any of the above, please complete trauma timeline (including age at abuse, type of abuse,
perpetrator, disclosure and which was most severe abuse)

If you answered "Yes" to abuse, what type of injuries did you sustain?

(describe each selected)

Soft tissue Fractures Stabbing Gunshot Other

Describe Soft tissue

_____

Describe Fracture

_____

Describe Stabbing

_____

Describe Gunshot

_____

Describe Other

_____

Have you ever required medical attention for injuries sustained from interpersonal violence?

Yes No Refused

Give details

If you have experienced any abuse during your lifetime, do you think it has affected you psychologically?

Yes No Refused Not Applicable

If yes, how has it affected you?

If you have experienced any abuse during your lifetime, do you think it has affected you with regards to your HIV (if applicable)

Yes No Refused Not Applicable

If yes, how has it affected you?

Have you ever engaged in prostitution? Yes No Refused

If yes, provide details of prostitution (Age at start of prostitution, duration of prostitution and reasons for prostitution)

Have you ever been part of a gang before or during incarceration?

Yes No Refused

If yes, provide details (Age at joining gang, gang activities)

Have you ever been exposed to any abuse while in prison (physical, emotional or sexual) - inmate on inmate or official on inmate or intimate partner on inmate?

Yes No Refused

If yes, please provide details of abuse in prison (perpetrator, type of abuse, duration of abuse)

What programmes have you completed while you have been in prison?

Substance rehabilitation Educational Vocational training Social skills Other (specify) None

Specify other programme

_____

What programmes would you like to participate in while you are in prison?

Educational Vocational Substance Rehabilitation Social skills Other (specify) None

Specify other programme you'd like to participate in

_____

What factors do you think have led you to prison?

Economic need Interpersonal/domestic violence Substances Other (specify)

Specify other factors

_____

What are your major worries or concerns during incarceration?

Welfare of children/family

Financial support after release

Coping in prison

Stigma

Other (specify)

None

Specify other major worries or concerns

_____

What factors do you think can prevent you from committing another crime?

Spirituality Family support Financial support Employment Other (specify)

Specify other factors that can prevent you from being imprisoned again

_____

Under whose care are your minor children while you are incarcerated?

Spouse Family Neighbours Unsupervised Child welfare services Unknown

N/A

Have you ever physically/emotionally/sexually abused or physically/emotionally neglected your children prior to

incarceration?

Yes No Not Applicable Refused

If yes, provide details (type of abuse/neglect and reasons for abuse/neglect)

_____

While you have been in prison, have you had any visits from your family or friends?

Yes No N/A Refused

While you have been in prison, have you had any visits from your children?

Yes No N/A Refused

If yes, provide details how frequently do they visit?

Weekly Monthly A few times a year Less than once per year

While you have been in prison, have you had any visits from your spouse?

Yes No N/A Refused

If yes, provide details how frequently do they visit?

Weekly Monthly A few times a year Less than once per year

While you have been in prison, have you had any visits from your parents?

Yes No N/A Refused

If yes, provide details how frequently do they visit?

Weekly Monthly A few times a year Less than once per year

While you have been in prison, have you had any visits from other family members?

Yes No N/A Refused

If yes, provide details how frequently do they visit?

Weekly Monthly A few times a year Less than once per year

While you have been in prison, have you had any visits from your friends?

Yes No N/A Refused

If yes, provide details how frequently do they visit?

Weekly Monthly A few times a year Less than once per year

How does this make you feel?

_____

If no visits from family or friends, please state why?

Financial difficulties Distance Strained relationships Other (specify)

Specify other reason

_____

What effect has this had on you?

_____

Do you have any children staying with you in prison? Yes No Not Applicable

If yes, how many?

_____

Who will care for your baby after they turn 2?

Spouse Family Institutional care Foster care Other (specify)

If yes, what are the challenges you face raising a child/children in prison?

Physically stressful Emotionally stressful Financially stressful Other (specify)

Specify other challenges

_____

Specify other to care for the baby

_____

What are your major worries/concerns about life after release?

Accommodation Employment Financial support Family support Stigma

None Other (specify)

Specify other concern

_____

What are your plans on release?

_____

Appendix K

World Health Organisation Adverse Childhood Experiences International Questionnaire (ACE-IQ)

Demographic Information

C1. Sex Male Female

C2. What is your date of birth? Date of birth known Unknown

Today's date

_____

C2. Date of Birth

_____

(Day [ ][ ] Month [ ][ ] Year [ ][ ][ ][ ])

C3. How old are you?

_____

C4. What population group do you identify as?

Black African White Coloured Indian Other (specify) Refused

Specify other

_____

C5. What is the highest level of education you have completed?

No formal schooling

Less than primary school

Primary school completed

Secondary/High school completed

College/University completed

Post graduate degree

Refused

C6. Which of the following best describes your main work status over the last 12 months (before incarceration)?

Government employee

Non-government employee

Self-employed

Non-paid

Student

Homemaker

Retired

Unemployed (able to work)

Unemployed (unable to work)

Refused

Please specify job description

_____

C7. What is your civic status?

Married (Go to Q.M2)

Living as couple

Divorced or separated

Single

Widowed (Go to Q.M2)

Other

Refused

Specify other

_____

Marriage

M1. Have you ever been married? Yes No (Go to Q.M5)

Refused

M2. At what age were you first married? Age Refused

Please write age

_____

(Age [ ][ ])

M3. At the time of your first marriage did you yourself choose your husband/wife?

Yes (Go to Q.M5) No Don't know / Not sure Refused

M4. At the time of your first marriage if you did not choose your husband/wife yourself, did you give your consent to the choice?

Yes No Refused

M5. If you are a mother or father what was your age when your first child was born?

Age Not applicable Refused

Please write age

_____

(Age [ ][ ])

RELATIONSHIP WITH PARENTS/GUARDIANS

When you were growing up, during the first 18 years of your life . . .

P1. Did your parents/guardians understand your problems and worries?

Always

Most of the time

Sometimes

Rarely

Never

Refused

P2. Did your parents/guardians really know what you were doing with your free time when you were not at school or work?

Always

Most of the time

Sometimes

Rarely

Never

Refused

P3. How often did your parents/guardians not give you enough food even when they could easily have done so?

Many times

A few times

Once

Never

Refused§

P4. Were your parents/guardians too drunk or intoxicated by drugs to take care of you?

Many times

A few times

Once

Never

Refused

P5. How often did your parents/guardians not send you to school even when it was available?

Many times

A few times
Once
Never
Refused
Family Environment
When you were growing up, during the first 18 years of your life . . .
F1. Did you live with a household member who was a problem drinker or alcoholic, or misused street or prescription drugs?
Yes
No
Refused
F2. Did you live with a household member who was depressed, mentally ill or suicidal?
Yes
No
Refused
F3. Did you live with a household member who was ever sent to jail or prison?
Yes
No
Refused
F4. Were your parents ever separated or divorced?
Yes
No
Not applicable
Refused
F5. Did your mother, father or guardian die?
Yes
No
Don't know / Not sure
Refused
These next questions are about certain things you may actually have heard or seen IN YOUR
HOME. These are things that may have been done to another household member but not

necessarily to you.

When you were growing up, during the first 18 years of your life . . .

F6. Did you see or hear a parent or household member in your home being yelled at, screamed at, sworn at, insulted
or humiliated?

Many times

A few times

Once

Never

Refused

F7. Did you see or hear a parent or household member in your home being slapped, kicked, punched or beaten up?

Many times

A few times

Once

Never

Refused

F8. Did you see or hear a parent or household member in your home being hit or cut with an object, such as a stick (or cane), bottle, club, knife, whip etc.?

Many times

A few times

Once

Never

Refused

These next questions are about certain things YOU may have experienced. When you were growing up, during the
first 18 years of your life . . .

A1. Did a parent, guardian or other household member yell, scream or swear at you, insult or humiliate you?

Many times

A few times

Once

Never

Refused

A2. Did a parent, guardian or other household member threaten to, or actually, abandon you or throw you out of the house?

Many times

A few times

Once

Never

Refused

A3. Did a parent, guardian or other household member spank, slap, kick, punch or beat you up?

Many times

A few times

Once

Never

Refused

A4. Did a parent, guardian or other household member hit or cut you with an object, such as a stick (or cane), bottle, club, knife, whip etc?

Many times

A few times

Once

Never

Refused

A5. Did someone touch or fondle you in a sexual way when you did not want them to?

Many times

A few times

Once

Never

Refused

A6. Did someone make you touch their body in a sexual way when you did not want them to?

Many times

A few times

Once

Never

Refused

A7. Did someone attempt oral, anal, or vaginal intercourse with you when you did not want them to?

Many times

A few times

Once

Never

Refused

A8. Did someone actually have oral, anal, or vaginal intercourse with you when you did not want them to?

Many times

A few times

Once

Never

Refused

Peer Violence

These next questions are about BEING BULLIED when you were growing up.

Bullying is when a young person or group

of young people say or do bad and unpleasant things to another young person. It is also bullying when a young

person is teased a lot in an unpleasant way or when a young person is left out of things on purpose. It is not bullying

when two young people of about the same strength or power argue or fight or when teasing is done in a friendly and

fun way.

When you were growing up, during the first 18 years of your life . . .

V1. How often were you bullied?

Many times A few times Once Never (Go to Q.V3) Refused

V2. How were you bullied most often?

I was hit, kicked, pushed, shoved around, or locked indoors

I was made fun of because of my race, nationality or colour

I was made fun of because of my religion

I was made fun of with sexual jokes, comments, or gestures

I was left out of activities on purpose or, completely ignored

I was made fun of because of how my body or face looked

I was bullied in some other way

Refused

This next question is about PHYSICAL FIGHTS. A physical fight occurs when two young people of about the same strength or power choose to fight each other.

When you were growing up, during the first 18 years of your life . . .

V3. How often were you in a physical fight?

Many times

A few times

Once

Never

Refused

Witnessing Community Violence

These next questions are about how often, when you were a child, YOU may have seen or heard certain things in your NEIGHBOURHOOD OR COMMUNITY (not in your home or on TV, movies, or the radio).

When you were growing up, during the first 18 years of your life . . .

Many times

V4. Did you see or hear someone being beaten up in real life?

Many times

A few times

Once

Never

Refused

V5. Did you see or hear someone being stabbed or shot in real life?

Many times

A few times

Once

Never

Refused

V6. Did you see or hear someone being threatened with a knife or gun in real life?

Many times

A few times

Once

Never
Refused
Exposure To War/Collective Violence
These questions are about whether YOU did or did not experience any of the following events when you were a child.
The events are all to do with collective violence, including wars, terrorism, political or ethnic conflicts, genocide, repression, disappearances, torture and organized violent crime such as banditry and gang warfare.
When you were growing up, during the first 18 years of your life . . .
V7. Were you forced to go and live in another place due to any of these events?
Many times
A few times
Once
Never
Refused
V8. Did you experience the deliberate destruction of your home due to any of these events?
Many times
A few times
Once
Never
Refused
V9. Were you beaten up by soldiers, police, militia, or gangs?
Many times
A few times
Once
Never
Refused
V10. Was a family member or friend killed or beaten up by soldiers, police, militia, or gangs?
Many times
A few times
Once
Never

Appendix L

Semi-structured qualitative interview guide

Dear participant,

Thank you for participating in this second phase of the study. Please be re-assured that your anonymity and confidentiality will be maintained throughout this phase as well. Also please be reminded that this session will be audio-recorded. Please feel free to ask for me to explain if you don't understand any question. If you find any question uncomfortable or distressing, you may choose not to answer.

You have been in prison for a while now. How have you been coping? What has been the most difficult aspect of being in prison? What helps you to cope here?

You revealed that you were HIV positive/negative during our last interview.

If HIV positive: Tell me about the day you were diagnosed with HIV? Has being diagnosed with HIV changed your life in anyway? If so, how? Would your life have turned out any differently if you did not have HIV?

If HIV positive or negative: How do people who come from your community/culture feel about people who have HIV? How do you feel about women who are HIV positive? Has that changed in any way since you have been incarcerated?

The last time we spoke you told me that you had suffered abuse during your childhood and/or adulthood. Do you think this has affected your life in any way? If so, how? Do you think your life would have turned out any differently if you did not suffer this abuse? If so, how?

How do people from your community/culture view mental illness for example depression? How do you feel about people who suffer from mental illnesses?

You also told me previously about some of your cultural beliefs/practices. Can you tell me more about this? What is your cultural identity? Do your cultural beliefs influence your life? If so, how?

If the Department of Correctional Services, had to come up with a programme to help women improve their mental health, what do you think they should include in this programme?

Is there anything else that you feel is important that you would like to share with me?

Thank you kindly for your participation.

Appendix M

Turnitin Report and Plagiarism declaration

The similarity index appears high (31%) however, this is largely due to the fact that two papers were already published at the time the report was generated (23/02/2022). These two papers account for 20% of similarity. Therefore actual similarity index is only 11%. In addition, the entire thesis has been thoroughly re-checked to ensure that all sources have been referenced accordingly and no plagiarism is present.

PhD Thesis version 14 without appendices.pdf

ORIGINALITY REPORT

31%	29%	18%	3%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	www.frontiersin.org Internet Source	8%
2	sajp.org.za Internet Source	7%
3	Samantha Naidoo, Ugasvaree Subramaney, Saeeda Paruk, Liezel Ferreira. "Mental illness and HIV amongst female inmates in Durban, South Africa", The South African Journal of Psychiatry : SAJP : the Journal of the Society of Psychiatrists of South Africa Internet Source	5%
4	www.ncbi.nlm.nih.gov Internet Source	2%
5	doaj.org Internet Source	1%
6	link.springer.com Internet Source	<1%
7	hdl.handle.net Internet Source	<1%

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

FACULTY OF HEALTH SCIENCES

PLAGIARISM DECLARATION TO BE SIGNED BY ALL HIGHER DEGREE STUDENTS

SENATE PLAGIARISM POLICY: APPENDIX ONE

I Samantha Naidoo (Student number: 1792160) am a student registered for the degree of Doctor of Philosophy in the academic year 2022

I hereby declare the following:

- I am aware that plagiarism (the use of someone else's work without their permission and/or without acknowledging the original source) is wrong.
- I confirm that the work submitted for assessment for the above degree is my own unaided work except where I have explicitly indicated otherwise.
- I have followed the required conventions in referencing the thoughts and ideas of others.
- I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this is not my own unaided work or that I have failed to acknowledge the source of the ideas or words in my writing.
- I have included as an appendix a report from "Turnitin" (or other approved plagiarism detection) software indicating the level of plagiarism in my research document.

Signature: Naidoo Date: 2022/02/25

1