



**The experiences and social factors influencing the behavior of incarcerated rapists in a male prison in KwaZulu-Natal, South Africa.**

**by**

**Lindokuhle Blessing Ngubane**

**201507832**

**Supervisor: Dr. L. Qulu**

**Co-Supervisor: Prof. M. V. Mabandla**

*Submitted as the dissertation component in partial fulfilment for the degree of*

**Master of Medical Science**

**In the Discipline of Human Physiology**

**School of Laboratory Medicine and Medical Sciences**

**College of Health Sciences**

**University of KwaZulu-Natal**

**2022**

## **Preface**

Rape is a global pandemic with severe health and economic adversities. South Africa is amongst the leading countries to record high rate of sexual violence, especially rape against women and children. Majority of sexual offences is predominantly perpetrated by men. However, in South Africa there is a dearth research aimed at understanding the factors and circumstances that contributes to the behaviour of a rape perpetrator, most research focuses on the victims. To better understand various factors that influence the behaviour of rape perpetrator, we adopted an *Integrated Theory of Sexual Offending* approach to design a qualitative research study. This study investigated early life adversities experienced by rape perpetrators and how these experiences may have influenced their adult behaviour, using an interview platform. The first objective of the study was to investigate the experiences of incarcerated rapists and whether there is an association between early life trauma and rape. The second objective was to investigate the association between exposure to violence, poverty, gender inequality and pornography with rape. The third objective was to investigate the influence of culture and religion with rape. We hypothesized that men incarcerated for rape would be exposed to childhood trauma, violence, poverty, alcohol abuse, pornography, gender inequality and these factors influence their behaviour to commit rape. Furthermore, the culture and religion of men incarcerated for rape would influence their behaviour towards rape perpetration.

Our findings indicated that majority of incarcerated rape perpetrators were exposed to at least one early life adversity. Additionally, most perpetrators failed to take responsibility. Recidivism was also common from participants.

## Declaration

I, **Lindokuhle Blessing Ngubane** (student number: 201507832), declare that:

The dissertation titled: **The experiences and social factors influencing the behavior of incarcerated rapists in a male prison in KwaZulu-Natal, South Africa** is my investigation. The research has not been submitted to any Tertiary Institution for obtaining any academic qualification.

This research was supervised by Dr Lihle Qulu and Prof. M.V. Mabandla



Student: Lindokuhle Blessing Ngubane

DATE



Supervisor: Dr L. Qulu

DATE



Co-Supervisor: Prof M. V. Mabandla

06 April 2023

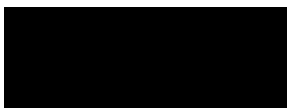
DATE

**Plagiarism declaration**  
**School of Laboratory Medicine and Medical Sciences, College of Health**  
**Sciences**

**MASTER’S DEGREE IN MEDICAL SCIENCES 2022**

1. I know that plagiarism is wrong. Plagiarism is to use another's work and pretend that it is one's own.
2. Contributions and quotation from the works of other people have been attributed and has been cited and referenced.
3. This thesis is my work.
4. I have not allowed and will not allow anyone to copy my work with the intention of passing it off as his or her own work.

**Signature**\_\_\_\_\_

A solid black rectangular box used to redact the signature of the student.

\_\_\_\_\_

## **Acknowledgements**

I would like to acknowledge the contributions of the following individuals to my study:

- The Lord without His Will, Guidance and Protection, I would have not persevered through challenging times to finish my study.
- Dr Lihle Qulu, for unconditional support and patience (which I know I have tested your limits). I am grateful that you remained my supervisor in this journey even though it was challenging at times. Without your insight, guidance and motivation this project would have collapsed. You are a true “mbokodo” the rock, and a “nkanyamba” a calm mother of all typhoons.
- Professor Musa Mabandla, for agreeing to be my supervisor after Dr. Qulu left UKZN.
- Dr S. Ramlall and Abigail Wilkinson, for always providing an additional fresh perspective view to the study.
- Professor R. Moletsane, for guidance on developing and analysing a qualitative research. Thank you for your sense of humour, you always made our meetings interesting and fun.
- My family, firstly my wife for the encouragement, support and being my pillar. Thank you for sharing my dream to further my studies. Secondly, my parents and siblings, thank you for your motivation and prayers to help me finish my study.
- Ms. K. Bhamjee, for prison induction and making sure that participants were always available. Most importantly, your motherly and professional nurture made it easy for me to cope with the prison environment.
- Participants for willingly availing themselves for the research.
- Human Physiology Department staff for the assistance and kindness.
- UKZN Research Ethics Committee (REC) for approving my project to be conducted on human participants.
- Department of Correctional Service Research Ethics Committee (REC) for trusting me to follow ethics guidelines to conduct a research on their premises.

## Contents

Preface .....	i
<b>Declaration</b> .....	ii
Plagiarism declaration.....	iii
<b>Acknowledgements</b> .....	iv
Table of figures.....	viiviii
Abbreviations.....	ixix
Study Outline .....	x
Abstract.....	xii
Chapter 1.....	1
Background.....	1
Integrated Theory of Sexual Offending.....	2
The Psychopathology of Sexual Offenders.....	3
Biological and neurological influences.....	4
Neurobiology.....	4
Effect of Early Life Trauma on the brain.....	5
Role of HPA Axis as a stress response system.....	5
The hippocampus.....	6
Psychosocial factors.....	7
Parental neglect and poverty.....	8
Alcohol and Drug usage.....	10
Violence and Apartheid.....	10
Personal factors.....	10
Neuropsychology.....	13
Motivational / emotional system.....	13
The Action selection and control system.....	13
The Perception and memory system.....	14
Aims and Objectives.....	14
References.....	15
Chapter 2.....	30

Abstract.....	30
Introduction.....	31
Methodology.....	34
Design.....	34
Participants and settings.....	34
Procedure.....	35
Data analysis.....	36
Results and Discussion.....	36
Demographic layout of the sample.....	36
Emerging themes.....	39
Theme 1: Childhood trauma and adverse events.....	39
Absent father.....	40
Orphaning (being raised without parents).....	40
Exposure to criminal or violent behavior.....	40
Early physical abuse.....	41
Early Sexual abuse.....	42
Family poverty.....	42
Theme 2: Understanding rape.....	44
Rape as sex by force and without consent.....	44
Rape as a violent act .....	45
Rape as sex with a minor.....	45
Myths about rape.....	45
Theme 3: Substance abuse.....	47
History of alcohol and drug use.....	47
Intoxication during rape perpetration.....	47
Theme 4: Gender roles and avoiding responsibility.....	48
Victim blaming.....	49
Rape as male prerogative.....	49

Transactional sex.....	50
Being framed or "set-up".....	51
Ignoring an ancestral call.....	50
Theme 5: Recidivism.....	51
Conclusion.....	52
Clinical, Legal and Policy Implications.....	52
Strengths and limitations.....	54
Acknowledgement.....	54
References.....	55
Chapter 3.....	62
Synthesis.....	62
Future recommendations.....	64
Study limitations.....	66
Reference.....	67
Chapter 4 (Appendices).....	84
Appendix A.....	84
Semi-Structured Interview Scheduled questions.....	84
Appendix B.....	88
Information document.....	88
Consent.....	90
Appendix C.....	93
Ethics Approval letters.....	93
UKZN BREC.....	93
Department of Correctional Service.....	94



### Table of figures

Figure	Title	Page
Chapter 2 manuscript		
<b>Figure 1</b>	Diagram displaying the integrated theory of sexual offending	<b>2</b>
<b>Table 1</b>	Showing the demographic information of the perpetrators and the victims	<b>37</b>
<b>Table 2</b>	Table showing main Themes and Sub-themes associated with rape perpetration	<b>39</b>

## **Abbreviations**

ACTH – adrenocorticotrophic

COMT - catechol-O-methyltransferase

CTA – Child trauma and adversity

CRH – corticotrophin-releasing hormone

GR – glucocorticoid receptors

HPA – hypothalamic pituitary adrenal axis

ITSO - Integrated Theory of Sexual Offending

MAO-O – monoamine oxidase-A

MR – mineralocorticoids receptors

OXT – oxytocin

PTSD – post-traumatic stress disorder

PVN – paraventricular nucleus

SHRP – stress hypo-responsive period

## **STUDY OUTLINE**

This dissertation is presented in manuscript format divided into four (4) chapters. The abstract provides the overview and summarizes the findings, of the study. Chapter 1 is a literature review which is a discussion of topics covered by the study. Chapter 2 is a manuscript submitted to, and published by *Frontiers in Psychology*, the research paper aims to investigate factors and experiences that influence the behavior of rape male incarcerated perpetrator. The research paper is authored by LB Ngubane, R Moletsane, J Nothling, A Wilkinson and L Qulu. Chapter 3 is the synthesis, future recommendations and limitations. Chapter 4 is the appendices for the study, includes Semi-Structured Interview questionnaire used during the interviews, Information document with informed consent, UKZN Research Ethics Committee approval letter, and Department of Correctional Service Research Ethics Committee approval letter.

## Abstract

**Introduction:** South Africa is amongst the leading countries in the world to record high rate of sexual violence against women and children. South Africa has been labelled “the rape capital of the world” with 116 rape cases reported daily. Sexual violence against women and children is a global pandemic with severe health problems, economic burden and a major violation of women’s / children’s human right. The overwhelming majority of sexual offences against women and children is perpetrated by men. However, international and South African research has been largely focused on exploring the victims behaviour and recovery after rape, with scarcely any research investigating factors that influence the behaviour of the rape perpetrator. To fully explore factors that influence the rape perpetrator *The Integrated Theory of Sexual Offending* approach must be considered.

**Methods:** Men incarcerated for rape were interviewed with a Semi-Structured Interview questions with focal domains of 1) Personal History, 2) Family upbringing and 3) Reason for Incarceration. Questions for domains were drawn from: their personal history and lifepath, childhood history and family history of violence, their perspectives on sexual behaviour, myths or beliefs related to sexual violence and rape, their mentors or role models, perspective on criminal behaviour and cultural contextualization and their religious and spiritual background. Each participant was interviewed privately after voluntary consent. The interview was voice recorded. The data were translated and transcribed. The data were analysed using Thematic and Content analysis methods.

**Results:** Our findings described the experiences of various factors that potentially drive the antisocial and aggressive behaviour on men incarcerated for rape. We found that all participants were exposed to at least one form of childhood trauma. Most participants were exposed to family and/or community violence. The majority of participants avoided taking responsibility for their rape actions and often blamed the victim, and recidivism was common.

**Conclusion:** The study demonstrates a complex personality cycle from being abused to being an abuser. Additionally, the study reveals the need for intervention for children at risk of trauma, neglect and abuse. Finally, the study provides a foundation to explore interlocking biological factors and neuropsychosocial functions and social leaning of the rape perpetrator.

**Key words: incarcerated rapist men, childhood trauma and adversity, rapist behaviour, rape, recidivism**

# Chapter 1

## Background

The South African government has redefined the definition of sexual offences to accommodate for a wider scope of circumstances (Jewkes et al., 2002, Essack and Toohey, 2018). The South African Criminal Law (Sexual Offences and Related matters) Amendment Act, 2007 (Act No. 32 of 2007) refers to rape as “an unlawful and intentional sexual penetration from one person to the other without consent” while sexual assault is referred to as “an act where a person unlawfully and intentionally sexually violates another person without consent, it also refers to an act where a person unlawfully and intentionally inspires a belief in another person that he / she will be sexually violated”. Rape penetration includes genitals, digital and object penetration (Sexual Offences and Related Matters Amendment Act 32, 2007). South Africa is amongst the leading countries globally to report high rate of sexual violence (Jewkes et al., 2013). Sexual offences make 8.5% of serious crimes committed annually and 79% of sexual offences are cases of rape (SAPS, 2019). South Africa is known to report 42 559 cases of rape annually, with an average of 77.4 cases per 100 000 population, while many more cases remain undocumented (Demombynes et al., 2005, Cepeda et al., 2022).

South Africa has been observed to have a higher sexual violence prevalence rate (75%) compared to the global prevalence rate—33% - 66% (Jewkes et al., 2013, Jewkes et al., 2011, White and Smith, 2004). Sexual violence is predominantly committed by men against women and children (Shors et al., 2014, Yapp and Quayle, 2018). The common age group for first-time sexual offenders is during the adolescent stage (Goodey, 2017).

Rape perpetration occurs in two forms, namely intimate partner rape and non-partner rape (Friis-Rødel et al., 2021). Intimate partner rape is perpetrated by an intimate partner of the survivor, e.g. husband, boyfriend or same gender partner (Stiernströmer et al., 2020). In contrast, non-partner rape is perpetrated by a person not in an intimate relationship with the survivor such as a stranger or a person known to the survivor including but not limited to a family member, friend, neighbour, acquaintance, or colleague (Abrahams et al., 2014, Miller and McCaw, 2019). Intimate partner rape has a higher prevalence rate compared to non-intimate partner rape (Miller and McCaw, 2019), with one in four South African women reporting having been raped by their intimate partners (Jewkes et al., 2013, Pronyk et al., 2006). Moreover, intimate partner rape perpetration is commonly less formally reported to the police and has a lower conviction rate than non-partner rape (Steele et al., 2019). Non-partner rape is

commonly high in Africa (4.5-37.5%) compared to other continents, Australia (11.5-21.4%), South America (0.3-20.5%), Asia (0-20.3%), North America (0-16.9%) and Europe (0-15.7%) (Lundrigan et al., 2019). Furthermore, non-partner rape especially by a stranger is commonly associated with violence, use of weapons, insults and physical injuries (Abrahams et al., 2014, Lundrigan et al., 2019). **Most sexual violence perpetrators are known to victims: a third of rape offences are perpetrated by people known to the victim. With a study reporting that 28% of participating men admitted to raping a woman or girl in their life time and 3% admitted to raping a man or boy (Abrahams et al., 2020).**

Sexual offences have far reaching psychological and economic consequences (Voth Schrag et al., 2019). Victims of sexual violence and rape are at higher risk to develop adverse physical outcomes (e.g. sexually transmitted infections, reproductive difficulties, cardiometabolic risk, pregnancy risk) and mental health outcomes (e.g. depression, suicidality, post-traumatic stress disorder, anxiety disorders) compared to victims of other criminality (Dworkin, 2020; Elklit & Christiansen, 2010, 2013; Möller et al., 2014; Nickerson et al., 2013). Victims of rape and the rape perpetration consequences have a significant burden on the economy (Breuer, 2021). In South Africa, the victims' medical and psychological consequences of rape has been estimated to cost between R28.4 and R42.4 billion per year, representing 0.9% and 1.3% of the gross domestic product (GDP), respectively (Muller et al., 2014). Furthermore, the costs involved in legal consultation, prosecution and incarceration is estimated at R48.7 billion per year (Muller et al., 2014). Scholars suggests that sexual offending is influenced by the interaction of multiple factors that eventually leads to sexual offending (Ward et al., 2016).

### **The Integrated Theory of Sexual Offending**

In an effort to explain the underlying causes of rape perpetration, a multi-discipline approach has been proposed, *the Integrated Theory of Sexual Offending (ITSO)*, (Murhula et al., 2019). According to this theory biological functions (e.g. genetics, evolution) and social learning (e.g. the individual's social and cultural environment, personal circumstance and physical environment) collectively impact on an individual's neuropsychological functioning which includes emotional state, ability to act appropriately, to control emotions, perceptions of reality and modeling memories related to socially acceptable behavior (Ward & Beech, 2006). The combination of emotional, social and cognitive difficulties may result in deviant behavior (e.g. anti-social behavior and an impaired ability to be accountable for actions) and sexual offences (Ward et al., 2016) (see figure 1).

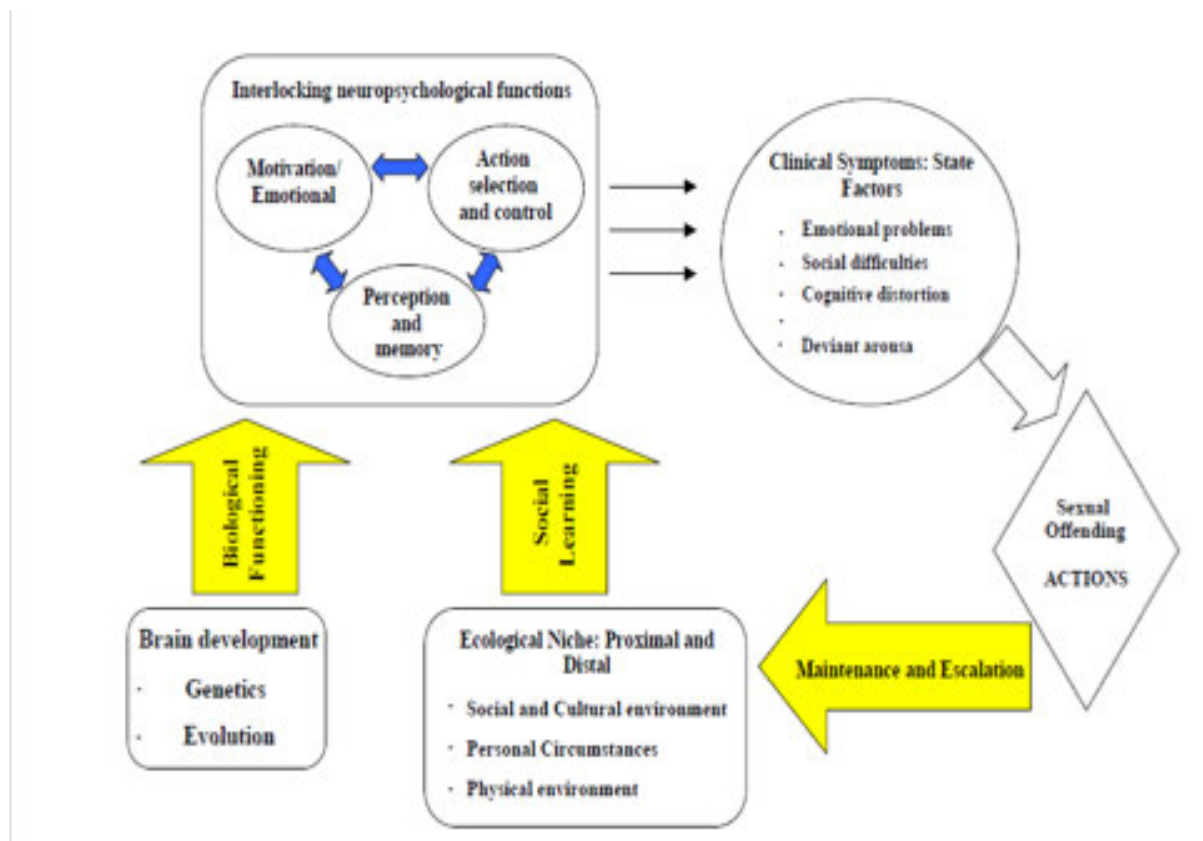


Figure 1. *Schematic outline to illustrate The Integrated Sexual Offending model*

The Integrated Sexual Offending (ITSO) approach gives a comprehensive psychopathological analysis of human behavior by examining multiple factors such as the etiology level (genetic and evolutionary factors affecting psychopathology), brain mechanisms (etiological factors affecting the development and functioning of the brain like chronic abuse), neuropsychological analysis (brain-based psychological mechanisms informing human behavior) and symptom analysis (characterization of psychopathology like deviant behavior and mood disturbances) (Pennington, 2002, Gantana et al., 2015). Literature suggests that several biological, ecological, neuropsychological and agency-level factors converge to cause sexual perpetration (Ward et al., 2016, Ybarra and Thompson, 2018).

### The psychopathology of sexual offenders



The ITSO approach suggests that biological factors, ecological factors, neuropsychological factors and symptomatic factors merge to cause sexual perpetration and to better understand the causes of sexual perpetration, it is therefore crucial to investigate these factors in relation to each other (Pennington, 2002, Ward et al., 2016).

### **Biological and neurological influences**

Biological factors include brain development and genetic inheritance/evolution. Biological factors have been associated with abnormal brain development such as malfunctioning inherited mating problems and regulating sexual behavior using hormonal activity (Zietsch et al., 2010). Genetic determinants are hereditary material of an organism through its evolution and have a role in the development of cognitive, motivational and behavioral characteristics of an offspring (Sterelny, 2012). Early life experience affects the brain development and gene expression, meaning that early experience affects a gene's instructions for creating protein or other products that lead to growth and development (Hambrick et al., 2019). The effects to the brain development depends on the underlying individual genetic characteristics (Chen and Baram, 2016). The ITSO approach suggests that the evolution of human beings attributed to genetics, individual leaning and cultural processes where genetic factors may be predisposed to seek some basic goods (such as sexual satisfaction, autonomy) whereas learning in a particular cultural context, influence the social behavior in achieving outcomes (Ward, 2014).

Biological factors (such as neurotransmitter, brain structure and neurophysiology) has been associated with aggression, violence and antisocial behaviour linked to sexual perpetration (Cupaioli et al., 2021).

Brain processes that involves the functioning of neurotransmitters and neural pathways can affected by 1) disruption due to brain abnormalities (e.g., high level of cortisol can compromise action selection and control system leading to impulsive behavior) and 2) by calibration of systems (e.g. high sex hormones increases sex appetite) (Siever, 2008, van der Gronde et al., 2014, Specker et al., 2018). The brain is central to modulate the response to stress as well as responding physiological and behavioral responses (Morilak et al., 2005, Freedman and Zaami, 2019). The brain response to stressors is adaptive due to it structurally and functional plasticity including neuronal replacement, dendric remodeling and synapse turnover (McEwen, 2017). Early life adversity is one of the common brain stressors (chronic or temporal) that affects the normal brain development and processes (Hambrick et al., 2019).

### **Effect of Early Life Trauma on the brain.**

Early life trauma is defined as an exposure to a stressful event at an early stage of life such as prenatal, postnatal and adolescence (Bilbo and Schwarz, 2012, Short and Baram, 2019). Early life trauma occurs in a form of social, physical, emotional and environmental event for example maternal postpartum depression, loss of a parent, parental neglect, violence (domestic and community), abuse (psychological, physical, emotional and sexual abuse) and poverty (Huang, 2014, De Bellis and Zisk, 2014, Dube et al., 2002, Malave et al., 2022). Childhood trauma and adversity (CTA) has been identified as a risk factor for sexual offences and rape perpetration (Abbey et al., 2011, Bendall, 2010, De Bellis and Zisk, 2014, Jewkes et al., 2010). Exposure to trauma and adversity affects the neuroendocrine, autonomic, immune and metabolic mediators that can lead to maladaptation with long lasting impact on the brain. (Lupien et al., 2018, Mackey et al., 2017, Majcher-Maślanka et al., 2017, Malarbi et al., 2017, Novick et al., 2018). The main brain parts responsible for the stress response is the amygdala and the hypothalamic pituitary adrenal (HPA) axis (Spencer and Deak, 2017).

### **Role of Hypothalamic pituitary adrenal (HPA) axis as a stress response system**

The ability of humans to regulate stress response is by means of the hypothalamic pituitary adrenal (HPA) axis (Lightman et al., 2020). The HPA axis is a system of complex inter-linked, multi-structural regions and neuromodulators in the brain responsible for the response to stressful circumstances (Bevans et al., 2005, Smith and Vale, 2022). The HPA axis consists of neuroendocrine mechanisms that involve hypothalamus, anterior pituitary gland and adrenal gland (Ashburner et al., 2004, Herman et al., 2016). The HPA axis modulates various physiological and behavioural responses to stressors (Veenema and Neumann, 2007, Vermetten and Bremner, 2002, Malarbi et al., 2017).

When exposed to a stressor, hypophysiotropic neurons in the medial parvocellular subdivision of the hypothalamic paraventricular nucleus (PVN) release corticotropin-releasing hormone (CRH) located in the hypophysial portal vessels connected to the anterior pituitary gland (Dou et al., 2019). CRH then binds to the receptors on the pituitary corticotropes leading to the production of adrenocorticotropin (ACTH) which is released into the peripheral circulation (Sherin and Nemeroff, 2011, Malave et al., 2022). The ACTH binds to the zona fasciculata on the adrenal cortex at the top of kidneys, activating the release of glucocorticoids from the adrenal cortex. Glucocorticoids downstream HPA axis activity and modulate physiological changes using intracellular receptors (Gądek-Michalska et al., 2017, O'connor et al., 2000). The secretion of glucocorticoids activates the production of cortisol (Russell and Lightman,

2019). Increased levels of blood cortisol due to a stressor triggers a negative feedback on the hypothalamus ceasing the secretion of CRH enabling cortisol levels to return to homeostatic levels (Kinlein and Karatsoreos, 2020). Cortisol homeostasis is essential for survival as it mediates biological changes associated with a normal stress response (Bilbo and Schwarz, 2012, Kempke et al., 2015). However, chronic exposure to stressors like early life or childhood trauma adversity may increase or decrease the level of cortisol that is not inhibited by a negative feedback, disrupting the HPA axis and leading to stress induced neurological complications, physiological and behavioural impairments (Chrousos and Gold, 1992, Epel, 2009). Hypercortisolism (elevated cortisol level) has been associated with childhood sexual abuse, panic disorder, obsessive compulsive disorder, melancholic depression and alcoholism (Kinlein and Karatsoreos, 2020). Hypocortisolism (low cortisol level) has been demonstrated in people exposed to early life trauma and suffering from impaired cognition and depressed mood later in life (Raison and Miller, 2011, Hart, 1988, Delima and Vimpani, 2011, Lupien et al., 2018). Stress regulation is also dependent to hippocampus (Kim et al., 2015).

### **The hippocampus**

The hippocampus is an extension of temporal part of cerebral cortex with densely packed S-shaped neurons (Mackey et al., 2017). The hippocampus modulates the HPA axis via negative feedback by activating glucocorticoid receptor (GR) and mineralocorticoids receptors (MR) (Kinlein and Karatsoreos, 2020). When glucocorticoids are secreted and circulate in response to a stressor, the MR and GR are activated (Otten and Meeter, 2015). The majority of basal glucocorticoids bound to MR (which has the highest affinity for glucocorticoids) but as glucocorticoids increase due to stress response, the GR binding to glucocorticoids is activated (Anand and Dhikav, 2012, Mifsud and Reul, 2018). This activation then triggers the negative feedback loop which cease the secretion of glucocorticoids by the HPA axis (Tottenham and Sheridan, 2010, Kim and Yoon, 1998, Kim et al., 2015). The chronic presence of GR in earlier life has been reported to disrupt the negative feedback by the HPA axis in later life (Vázquez, 1998, Catalani et al., 2011, Joëls et al., 2018). Some scholars argue that early life trauma affects the adult hippocampus (Teicher et al., 2018). Childhood stress and trauma do not only disrupt the hypothalamus and hippocampus but also affect other brain structures and their functioning, such as the amygdala (Giannopoulou, 2012, Bremner, 2022).

The commonly affected brain regions during a stress response include the amygdala, hippocampus and cortical regions such as the insula, anterior cingulate and orbitofrontal region

(Lim et al., 2015, Bremner, 2022). These regions are primarily responsible for executive functions of the brain, emotional regulation, and cognitive processing of decision making (Bilbo and Schwarz, 2012, Delima and Vimpani, 2011, Kodituwakku and Kodituwakku, 2014, Vermetten and Bremner, 2002). Early life exposure to trauma has been associated with an increased response in the amygdala and hippocampus (Marusak et al., 2015) and further supports the theory that early life trauma exposure may alter neurobiological ascription of salience to emotional cues (Dannlowski et al., 2012). These brain regions form a neural circuit that regulate the adoption of stress and fear conditioning (Bremner, 2005). Dysregulation of the neural circuit has been associated with mental and health disorders like depression and post-traumatic stress disorder (PTSD) (Dube et al., 2002, McTeague et al., 2020, Bremner et al., 2007).

Childhood brain regions manifest in different developmental changes in both HPA axis activity and cortisol reactivity (Bevans et al., 2005, Tarullo and Gunnar, 2006) leading to a different age vulnerability to early life stress (Lupien et al., 2009, Heim et al., 2010). Different brain regions show different developments, for an example, the hippocampus develops fully by 2 years, the amygdala develops up until the late 20s, while the prefrontal cortex develops fully between 8 and 25 years (Heim et al., 2010). Stressors increase the impact of adversity on the developing brain. hence chronic and continuous stress may negatively affect neurodevelopment and affect stress responses later in life, thereby increasing vulnerability for stress psychopathologies in adulthood (Lupien et al., 2018). Different childhood adversities as a result of psychosocial factors such as parental neglect (Kilpatrick et al., 2003), poor maternal care (Heider et al., 2006) and loss of parent have been established as risk factors for depression and PTSD in adulthood and associated with rape perpetration (Chu et al., 2013).

### **Psychosocial factors**

Early life trauma can be experienced from various psychosocial factors such as social, personal, cultural circumstances and physical environment (Ward et al., 2016, Diab et al., 2018, Upton, 2020). The psychological system of a person is influenced by biological inheritance and social learning, implying that a person with psychological vulnerabilities will struggle with ecological challenges and more like to be a sexual perpetrator (Chevignard et al., 2017). Furthermore, ecological factors have a significant impact on the etiology of sexual perpetration where specific circumstances trigger the psychological deficits (Chevignard et al., 2017). The ecological factor can be the casual factor for sexual perpetration where an individual capacity

is disrupted by circumstances. Sexual perpetration is a convergence of individual circumstances in a specific habitat (Delavari et al., 2016).

Various ecological factors have been associated with early life trauma adversities such as parental neglect, maternal separation, domestic violence, emotional, physical and sexual abuse (Chemtob et al., 2013, Chu et al., 2013, Corbo et al., 2016, Danese et al., 2009, Delavari et al., 2016, Dragan and Hardt, 2016, Elton et al., 2014, Twardosz and Lutzker, 2010).

### **Parental neglect and poverty**

Parental neglect is defined as a failure of a parent or guardian to fulfil his/her responsibility to provide the basic needs of a child such as proper housing, health care, clothing, nutrition, education and protection from abuse (Campbell et al., 2016, Avdibegović and Brkić, 2020). Parental neglect can be the result of different circumstances such as loss of parent (death, divorce or separation), poverty, unemployment, large family, single parenting, teenage/unplanned pregnancy and long-distance parenting (Chu et al., 2013, Avdibegović and Brkić, 2020).

Parental care mediates the stress hypo-responsive period (SHRP), which is postulated to protect the brain from deleterious impact of increased adrenocortical hormones (Turton and Lingford-Hughes, 2016). In cases where parental care is lacking, the developing HPA axis system no longer has this buffer, leading to exacerbated cortisol levels which can disrupt the development of the brain (Blaisdell et al., 2019). It is, therefore, presumed that sensitive and responsive parental care leads to a secure attachment formation and forms a protective factor against the development of physical, psychological, cognitive and behavioral disorders later in life (Tarullo and Gunnar, 2006, Hildyard and Wolfe, 2002, Friedman and Billick, 2015). **Parental neglect has been heavily associated with sexual offenders and offenders often express symptoms of abnormal neuropsychological and behavioral symptoms associated with parental neglect (Blaisdell et al., 2019).**

Poverty is another psychosocial factor that has been associated with rape perpetration where perpetrators are exposed to unemployment, lack of or low education and poor backgrounds (Gannon et al., 2008, Eralp and Gokmen, 2022). Unemployment and poor background have a negative psychological impact on men, in a culture where men are expected to be providers and protectors (Maneta et al., 2017). It is a common practice across many cultures that men are responsible and expected to provide for the family and any failure to this expectation is

associated with self-doubt leading to low self-esteem (Gannon et al., 2008, Hall et al., 2019). Men with low self-esteem have been observed to be more aggressive, confrontational and controlling (Maneta et al., 2017). Furthermore, unemployed low men with self-esteem are more likely to exhibit a desire to prove a point that they are in charge and in control in their partners/families/communities (Gannon et al., 2008, Jiang, 2020). Factors associated with poor unemployed men have been shown to be a risk indicator for sexual perpetration (Bourgois, 1996, Selvi and Karanfil, 2016). Rape perpetrators describe rape as a way of showing dominance and control over women and it is used indirectly as a tool to conceal insecurities (Bourgois, 1996). In poor communities (such as townships/rural areas) in South Africa, poor men are often found loitering around shops with nothing to do and this creates an opportunity to commit crimes mostly against vulnerable women and children travelling long distances, travelling to/from work at night and travelling in dangerous areas (Jiang, 2020). Low social standard of living has also been associated with alcohol and drug abuse (Liu and Fu, 2022).

### **Alcohol and Drug usage**

Early life adversity has been associated with an increased risk of alcohol intake in adolescence and adulthood (Andersen and Teicher, 2009, Behnken, 2017). Early life adversity may not only disrupt neurohormonal and HPA axis functioning in the brain but can also alter DNA functioning that can change gene expression in the mesolimbic dopamine reward system involved in addiction, making the child more susceptible to alcohol addiction (Moustafa et al., 2021). Alcohol abuse has been linked with increased risk to commit and perpetuate rape offences (Lee et al., 2018) by affecting the brain's cognitive decision making mechanisms (Kunar et al., 2013), impairing rational judgement and increasing a desire for quick sex at all cost (Trautmann et al., 2018). Alcohol and drug abuse has been associated with rape offenders (Jewkes et al., 2002). Rape perpetrators have described alcohol/drug abuse as one of the reasons to rape, using alcohol and drugs to minimize displace responsibility and guilt, and justify the offence (Toots, 2020). Alcohol abuse has been shown to be a risk factor for violence (Hills et al., 2016).

### **Violence and apartheid**

South Africans have historically been exposed to systematic violence (from apartheid, tribal wars, and military warfare) where violence was predominantly used to resolve conflicts and fighting was considered bravery and heroic (Hunter, 2005). This exacerbated violence is associated with abominable cruelty to intimidate, resolve conflicts and impose ascendancy

control (Dommissie, 1986). In such society, the use of force and intimidation becomes unnoticed and be part of life (Dunkle et al., 2004). Intimidation and aggression are often used by rape perpetrators to be in control (Hunter, 2015).

Societies exposed to wars/apartheid endure generational injuries (psychological, emotional, physical and economical) where lifestyle, environment and social factors change forever (Dommissie, 1986). In 1982 the South African Institute of Race Relations reported that South African social order in particular was greatly affected due to apartheid and there was an increased rate of family disruption, divorce and imprisonment. Furthermore, World Health Organization reported that apartheid infringes human right and negatively impact people's lives.

### **Personal factors**

Gender identity refers to how men and women consider themselves in a society based on masculinity and femininity (Marrocco and McEwen, 2016). Gender identity is developed by what the society accept for a particular gender in relation to biological sex (Marrocco and McEwen, 2016). Gender describes the function and role of a person (male and female) in any society (Drieschner and Lange, 1999, LeSuer, 2020). Gender role is affected by societal norms, expectations and culture that often encourage men dominance over women (Giuliano, 2017). Gender inequality considers men superior and women inferior due to “assigned” gender roles, some examples include that men are the heads of the family and provider (due to their physical strength), women are child bearers and belong in the kitchen (perceived as weak and nurturing). Gender inequality perpetuates (directly or indirectly) stereotyping of men and using masculinity to dominate women.

Masculinity refers to the characterization of a male behavior. Some men use their masculinity to ascend control over women (Russell. et al., 2017). Hyper-masculine men are associated with insecurities, hypersensitivity, distrust of women and enjoyment of dominating women (Malamuth et al., 1995, Vechiu, 2019). Hyper-masculinity has been associated with peer pressure, culture and religion where societies expect men to toughen-up, and be dominant and aggressive, while women are expected to be obedient and sensitive (Ryan et al., 2011). In order to be a “real man” amongst peers, it is expected that a man needs to be in control of his woman and men use their masculinity to manifest power and control against women. This can lead to sexual coercion against women (Jewkes et al., 2013). Sexual coercion reaffirms men's superiority and impose obedience and control against women (Kunar et al., 2013). Men



insecure of their masculinity are sensitive to rejection and become anxious in relationships with women. To cope with the rejection and anxiety these men often sexually coerce women (Johansson-Love and Geer, 2003). Additionally, men use coercive sex to reduce women's ability to exercise their freedom of choice (Vechiu, 2019). Poverty can negatively influence a man's masculinity, especially if he cannot provide for the family, and this may lead him to show his dominance in a relationship by coercive sex (Jewkes et al., 2009). Examining social values of manhood provides understanding on how men masculinity affects violent behavior to control women (Hunter, 2005, Mvune, 2020). Societal attitude and behaviour is commonly measured by morality with culture and religion used as a moral compass (LeSuer, 2022).

Studying rape in South Africa requires one to understand the influence of culture and religion in the society behavior (Jewkes et al., 2002, Le Roux, 2013). South Africa is rich with diverse cultures and religions and most South Africans use culture and religion as a foundation and booster for good moral values (Franiuk et al., 2011). However, there is a view that culture and religion places men above women and indirectly perpetuate men's entitlement over women (Dunkle et al., 2004, Kalra and Bhugra, 2013, Vanderwoerd and Cheng, 2017). Religious scriptures such as Ephesians 5:22-23, instructs "Wives, submit yourselves unto your own husbands, as unto the Lord. For the husband is the head of the wife, even as Christ is the head of the church" and 1 Corinthians 7:4 "For the wife does not have authority over her own body, but the husband does" (Kalmanofsky, 2017). These scriptures can be viewed as perpetuating the societal belief that men are in control of women and that a husband has conjugal rights over his wife (Edwards et al., 2011). Similarly, the Skanda Purana, a sacred text of Hinduism instructs that "a wife should take her meals after her husband, sleep after he sleeps. If he assaults her, she should not lose her temper, she should never sit in an elevated place and never look angrily at her husband." African cultures are no exception, as they expect women to be obedient to their husbands as they are groomed from an early age to be a disciplined wife (Klaw et al., 2005, Chung et al., 2018). Furthermore, in Islam, men are considered to think more rationally and purely than women hence they are considered to be protectors and maintainers of women, and women are obliged to obey men as referred to Al-Qur'an "Men are the protectors and maintainers of women, because Allah has made one of them to excel the other, and because they spend to support them from their means". Rape perpetrators can easily manipulate these religious and cultural beliefs to pursue and justify rape offences (Edwards et al., 2011, Boles et al., 2019). Culture and religion play a significant role in shaping societal attitudes, perceptions and myths about rape (Farrington et al., 2017).



A “rape myth” is defined as a false rape belief held by the offender against the victim (Burt (1980). Rape myths are commonly associated with stigmatization, stereotyping and prejudicing the victim and minimize the perpetrators transgression. Rape myths include beliefs about the victim’s character, appearance and behaviour, motivations and behaviour of the offender and the situational factors of the offence (Johnson and Beech, 2017). Rape myths can be grouped to four categories: 1) blaming the victim, 2) exonerating the offender, 3) minimizing the offence that rape is not serious and it is common, and 4) the belief that only certain women are raped (Persson and Dhingra, 2022). Men exhibit higher levels of rape myth acceptance than women across multiple communities (Abbey et al., 2011, Johnson and Beech, 2017). Rape perpetrators often blame victims as the cause of the rape (Gravelin et al., 2019, Hine and Murphy, 2019).

Pornography is another factor that has been associated with sexual violence (Foubert et al., 2019). Pornography refers to a medium platform (printed or visual) with explicit sexual organs or sexual activity to stimulate sexual arousal (Guggisberg, 2020). The wide spread and easily accessibility of pornography has been associated with the growing concern of pornography addiction. a large content of pornography portrays and perpetuate a notion that: 1) men are in charge and must be satisfied sexually, 2) women are sex objects, 3) women always enjoy and are always ready for sex, and 4) aggression is part of sex (Vera-Gray et al., 2021). Approximately, 94% of pornography depicts women as sex objects for men satisfaction and 88% of porn scenes include physical aggression (Edwards et al., 2011, Foubert et al., 2019). These depictions of gender inequality where men are charge and women are submissive fosters the idea of men’s superiority and women’s inferiority and can lead to sexual violence against women (Vinnakota et al., 2021). Additionally, the majority of men that watch pornography are more likely to reenact the sexual fantasies (Malamuth et al., 2012, Russell, 2013, Guggisberg, 2020).

## **Neuropsychology**

Biological inheritance and social learning can affect the brain development and affect the three interlocking neuropsychological systems; namely motivational/emotional, perception and memory and action selection control that underpin the psychological functioning (Ashburner et al., 2004, Ceccarelli, 2019).

### **Motivational/emotional system**

This system is associated with the following brain structures, the limbic, cortical and brainstem brain structures, mainly responsible for regulating goals and values to influence perception and action selection and adjust motivational state to fit environmental circumstances (Giacolini and Sabatello, 2019). Motivational/emotional system is associated with the amygdala that modulate emotions, fear and pleasure responses and highly sensitive to early or adult life stressors (García-Sancho et al., 2017). The amygdala has been associated with aggressive behavior, anxiety, autism and phobias (Palmer et al., 2010). A disrupted amygdala may cause emotional dysregulation and a disrupted orbital frontal cortex (OFC) which can result in impulsive behavior (Hoffman et al., 2019). Biological inheritance and traumatic experience can affect the amygdala, hippocampus and OFC leading to a defective motivational/emotional system (Mummendey, 2012, Cromwell and Papadelis, 2022). For example, an individual with childhood trauma may fail to identify his/her emotional state and be confused when confronted with emotionally charged situations (Beech and Ward, 2004). Furthermore, an individual with inadequate/adverse early learning may lack skills to develop strong interpersonal relationships resulting in social isolation, attachment and intimacy problems leading to sexual perpetration (Thornton, 2002, Alexander et al., 2021). Such interpersonal functioning is considered a causal psychological risk factors for sexual perpetration and is a cause of a disrupted motivation/emotional system (Ward et al., 2016, Cromwell et al., 2020).

### **The action selection and control system**

This system is associated with several brain structures such as the basal ganglia, frontal cortex, thalamus and striatum (Ridderinkhof et al., 2004). The action selection and control system regulates the planning, implementation and evaluation of actions, emotions and thoughts in relation to achieve individual's goals (Mann et al., 2010). Any disruption to the action and control system may give rise to self-regulation dysfunction such as impulsivity, inability to adapt plans to evolving circumstances, poor solving skills, failure to control negative emotions. Such deficits of action selection and control system are considered risk factors for sexual perpetration (Beech and Ward, 2004, Ward and Beech, 2016).

### **The perception and memory system**

The perception and memory system is linked with the hippocampus and posterior neocortex (Yonelinas, 2013, Tresp et al., 2019). The system process incoming sensory information and construct representations of objects and events, and make them available to two other systems (ROME, 1976). Malfunctioning of the perception and memory system leads to maladaptive

beliefs, attitude, incorrect interpretations of social encounters (Brosch et al., 2013). Impaired perception and memory systems distort the individual's view and perspective, impacting the reasoning for action and actions plans which are likely to upset/harm oneself or others (Mann et al., 2010). Such deficits in the perception and memory system are also considered risk factors for sexual perpetration (Mann et al., 2010, Connor and Knierim, 2017).

The ITSO approach considers levels of risk factors across casual multiple fields.

### **Aims and objectives**

This study aimed to investigate the experiences of incarcerated male rapists and how these experiences may influence their behaviour. The first objective was to investigate the experiences of incarcerated rapists and whether there was an association between early life trauma and rape. The second objective was to investigate the association between exposure to violence, poverty, gender inequality and pornography with rape. The third objective was to investigate the influence of culture and religion with rape. We hypothesized that men incarcerated for rape would have been exposed to childhood trauma, violence, poverty, alcohol abuse, pornography, gender inequality and that these factors would be associated with rape. Furthermore, the culture and religion of men incarcerated for rape would influence their behaviour towards rape perpetration.

### **References**

- Abbey, A., Jacques-Tiura, A. J. & Lebreton, J. M. 2011. Risk factors for sexual aggression in young men: An expansion of the confluence model. *Aggressive behavior*, 37, 450-464.
- Abbey, A., McAuslan, P. & Ross, L. T. 1998. Sexual assault perpetration by college men: The role of alcohol, misperception of sexual intent, and sexual beliefs and experiences. *Journal of Social and Clinical Psychology*, 17, 167-195.
- Abrahams, N., Devries, K., Watts, C., Pallitto, C., Petzold, M., Shamu, S. & Garcia-Moreno, C. 2014. Worldwide prevalence of non-partner sexual violence: a systematic review. *The Lancet*, 383, 1648-1654.
- Abrahams, N., Mhlongo, S., Chirwa, E., Lombard, C., Dunkle, K., Seedat, S., Kengne, A. P., Myers, B., Peer, N. & Garcia-Moreno, C. M. 2020. Rape survivors in South Africa:

- analysis of the baseline socio-demographic and health characteristics of a rape cohort. *Global health action*, 13, 1834769.
- Altintas, M. & Bilici, M. 2018. Evaluation of childhood trauma with respect to criminal behavior, dissociative experiences, adverse family experiences and psychiatric backgrounds among prison inmates. *Comprehensive Psychiatry*, 82, 100-107.
- Anand, K. S. & Dhikav, V. 2012. Hippocampus in health and disease: An overview. *Annals of Indian Academy of Neurology*, 15, 239.
- Andersen, S. L. & Teicher, M. H. 2009. Desperately driven and no brakes: developmental stress exposure and subsequent risk for substance abuse. *Neuroscience & Biobehavioral Reviews*, 33, 516-524.
- Ashburner, J., Friston, K. J. & Penny, W. 2004. Human brain function. *Academic Press, Burlington*, ed. 2, 707-722.
- Beech, A. R. & Ward, T. 2004. The integration of etiology and risk in sexual offenders: A theoretical framework. *Aggression and violent behavior*, 10, 31-63.
- Bendall, C. 2010. The domestic violence epidemic in South Africa: legal and practical remedies. *Women's Studies*, 39, 100-118.
- Bevans, K., Cerbone, A. B. & Overstreet, S. 2005. Advances and future directions in the study of children's neurobiological responses to trauma and violence exposure. *Journal of Interpersonal Violence*, 20, 418-425.
- Bilbo, S. D. & Schwarz, J. M. 2012. The immune system and developmental programming of brain and behavior. *Frontiers in neuroendocrinology*, 33, 267-286.
- Blaisdell, K. N., Imhof, A. M. & Fisher, P. A. 2019. Early adversity, child neglect, and stress neurobiology: From observations of impact to empirical evaluations of mechanisms. *International Journal of Developmental Neuroscience*, 78, 139-146.
- Blanche, M. T., Blanche, M. J. T., Durrheim, K. & Painter, D. 2006. *Research in practice: Applied methods for the social sciences*, Juta and Company Ltd.
- Borrell-Carrio, F., Suchman, A. L. & Epstein, R. M. 2004. The biopsychosocial model 25 years later: principles, practice, and scientific inquiry. *The Annals of Family Medicine*, 2, 576-582.
- Bourgois, P. 1996. In search of masculinity: violence, respect and sexuality among Puerto Rican crack dealers in East Harlem. *The British Journal of Criminology*, 36, 412-427.
- Braun, V. & Clarke, V. 2006. Using thematic analysis in psychology. *Qualitative research in psychology*, 3, 77-101.
- Braun, V., Clarke, V. & Terry, G. 2014. Thematic analysis. *Qual Res Clin Health Psychol*, 24, 95-114.

- Bremner, J. D. 2005. Effects of traumatic stress on brain structure and function: relevance to early responses to trauma. *Journal of trauma & dissociation*, 6, 51-68.
- Bremner, J. D. 2022. Traumatic stress: effects on the brain. *Dialogues in clinical neuroscience*.
- Bremner, J. D., Elzinga, B., Schmahl, C. & Vermetten, E. 2007. Structural and functional plasticity of the human brain in posttraumatic stress disorder. *Progress in brain research*, 167, 171-186.
- Brosch, T., Scherer, K., Grandjean, D. & Sander, D. 2013. The impact of emotion on perception, attention, memory, and decision-making. *Swiss medical weekly*, 143, w13786-w13786.
- Burt, M. R. 1980. Cultural myths and supports for rape. *Journal of personality and social psychology*, 38, 217.
- Campbell, C., Roberts, Y., Synder, F., Papp, J., Strambler, M. & Crusto, C. 2016. The assessment of early trauma exposure on social-emotional health of young children. *Children and Youth Services Review*, 71, 308-314.
- Caravaca Sanchez, F., Ignatyev, Y. & Mundt, A. P. 2019. Associations between childhood abuse, mental health problems, and suicide risk among male prison populations in Spain. *Criminal behaviour and mental health*, 29, 18-30.
- Carpenter, L. L., Shattuck, T. T., Tyrka, A. R., Geraciotti, T. D. & Price, L. H. 2011. Effect of childhood physical abuse on cortisol stress response. *Psychopharmacology*, 214, 367-375.
- Carrera-Fernandez, M. J., Guardia-Olmos, J. & Pero-Cebollero, M. 2014. Qualitative methods of data analysis in psychology: an analysis of the literature. *Qualitative Research*, 14, 20-36.
- Catalani, A., Alema, G. S., Cinque, C., Zuena, A. R. & Casolini, P. 2011. Maternal corticosterone effects on hypothalamus–pituitary–adrenal axis regulation and behavior of the offspring in rodents. *Neuroscience & Biobehavioral Reviews*, 35, 1502-1517.
- Chemtob, C. M., Gudino, O. G. & Laraque, D. 2013. Maternal posttraumatic stress disorder and depression in pediatric primary care: association with child maltreatment and frequency of child exposure to traumatic events. *JAMA pediatrics*, 167, 1011-1018.
- Chevignard, M., Kerrouche, B., Krasny-Pacini, A., Mariller, A., Pineau-Chardon, E., Notteghem, P., Prodhomme, J., LE Gall, D., Roulin, J.-L. & Fournet, N. 2017. Ecological assessment of everyday executive functioning at home and at school following childhood traumatic brain injury using the BRIEF questionnaire. *The Journal of head trauma rehabilitation*, 32, E1-E12.
- Chrousos, G. P. & Gold, P. W. 1992. The concepts of stress and stress system disorders: overview of physical and behavioral homeostasis. *Jama*, 267, 1244-1252.

- Chu, D. A., Williams, L. M., Harris, A. W. F., Bryant, R. A. & Gatt, J. M. 2013. Early life trauma predicts self-reported levels of depressive and anxiety symptoms in nonclinical community adults: Relative contributions of early life stressor types and adult trauma exposure. *Journal of Psychiatric Research*, 47, 23-32.
- Colorado, R. A., Shumake, J., Conejo, N. M., Gonzalez-Pardo, H. & Gonzalez-Lima, F. 2006. Effects of maternal separation, early handling, and standard facility rearing on orienting and impulsive behavior of adolescent rats. *Behavioural processes*, 71, 51-58.
- Corbo, V., Amick, M. A., Milberg, W. P., McGlinchey, R. E. & Salat, D. H. 2016. Early life trauma is associated with altered white matter integrity and affective control. *Journal of Psychiatric Research*, 79, 70-77.
- Danese, A., Moffit, T. E., Harrington, H., Milne, B. J., Polanczyk, G., Pariante, C. M., Poulton, R. & Caspi, A. 2009. Adverse childhood experiences and adult risk factors for age-related disease: depression, inflammation, and clustering of metabolic risk markers. *Archives of pediatrics & adolescent medicine*, 163, 1135-1143.
- Dannlowski, U., Stuhrmann, A., Beutelmann, V., Zwanzger, P., Lenzen, T., Grotegerd, D., Domschke, K., Hohoff, C., Ohrmann, P. & Bauer, J. 2012. Limbic scars: long-term consequences of childhood maltreatment revealed by functional and structural magnetic resonance imaging. *Biological psychiatry*, 71, 286-293.
- De Bellis, D. M. & Thomas, L. A. 2003. Biologic findings of post-traumatic stress disorder and child maltreatment. *Current psychiatry reports*, 5, 108-117.
- De Bellis, M. D., Baum, A. S., Birmaher, B., Keshavan, M. S., Eccard, C. H., Boring, A. M., Jenkins, F. J. & Ryan, N. D. 1999. Developmental traumatology part I: Biological stress systems. *Biological psychiatry*, 45, 1259-1270.
- De Bellis, M. D. & Zisk, A. 2014. The Biological Effects of Childhood Trauma. *Child and Adolescent Psychiatric Clinics of North America*, 23, 185-222.
- Delavari, F., Sheibani, V., Esmacili-Mahani, S. & Nakhaee, N. 2016. Maternal separation and the risk of drug abuse in later life. *Addiction & health*, 8, 107.
- Delima, J. & Vimpani, G. 2011. The neurobiological effects of childhood maltreatment: An often overlooked narrative related to the long-term effects of early childhood trauma? *Family Matters*, 42.
- Demombynes, Gabriel & Özler, B. 2005. Crime and local inequality in South Africa. *Journal of Development Economics*, 76, 265-292.
- Diab, S. Y., Palosaari, E. & Punamaki, R.-L. 2018. Society, individual, family, and school factors contributing to child mental health in war: The ecological-theory perspective. *Child abuse & neglect*, 84, 205-216.
- Dommissie, J. 1986. The psychological effects of apartheid psychoanalysis: social, moral and political influences. *International journal of social psychiatry*, 32, 51-63.

- Dou, J., Montanholi, Y. R., Wang, Z., Li, Z., Yu, Y., Martell, J. E., Wang, Y. J. & Wang, Y. 2019. Corticosterone tissue-specific response in Sprague Dawley rats under acute heat stress. *Journal of thermal biology*, 81, 12-19.
- Dragan, M. & Hardt, J. 2016. Childhood adversities and risk for problematic alcohol use. *Addictive Behaviors*, 59, 65-71.
- Drieschner, K. & Lange, A. 1999. A review of cognitive factors in the etiology of rape: Theories, empirical studies, and implications. *Clinical Psychology Review*, 19, 57-77.
- Dube, S. R., Anda, R. F., Felitti, V. J., Edwards, V. J. & Croft, J. B. 2002. Adverse childhood experiences and personal alcohol abuse as an adult. *Addictive behaviors*, 27, 713-725.
- Dunkle, K. L., Jewkes, R. K., Brown, H. C., Gray, G. E., Mcintyre, J. A. & Harlow, S. D. 2004. Gender-based violence, relationship power, and risk of HIV infection in women attending antenatal clinics in South Africa. *The lancet*, 363, 1415-1421.
- Dworkin, E. R. 2020. Risk for mental disorders associated with sexual assault: A meta-analysis. *Trauma, Violence, & Abuse*, 21, 1011-1028.
- Edwards, K. M., Turchik, J. A., Dardis, C. M., Reynolds, N. & Gidycz, C. A. 2011. Rape myths: History, individual and institutional-level presence, and implications for change. *Sex Roles*, 65, 761-773.
- El-Khodary, B. & Samara, M. 2020. Effectiveness of a school-based intervention on the students' mental health after exposure to war-related trauma. *Frontiers in psychiatry*, 10, 1031.
- Elton, A., Tripathi, S. P., Mletzko, T., Young, J., Cisler, J. M., James, G. A. & Kilts, C. D. 2014. Childhood maltreatment is associated with a sex-dependent functional reorganization of a brain inhibitory control network. *Human brain mapping*, 35, 1654-1667.
- Engel, G. L. 1977. The need for a new medical model: a challenge for biomedicine. *Science*, 196, 129-136.
- Enoch, M.-A. 2011. The role of early life stress as a predictor for alcohol and drug dependence. *Psychopharmacology*, 214, 17-31.
- Epel, E. S. 2009. Psychological and metabolic stress: a recipe for accelerated cellular aging? *Hormones*, 8, 7-22.
- Eralp, A. & Gokmen, S. 2022. The impact of poverty on partner violence against women under regional effects: the case of Turkey. *Journal of interpersonal violence*, 08862605221119515.
- Etikan, I., Musa, S. A. & Alkasim, R. S. 2016. Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5, 1-4.

- Farrington, David, Gaffney, Hannah, Ttofi & M., M. 2017. Systematic reviews of explanatory risk factors for violence, offending, and delinquency. *Aggression and Violent Behavior*, 33, 24-36.
- Ferrari, G., Torres-Rueda, S., Chirwa, E., Gibbs, A., Orangi, S., Barasa, E., Tawwiah, T., Dwommoh Prah, R. K., Hitimana, R. & Daviaud, E. 2022. Prevention of violence against women and girls: A cost-effectiveness study across 6 low-and middle-income countries. *PLoS medicine*, 19, e1003827.
- Fox, B. H., Perez, N., Cass, E., Baglivio, M. T. & Epps, N. 2015. Trauma changes everything: Examining the relationship between adverse childhood experiences and serious, violent and chronic juvenile offenders. *Child Abuse & Neglect*, 46, 163-173.
- Francis, J. J., Johnston, M., Robertson, C., Glidewell, L., Entwistle, V., Eccles, M. P. & Grimshaw, J. M. 2010. What is an adequate sample size? Operationalising data saturation for theory-based interview studies. *Psychology and Health*, 25, 1229-1245.
- Franiuk, Renae, Shain & Ashley. 2011. Beyond Christianity: The status of women and rape myths. *Sex roles*, 65, 783-791.
- Frazier, A., Ferreira, P. A. & Gonzales, J. E. 2019. Born this way? A review of neurobiological and environmental evidence for the etiology of psychopathy. *Personality Neuroscience*, 2, e8.
- Friis-Rodel, A. M., Leth, P. M. & Astrup, B. S. 2021. Stranger rape; distinctions between the typical rape type and other types of rape. A study based on data from Center for Victims of Sexual Assault. *Journal of forensic and legal medicine*, 80, 102159.
- Gadek-Michalska, A., Bugajski, A., Tadeusz, J., Rachwalska, P. & BUGAJSKI, J. 2017. Chronic social isolation in adaptation of HPA axis to heterotypic stress. *Pharmacological Reports*, 69, 1213-1223.
- Gannon, A., T., Collie, M., R., Ward, Tony, Thakker & JO 2008. Rape: Psychopathology, theory and treatment. *Clinical Psychology Review*, 28, 982-1008.
- Gantana, H., Londt, M. P., Ryan, J. & Roman, N. 2015. 'The revolving door': factors that contribute to the recidivism of incarcerated sex offenders in the Western Cape. *Acta Criminologica: African Journal of Criminology & Victimology*, 28, 78-91.
- Garcia-Sancho, E., Dhont, K., Salguero, J. M. & Fernandez-Berrocal, P. 2017. The personality basis of aggression: The mediating role of anger and the moderating role of emotional intelligence. *Scandinavian Journal of Psychology*, 58, 333-340.
- Gard, A. M., Waller, R., Shaw, D. S., Forbes, E. E., Hariri, A. R. & Hyde, L. W. 2017. The long reach of early adversity: Parenting, stress, and neural pathways to antisocial behavior in adulthood. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 2, 582-590.



- Giacolini, T. & Sabatello, U. 2019. Psychoanalysis and affective neuroscience. The motivational/emotional system of aggression in human relations. *Frontiers in psychology*, 9, 2475.
- Giannopoulou, I. 2012. Neurobiological inscriptions of psychological trauma during early childhood. *Psychiatrike= Psychiatriki*, 23, 27-38.
- Guiliano, P. 2017. Gender: An historical perspective.
- Hald, Gert, Martin, Malamuth, Neil M, Yuen & Carlin 2010. Pornography and attitudes supporting violence against women: Revisiting the relationship in nonexperimental studies. *Aggressive Behavior*, 36, 14-20.
- Hart, B. L. 1988. Biological basis of the behavior of sick animals. *Neuroscience & Biobehavioral Reviews*, 12, 123-137.
- Heider, D., Matschinger, H., Bernert, S., Alonso, J. & Angermeyer, M. C. 2006. Relationship between parental bonding and mood disorder in six European countries. *Psychiatry Research*, 143, 89-98.
- Heim, C., Shugart, M., Craighead, W. E. & Nemeroff, C. B. 2010. Neurobiological and psychiatric consequences of child abuse and neglect. *Developmental psychobiology*, 52, 671-690.
- Heinz, A., Kluge, U., Schouler-Ocak, M. & Beck, A. 2016. Alcohol and aggression. *European Psychiatry*, 33, S21.
- Heise, L. L., Raikes, A., Watts, C. H. & Zwi, A. B. 1994. Violence against women: a neglected public health issue in less developed countries. *Social science & medicine*, 39, 1165-1179.
- Herman, J. P., Mcklveen, J. M., Ghosal, S., Kopp, B., Wulsin, A., Makinson, R., Scheimann, J. & Myers, B. 2016. Regulation of the hypothalamic-pituitary-adrenocortical stress response. *Comprehensive physiology*, 6, 603.
- Hoaken, P. N. S. & Stewart, S. H. 2003. Drugs of abuse and the elicitation of human aggressive behavior. *Addictive Behaviors*, 28, 1533-1554.
- Hoffman, A. N., Lam, J., Hovda, D. A., Giza, C. C. & Fanselow, M. S. 2019. Sensory sensitivity as a link between concussive traumatic brain injury and PTSD. *Scientific reports*, 9, 1-11.
- Huang, L.-T. 2014. Early-life stress impacts the developing hippocampus and primes seizure occurrence: cellular, molecular, and epigenetic mechanisms. *Frontiers in molecular neuroscience*, 7.
- Hunter, M. 2005. Cultural politics and masculinities: Multiple-partners in historical perspective in KwaZulu-Natal. *Culture, health & sexuality*, 7, 389-403.

- Hyde, L. W., Byrd, A. L., Votruba-Drzal, E., Hariri, A. R. & Manuck, S. B. 2014. Amygdala reactivity and negative emotionality: divergent correlates of antisocial personality and psychopathy traits in a community sample. *Journal of abnormal psychology*, 123, 214.
- Jackson, R. 2009. Studying religions: the interpretive approach in brief. *European Wergeland Centre: Oslo, Norway*.
- Jewkes, Rachel & Abrahams, N. 2002a. The epidemiology of rape and sexual coercion in South Africa: an overview. *Social science & medicine*, 55, 1231-1244.
- Jewkes, R., FULU, E., ROSELLI, T. & GARCIA-MORENO, C. 2013. Prevalence of and factors associated with non-partner rape perpetration: findings from the UN Multi-country Cross-sectional Study on Men and Violence in Asia and the Pacific. *The lancet global health*, 1, e208-e218.
- Jewkes, R., Levin, J. & Penn-Kekana, L. 2002b. Risk factors for domestic violence: findings from a South African cross-sectional study. *Social science & medicine*, 55, 1603-1617.
- Jewkes, R., Sikweyiya, Y., Morrell, R. & Dunkle, K. 2009. Understanding men's health and use of violence: interface of rape and HIV in South Africa. *Cell*, 82, 3655.
- Jewkes, R., Sikweyiya, Y., Morrell, R. & Dunkle, K. 2010. Why, when and how men rape- Understanding rape perpetration in South Africa. *SA Crime Quarterly*, 2010, 23-31.
- Jewkes, R., Sikweyiya, Y., Morrell, R. & Dunkle, K. 2011. Gender inequitable masculinity and sexual entitlement in rape perpetration South Africa: findings of a cross-sectional study. *PloS one*, 6, e29590.
- Johansson-Love, J. & Geer, J. H. 2003. Investigation of attitude change in a rape prevention program. *Journal of Interpersonal Violence*, 18, 84-99.
- Johnson, J., Adkins, D. & Chauvin, S. 2020. Qualitative research in pharmacy education. *A review of the quality indicators of rigor in qualitative research. AJPE [Internet]*, 84, 138-146.
- Johnson, S. 2019. Understanding the violent personality: antisocial personality disorder, psychopathy, & sociopathy explored. *Forensic Research & Criminology International Journal*, 7, 76-88.
- Kaljee, L., Zhang, L., Langhaug, L., Munjile, K., Tembo, S., Menon, A., Stanton, B., LI, X. & Malungo, J. 2017. A randomized-control trial for the teachers' diploma programme on psychosocial care, support and protection in Zambian government primary schools. *Psychology, health & medicine*, 22, 381-392.
- Kakra, G. & Bhugra, D. 2013. Sexual violence against women: Understanding cross-cultural intersections. *Indian journal of psychiatry*, 55, 244-249.
- Kempke, S., Luyten, P., De Coninck, S., Van Houdenhove, B., Mayes, L. C. & Claes, S. 2015. Effects of early childhood trauma on hypothalamic-pituitary-adrenal (HPA) axis

- function in patients with Chronic Fatigue Syndrome. *Psychoneuroendocrinology*, 52, 14-21.
- Kilpatrick, D. G., Ruggiero, K. J., Acierno, R., Saunders, B. E., Resnick, H. S. & Best, C. L. 2003. Violence and risk of PTSD, major depression, substance abuse/dependence, and comorbidity: results from the National Survey of Adolescents. *Journal of consulting and clinical psychology*, 71, 692.
- Kim, E. J., Pellman, B. & Kim, J. J. 2015. Stress effects on the hippocampus: a critical review. *Learning & memory*, 22, 411-416.
- Kim, J. J. & Yoon, K. S. 1998. Stress: metaplastic effects in the hippocampus. *Trends in neurosciences*, 21, 505-509.
- Kingdon, D., Cardoso, C. & McGrath, J. J. 2016. Research Review: Executive function deficits in fetal alcohol spectrum disorders and attention-deficit/hyperactivity disorder—a meta-analysis. *Journal of Child Psychology and Psychiatry*, 57, 116-131.
- Kinlein, S. A. & Karatsoreos, I. N. 2020. The hypothalamic-pituitary-adrenal axis as a substrate for stress resilience: Interactions with the circadian clock. *Frontiers in neuroendocrinology*, 56, 100819.
- Klaw, E. L., Lonsway, K. A., Berg, D. R., Waldo, C. R., Kothari, C., Mazurek, C. J. & Hegeman, K. E. 2005. Challenging rape culture: Awareness, emotion and action through campus acquaintance rape education. *Women & Therapy*, 28, 47-63.
- Kodituwakku, P. & Kodituwakku, E. 2014. Cognitive and behavioral profiles of children with fetal alcohol spectrum disorders. *Current Developmental Disorders Reports*, 1, 149-160.
- Krumpal, I. 2013. Determinants of social desirability bias in sensitive surveys: a literature review. *Quality & Quantity*, 47, 2025-2047.
- Kunar, A., Nizamie, S. H. & Srivastava, N. K. 2013. Violence against women and mental health. *Ment. Health Prev*, 1, 4-10.
- Le Roux, E. 2013. Sexual violence in South Africa and the role of the church. *Teddington: Tearfund*. Accessed January, 13, 2016.
- Leech, N. L. & Onwuegbuzie, A. J. 2007. An array of qualitative data analysis tools: a call for data analysis triangulation. *School psychology quarterly*, 22, 557.
- Lim, L., Hart, H., Mehta, M. A., Simmons, A., Mirza, K. & Rubia, K. 2015. Neural correlates of error processing in young people with a history of severe childhood abuse: an fMRI study. *American Journal of Psychiatry*, 172, 892-900.
- Lundrigan, S., Dhimi, M. K. & Agudelo, K. 2019. Factors predicting conviction in stranger rape cases. *Frontiers in Psychology*, 526.

- Lupien, S. J., Juster, R.-P., Raymond, C. & Marin, M.-F. 2018. The effects of chronic stress on the human brain: From neurotoxicity, to vulnerability, to opportunity. *Frontiers in Neuroendocrinology*.
- Lupien, S. J., McEwen, B. S., Gunnar, M. R. & Heim, C. 2009. Effects of stress throughout the lifespan on the brain, behaviour and cognition. *Nature reviews neuroscience*, 10, 434.
- Mackey, S., Chaarani, B., Kan, K.-J., Spechler, P. A., Orr, C., Banaschewski, T., Barker, G., Bokde, A. L. W., Bromberg, U., Buchel, C., Cattrell, A., Conrod, P. J., Desrivieres, S., Flor, H., Frouin, V., Gallinat, J., Gowland, P., Heinz, A., Ittemann, B., Pailhere Martinot, M.-L., Artiges, E., Nees, F., Papadopoulos-Orfanos, D., Poustka, L., Smolka, M. N., Jurk, S., Walter, H., Whelan, R., Schumann, G., Althoff, R. R. & Garavan, H. 2017. Brain Regions Related to Impulsivity Mediate the Effects of Early Adversity on Antisocial Behavior. *Biological Psychiatry*, 82, 275-282.
- Mahlangu, P., Chirwa, E., Machisa, M., Sikweyiya, Y., Shai, N. & Jewkes, R. 2021. Prevalence and factors associated with experience of corporal punishment in public schools in South Africa. *PLoS one*, 16, e0254503.
- Majcher-Maslanka, I., Solarz, A., Wedzony, K. & Chocyk, A. 2017. The effects of early-life stress on dopamine system function in adolescent female rats. *International Journal of Developmental Neuroscience*, 57, 24-33.
- Malamuth, Neil M, Hald, Martin, G., Koss & MARY 2012. Pornography, individual differences in risk and men's acceptance of violence against women in a representative sample. *Sex Roles*, 66, 427-439.
- Malamuth, N. M., Linz, D., Heavy, C. L., Barnes, G. & Acker, M. 1995. Using the confluence model of sexual aggression to predict men's conflict with women: a 10-year follow-up study. *Journal of personality and social psychology*, 69, 353.
- Malarbi, S., Abu-Rayya, H. M., Muscara, F. & Stargatt, R. 2017. Neuropsychological functioning of childhood trauma and post-traumatic stress disorder: A meta-analysis. *Neuroscience & Biobehavioral Reviews*, 72, 68-86.
- Malterud, K., Siersma, V. D. & Guassora, A. D. 2016. Sample size in qualitative interview studies: guided by information power. *Qualitative health research*, 26, 1753-1760.
- Maneta, K., E., White & Mezzacappa, E. 2017. Parent-child aggression, adult-partner violence, and child outcomes: A prospective, population-based study. *Child Abuse & Neglect*, 68, 1-10.
- Mamn, R. E., Hanson, R. K. & Thornton, D. 2010. Assessing risk for sexual recidivism: Some proposals on the nature of psychologically meaningful risk factors. *Sexual Abuse*, 22, 191-217.
- Marrocco, J. & McEwen, B. S. 2016. Sex in the brain: hormones and sex differences. *Dialogues in clinical neuroscience*, 18, 373.

- Marusak, H. A., Martin, K. R., Etkin, A. & Thomason, M. E. 2015. Childhood trauma exposure disrupts the automatic regulation of emotional processing. *Neuropsychopharmacology*, 40, 1250.
- Mathews, S., Achyut, P., October, L. & Makola, L. 2021. Evidence Review: Prevention of violence against children through schools in the Global South. *Cape Town: Uganda and University of Cape Town*.
- McEwen, B. S. 2017. Neurobiological and systemic effects of chronic stress. *Chronic stress*, 1, 2470547017692328.
- Mcklveen, J. M., Myers, B. & Herman, J. P. 2015. The medial prefrontal cortex: coordinator of autonomic, neuroendocrine and behavioural responses to stress. *Journal of neuroendocrinology*, 27, 446-456.
- Mcteague, L. M., Rosenberg, B. M., Lopez, J. W., Carreon, D. M., Huemer, J., Jiang, Y., Chick, C. F., Eickhoff, S. B. & Eetkin, A. 2020. Identification of common neural circuit disruptions in emotional processing across psychiatric disorders. *American Journal of Psychiatry*, 177, 411-421.
- Miller, E. K. & Cohen, J. D. 2001. An integrative theory of prefrontal cortex function. *Annual review of neuroscience*, 24, 167-202.
- Mmoffitt, T. E. 2018. Male antisocial behaviour in adolescence and beyond. *Nature human behaviour*, 2, 177-186.
- Morilak, D. A., Barrera, G., Echevarria, D. J., Garcia, A. S., Hernandez, A., MA, S. & Petre, C. O. 2005. Role of brain norepinephrine in the behavioral response to stress. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 29, 1214-1224.
- Mummendey, A. 2012. *Social psychology of aggression: From individual behavior to social interaction*, Springer Science & Business Media.
- Murhula, P. B. B., Singh, S. B. & Nunlall, R. 2019. A critical analysis on offenders rehabilitation approach in South Africa: A review of the literature. *African Journal of Criminology and Justice Studies: AJCJS*, 12, 21-43.
- Ngubane, L., Mkhize, S. & Singh, S. B. 2019. Perceptions and Experiences of Learners on the Banning of Corporal Punishment in South African Schools. *J. Sociol. Soc. Anthropol*, 10, 84-100.
- Novic, A. M., Levandowski, M. L., Laumann, L. E., Philip, N. S., Price, L. H. & Tyrka, A. R. 2018. The effects of early life stress on reward processing. *Journal of Psychiatric Research*, 101, 80-103.
- O'Connor, T., O'Halloran, D. & Shanahan, F. 2000. The stress response and the hypothalamic-pituitary-adrenal axis: from molecule to melancholia. *Qjm*, 93, 323-333.
- Oscar-Berman, M. & Marinkovic, K. 2007. Alcohol: effects on neurobehavioral functions and the brain. *Neuropsychology review*, 17, 239-257.

- Ootten, M. & Meeter, M. 2015. Hippocampal structure and function in individuals with bipolar disorder: a systematic review. *Journal of affective disorders*, 174, 113-125.
- Palmer, R. S., McMahon, T. J., Rounsaville, B. J. & Ball, S. A. 2010. Coercive sexual experiences, protective behavioral strategies, alcohol expectancies and consumption among male and female college students. *Journal of interpersonal violence*, 25, 1563-1578.
- Pennington, B. F. 2002. *The development of psychopathology: Nature and nurture*, Guilford Press.
- Pprice, A., Cook, P. A., Norgate, S. & Mukherjee, R. 2017. Prenatal alcohol exposure and traumatic childhood experiences: A systematic review. *Neuroscience & Biobehavioral Reviews*, 80, 89-98.
- Pronyk, P. M., Hargreaves, J. R., Kim, J. C., Morison, L. A., Phetla, G., Watts, C., BUSZA, J. & Porter, J. D. 2006. Effect of a structural intervention for the prevention of intimate-partner violence and HIV in rural South Africa: a cluster randomised trial. *The lancet*, 368, 1973-1983.
- Raison, C. L. & Miller, A. H. 2011. When Not Enough Is Too Much: The Role of Insufficient Glucocorticoid Signaling in the Pathophysiology of Stress-Related Disorders. *Focus*, 9, 399-410.
- Ridderinkhof, K. R., Van Den Wildenberg, W. P., Segalowitz, S. J. & Carter, C. S. 2004. Neurocognitive mechanisms of cognitive control: the role of prefrontal cortex in action selection, response inhibition, performance monitoring, and reward-based learning. *Brain and cognition*, 56, 129-140.
- Rome, H. P. 1976. The Working Brain: An Introduction to Neuropsychology; Luria's Neuropsychological Investigation: Text, Manual, and Test Cards. *American Journal of Psychiatry*, 133, 349-349.
- Rush, A. J., Trivedi, M. H., Ibrahim, H. M., Carmody, T. J., Arnow, B., Klein, D. N., Markwitz, J. C., Ninan, P. T., Kornstein, S. & Manber, R. 2003. The 16-Item Quick Inventory of Depressive Symptomatology (QIDS), clinician rating (QIDS-C), and self-report (QIDS-SR): a psychometric evaluation in patients with chronic major depression. *Biological psychiatry*, 54, 573-583.
- Russell, D. E. 2013. Pornography and rape: A causal model. *Sexual Assault and Abuse*. Routledge.
- Russell, G. & Lightman, S. 2019. The human stress response. *Nature reviews endocrinology*, 15, 525-534.
- Russell., Kirsten, Hand. & Christophe 2017. Rape myth acceptance, victim blame attribution and Just World Beliefs: A rapid evidence assessment. *Aggression and Violent Behavior*, 37, 153-160.

- Ryan, Kathryn & M 2011. The relationship between rape myths and sexual scripts: The social construction of rape. *Sex Roles*, 65, 774-782.
- Sardinha, L., Maheu-Girroux, M., Stocki, H., Meyer, S. R. & Garcia-Moreno, C. 2022. Global, regional, and national prevalence estimates of physical or sexual, or both, intimate partner violence against women in 2018. *The Lancet*, 399, 803-813.
- Selepe, M., Lndergger, G. & Govender, K. 2021. Discourses in accounts of rape by sex offenders in Limpopo province, South Africa. *South African Journal of Psychology*, 51, 521-532.
- Selvi, Ü. Y. & KARANFIL, D. 2016. Intimate partner violence against women: Effects of power distance, individualism and economy Kadına yönelik yakın partner şiddeti: Güç mesafesi, bireycilik ve ekonominin etkisi. *Journal of Human Sciences*, 13, 60-71.
- Senn, C. Y., Desmarais, S., Verberg, N. & Wood, E. 2000. Predicting coercive sexual behavior across the lifespan in a random sample of Canadian men. *Journal of Social and Personal Relationships*, 17, 95-113.
- Sherin, J. E. & Nemeroff, C. B. 2011. Post-traumatic stress disorder: the neurobiological impact of psychological trauma. *Dialogues in Clinical Neuroscience*, 13, 263-278.
- Shors, T. J., Olson, R. L., Bates, M. E., Sselby, E. A. & Alderman, B. L. 2014. Mental and Physical (MAP) Training: A neurogenesis-inspired intervention that enhances health in humans. *Neurobiology of Learning and Memory*, 115, 3-9.
- Siever, L. J. 2008. Neurobiology of aggression and violence. *American Journal of Psychiatry*, 165, 429-442.
- Ssing, S. B. 2014. "Doing time for crime": The historical development of the different models (approaches) of treatment for incarcerated offenders at the Westville Correctional Centre, Durban, South Africa.
- Smith, S. M. & Vale, W. W. 2022. The role of the hypothalamic-pituitary-adrenal axis in neuroendocrine responses to stress. *Dialogues in clinical neuroscience*.
- Steele, S. J., Abrahams, N., Duncan, K., Woollett, N., Hwang, B., O'Connell, L., VAN Cutsem, G. & Shroufi, A. 2019. The epidemiology of rape and sexual violence in the platinum mining district of Rustenburg, South Africa: Prevalence, and factors associated with sexual violence. *PloS one*, 14, e0216449.
- Sterelny, K. 2012. *The evolved apprentice*, MIT press.
- Stiernstrer, E., Vafors Fritz, M., Mellgren, C. & Khoshnood, A. 2020. Characteristics of convicted male-on-female rapists in the South of Sweden between 2013 and 2018: a pilot study. *Forensic sciences research*, 5, 126-133.
- Tabakoff, B. & Hoffman, P. L. 2013. The neurobiology of alcohol consumption and alcoholism: an integrative history. *Pharmacology Biochemistry and Behavior*, 113, 20-37.

- Tarullo, A. R. & Gunnar, M. R. 2006. Child maltreatment and the developing HPA axis. *Hormones and behavior*, 50, 632-639.
- Tatu, L. & Vuiller, F. 2014. Structure and vascularization of the human hippocampus. *The Hippocampus in Clinical Neuroscience*, 34, 18-25.
- Tteicher, M. H., Anderson, C. M., Ohashi, K., Khan, A., McGreenery, C. E., Bolger, E. A., Rohan, M. L. & Vitaliano, G. D. 2018. Differential effects of childhood neglect and abuse during sensitive exposure periods on male and female hippocampus. *Neuroimage*, 169, 443-452.
- Thornton, D. 2002. Constructing and testing a framework for dynamic risk assessment. *Sexual Abuse: A Journal of Research and Treatment*, 14, 139-153.
- Tiihonen Moller, A., Backstrom, T., Sonderrgarrd, H. P. & Helstrom, L. 2014. Identifying risk factors for PTSD in women seeking medical help after rape. *PloS one*, 9, e111136.
- Tottenham, N. & Sheridan, M. A. 2010. A review of adversity, the amygdala and the hippocampus: a consideration of developmental timing. *Frontiers in human neuroscience*, 68.
- Tresp, V., Sharifzadesh, S. & Konopatzki, D. A model for perception and memory. Conference on Cognitive Computational Neuroscience, 2019.
- Turton, S. & Lingford-Hughes, A. 2016. Neurobiology and principles of addiction and tolerance. *Medicine*, 44, 693-696.
- Twardosz, S. & Lutzker, J. R. 2010. Child maltreatment and the developing brain: A review of neuroscience perspectives. *Aggression and violent behavior*, 15, 59-68.
- Van Der Gronde, T., Kempes, M., Van EL, C., Rinne, T. & Pieters, T. 2014. Neurobiological correlates in forensic assessment: a systematic review. *PloS one*, 9, e110672.
- Vazquez, D. M. 1998. Stress and the developing limbic–hypothalamic–pituitary–adrenal axis. *Psychoneuroendocrinology*, 23, 663-700.
- Vechiu, C. 2019. The Role of Hypermasculinity as a Risk Factor in Sexual Assault Perpetration. *Handbook of Sexual Assault and Sexual Assault Prevention*, 257-273.
- Veenema, A. H. & Neumann, I. D. 2007. Neurobiological mechanisms of aggression and stress coping: a comparative study in mouse and rat selection lines. *Brain Behav Evol*, 70, 274-85.
- Vermetten, E. & Bremner, J. D. 2002. Circuits and systems in stress. II. Applications to neurobiology and treatment in posttraumatic stress disorder. *Depression and anxiety*, 16, 14-38.



- Voth Schrag, R. J., Robinson, S. R. & Ravi, K. 2019. Understanding pathways within intimate partner violence: Economic abuse, economic hardship, and mental health. *Journal of Aggression, Maltreatment & Trauma*, 28, 222-242.
- Ward, T. 2014. The explanation of sexual offending: From single factor theories to integrative pluralism. *Journal of sexual aggression*, 20, 130-141.
- Ward, T. & Beech, A. R. 2016. The integrated theory of sexual offending—revised: A multifield perspective. *The Wiley handbook on the theories, assessment and treatment of sexual offending*, 123-137.
- Ward, T., Fisher, S. & Beech, A. 2016. An integrated theory of sexual offending. *Sexual Offending*. Springer.
- White, J. W. & Smith, P. H. 2004. Sexual assault perpetration and perpetration: From adolescence to young adulthood. *Criminal Justice and Behavior*, 31, 182-202.
- Yapp, E. J. & Quayle, E. 2018. A systematic review of the association between rape myth acceptance and male-on-female sexual violence. *Aggression and violent behavior*, 41, 1-19.
- Yonelinas, A. P. 2013. The hippocampus supports high-resolution binding in the service of perception, working memory and long-term memory. *Behavioural brain research*, 254, 34-44.
- Zietsch, B., Verweij, K., Bailey, J., Wright, M. & Martin, N. 2010. Genetic and environmental influences on risky sexual behaviour and its relationship with personality. *Behavior Genetics*, 40, 12-21.

Chapter 2 is an article published by Frontiers in Psychology.

## **Chapter 2**

### **Why Men Rape: Perspectives from incarcerated rapists in a KwaZulu-Natal Prison.**

**L. Ngubane<sup>1\*</sup>, R. Moletsane<sup>2</sup>, J. Nothling<sup>3</sup>, A Wilkinson T<sup>4</sup>, L. Qulu<sup>5,6,\*</sup>**

*<sup>1</sup>Discipline of Human Physiology, School of Laboratory Medicine and Medical Science, College of Health Sciences, University of KwaZulu-Natal, Durban, KwaZulu-Natal, South Africa*

*<sup>2</sup>Discipline of Education and Development, School of Education, College of Humanities, University of KwaZulu-Natal, Durban, KwaZulu-Natal, South Africa*

*<sup>3</sup>Department of Psychiatry, Faculty of Medicine and Health Science, Stellenbosch University, Cape Town, South Africa*

*<sup>4</sup>Discipline of Psychology, School of Applied Human Sciences, College of Humanities, University of KwaZulu-Natal, Pietermaritzburg, KwaZulu-Natal, South Africa*

*<sup>5</sup>Division of Medical Physiology, Faculty of Medicine and Health Sciences, University of Stellenbosch, Cape Town, South Africa*

*<sup>6</sup>Fellow: Developing Research, Innovation, Localization and Leadership in South Africa (DRILL) College of Health Sciences*

#### **Abstract**

Sexual offending is a global problem but is particularly prevalent on the African continent and in South Africa. Childhood experiences related to abuse, alcohol use, and criminal activities in the household and community has been associated with an increased risk for violence perpetration in adulthood. Less is known about sexual violence perpetration, especially in the South African context. In this study, the experiences of incarcerated male perpetrators of rape in South Africa are investigated along with the collective social context and individual childhood experiences that potentially contribute to rape perpetration. Eighteen male perpetrators of rape who were inmates at Westville Correctional Services in KwaZulu-Natal, South Africa, were interviewed. The semi-structured in-depth qualitative interviews were transcribed, coded and annotated using an interpretive paradigm and thematic analysis approach. Five main themes emerged from the research and included (1) childhood trauma and

adverse events e.g. an absent father, being raised without parents, exposure to criminal or violent behavior, physical abuse, sexual abuse and poverty, (2) understanding rape e.g. rape as sex by force and without consent, rape as a violent act, rape as sex with a minor, myths about rape (3) substance abuse e.g. history of alcohol and drug use, and intoxication during rape perpetration, (4) gender roles and avoiding responsibility e.g. victim blaming, rape as male prerogative, transactional sex, being framed or set-up, ignoring an ancestral call and (5) recidivism. The findings revealed that all rape perpetrators were exposed to at least one childhood trauma type. Family and community violence and criminality was common. Most participants avoided taking responsibility for their actions and blamed the victim and recidivism/prior convictions were often reported. The findings demonstrate the complex personality dynamic involved in the cycle of abuse and the evolution of criminal behavior, starting as a victim and ending as a perpetrator. The findings also highlight the need for interventions aimed at reducing childhood trauma exposure and improving the social and relational context of those at risk for childhood neglect and abuse.

**Key words:** Incarcerated rapist men, childhood trauma and adversity, Rapist behaviour, Rape, recidivism

\*Author for Correspondence: L. Qulu [Qulul@sun.ac.za](mailto:Qulul@sun.ac.za)

## INTRODUCTION

The South African Sexual Offences Act of 2007 defines rape as the genital, anal or oral penetration of the victim (without his/her consent) by the perpetrator. Penetration by the perpetrator includes genital, digital and object-penetration. Adult rape can take on many forms e.g. acquaintance rape also known as date rape (perpetrator is known to the victim), stranger rape (perpetrator not known to victim), spousal rape (perpetrator is a marital partner), compelled rape (when the perpetrator forces the victims to have sex with each other), gang rape (multiple perpetrators) and corrective rape (rape as punishment for homosexuality). The underlying theme of rape, and what defines it as a criminal offence, is that the rape survivor does not consent to the act (*Sexual Offences and Related Matters, Amendment Act 32 of 2007*). Non-partner rape perpetration is particularly high in Africa (4.5% to 37.5%) compared to other continents e.g. Australia (11.5% - 21.4%), South America (0.3% - 20.5%), Asia (0% - 20.2%),

North America (0% - 16.9%) and Europe (0% - 15.7%) (Abrahams et al., 2014). South Africa has been labeled the rape capital of the world with an average of 42 559 cases being reported to the police each year and many more cases remaining unreported (Jewkes et al., 2013; South African Police Service, 2021). Sexual offences make up 8.5% of serious crimes committed annually of which 79% are cases of rape (South African Police Service, 2020). While sexual offences are not exclusively committed by men, men are the predominant perpetrators of sexual offences targeted towards women and children (Yapp and Quayle, 2018). Intimate partner rape (husband, boyfriend or life partner) is more prevalent than non-partner rape (stranger, family member, relative, friend, neighbor, colleague or acquaintance) but is less commonly reported and is associated with a low conviction rate (Abrahams et al., 2014). In general, about a third of rape offences are committed by perpetrators known to the victim (South African Police Service, 2020). Stranger rape is usually associated with more severe violence inflicted on the rape survivor e.g. use of force and threatening or enacting violence using a weapon (Jewkes et al., 2013).

Sexual offences have far reaching psychological and economic consequences. Victims of rape and sexual assault are at higher risk of developing adverse physical (e.g. sexually transmitted infections, reproductive challenges, cardiometabolic risk) and mental health outcomes (e.g. depression, suicidality, posttraumatic stress disorder, anxiety disorders) compared to victims of other trauma types (Dworkin, 2020; Elklit and Christiansen, 2010; Nickerson et al., 2013; Möller et al., 2014). Rape perpetration and victimization places a significant burden on the economy of South Africa with the medical and psychological consequences of rape estimated to cost between R28.4 billion and R42.4 billion per year, representing 0.9% and 1.3% of the gross domestic product (GDP), respectively (Khumalo, et al., 2014). The costs involved in legal consultation, prosecution and incarceration is estimated to be R48.7 billion per year.

A combination of emotional, social and cognitive adversities have been implicated in deviant behavior (e.g. antisocial behavior and an impaired ability to be accountable for actions) and sexual offences (Ward and Beech, 2006). Adverse outcomes are shaped by the individual's social, cultural, physical and interpersonal environment which has an impact on their emotional state, ability to act appropriately, to control emotions, perceptions of reality and modeling memories related to socially acceptable behavior (Ward and Beech, 2006). An important social/environmental factor that shapes emotional and cognitive states in adulthood is childhood trauma exposure (Carr et al., 2013). Men exposed to severe childhood trauma e.g. abuse, neglect, community violence exposure and adverse parenting styles, are more likely than non-exposed men to develop depression, posttraumatic stress disorders, anxiety disorders,

poor cognitive functioning and impaired learning (Gunnar and Vazquez, 2001; Bilbo and Schwarz, 2012; Scoglio et al., 2021). They are also more likely to display violent, antisocial behavior and to become chronic perpetrators of rape (Fox et al., 2015; Piotrowska et al., 2015; Moffitt, 2018). Victimized children also often have more violence supportive attitudes especially when exposed to domestic violence as children along with widespread societal exposure and acceptance of violence against women (Debowska et al., 2021).

Alcohol use during childhood and adolescence is another factor that may disrupt development and result in emotional, social and cognitive deficits (De Bellis and Zisk, 2014). Onset of alcohol use at an early age increases susceptibility to alcohol addiction in later life (Ploj et al., 2003). Childhood trauma has been associated with an increased risk of alcohol abuse in adolescence and adulthood (Andersen and Teicher, 2009), younger age of rape perpetration and more frequent offences (Altintas and Bilici, 2018). Excessive alcohol consumption is associated with increased aggression and likelihood to commit rape (Jewkes et al., 2009), mediated by poor decision making and an increased sex drive (Jewkes et al., 2003).

Social and contextual factors encouraging male entitlement, hyper-masculinity, toxic masculinity and unequal gender norms are other key factors that drive rape perpetration (Maneta et al., 2017; Selepe et al., 2020). Hyper-masculinity and toxic masculinity are associated with insecurities, hypersensitivity, distrust towards women and satisfaction obtained from controlling and dominating women (Malamuth et al., 1996). Rape perpetrators often describe rape as a way to exert power, dominance and control over women and use it indirectly as a tool to conceal insecurities (Selepe et al., 2020). Linked to this, male entitlement, where men believe that they have total control over women and their bodies, influences them to perpetrate sexual violence (Selepe et al., 2020). One study reported that male perpetrators believe that as men, they are entitled to sex with their female partners regardless of their consent, especially if they are married (Adinkrah, 2011).

While there are many studies investigating the social factors influencing male criminal behaviour in general (Fox et al., 2015; Altintas and Bilici, 2018), less is known about the factors that shape sexual violence and rape perpetration specifically. In order to adequately address the issue of rape and sexual violence against women, research that focuses on the factors that influence male rape perpetration is needed. This may be of benefit to rehabilitation programmes and to determine factors associated with recidivism (Abramsky et al., 2014; Selepe et al., 2020). In this study we investigate the experiences of incarcerated male perpetrators of rape in South Africa along with the collective social context and individual childhood experiences that potentially contribute to rape perpetration.

## METHODOLOGY

### Design

We followed an exploratory design using an interpretive paradigm which suggests that reality is not singular or objective but involves an inter-subjective epistemology and ontology (Jackson, 2011). A qualitative approach was used to explore incarcerated men's perspectives on why they have raped. This approach allows the understanding of various participant experiences and further gives insight into contextual and cultural factors that impede or enhance the efficacy and social/ecological validity of interventions (Leech and Onwuegbuzie, 2007). Numerous sexual violence research studies have been conducted globally, but there is a dearth on research focusing on incarcerated male perpetrators of rape. This is especially true in the South African context where rape perpetration is high and violence is normalized following nearly 50 years of institutionalized racial segregation, civil unrest and intergenerational trauma under the South African apartheid regime (Hirschauer, 2014).

### Participants and setting

The study was conducted at Westville Correctional Services (prison) in KwaZulu-Natal, South Africa. Westville Correctional Services is one of the largest correctional facilities in South African and houses approximately 12500 offenders. Westville consists of five correctional centers housing (1) unsentenced offenders awaiting trial, (2) sentenced male maximum security offenders, (3) male short-to-medium security offenders, (4) sentenced youth offenders, and (5) sentenced female offenders. The prison system in South Africa is referred to as correctional services, given that there is a strong focus on rehabilitating offenders and reintegrating them into society once they have served their sentence. Various rehabilitation programmes are offered at Westville and generally focus on developing life skills, psychoeducation, diversion using sports and recreational activities, correcting sexual and aggressive behavior, drug and alcohol use education, promotion of social responsibility and the development of skills to encourage productivity and financial security (Singh, 2014).

For the purpose of this study, we used purposive and convenience sampling to recruit male perpetrators of rape, housed in the sentenced short-to-medium security offenders center. We interviewed a total of 18 participants. All participants were sampled from the same correctional center and data from all participants were used in the analysis. The inclusion criteria were (1) male, (2) between 18 and 65 years, (3) convicted of any rape charge, and (4) incarcerated at

Westville Prison in KwaZulu-Natal. Participants were excluded if they were unable to understand and speak either isiZulu or English, and unable to consent to participating in the study (e.g. due to intellectually disability).

## **Procedure**

All men were recruited through the Head of Psychological Services, who provided them with the study information sheet that described the purpose and procedure of the study. Men who agreed to further contact were invited to meet the researcher (a male Master's student with training in qualitative research methods). The researcher explained the study to potential participants and those interested in taking part completed the informed consent form with the researcher. All interviewees participated voluntarily and were informed that they could withdraw from the study at any time point without any adverse consequences to themselves. Semi-structured interviews were conducted by the researcher to obtain a rich narrative suitable for qualitative analysis. An interview guide with open-ended questions and tentative probes was used to elicit the participants' subjective accounts of (1) their personal history and lifepath, (2) childhood history and family history of violence, (3) their perspectives on sexual behavior, (4) myths or beliefs related to sexual violence and rape, (5) their mentors or role models, (6) perspectives on criminal behavior and cultural contextualization, and (7) their religious and spiritual backgrounds. Participants were interviewed individually in a private consultation room with no guard present to ensure confidentiality. The interviews lasted between one hour to one and a half hours and continued until saturation point was reached. The interviews were audio-recorded with the written permission of participants. The researcher also took notes during the interviews.

The Department of Correctional Service in South Africa approved the study and allowed permission to conduct the research on their premises. The study was approved by the Biomedical Resource Ethics Committee (BREC) of the University of KwaZulu-Natal (BREC No. BE 129/19).

## **Data analysis**

IsiZulu audio recordings were translated to English and all recordings were transcribed for analysis. The recordings were destroyed after transcription as was agreed upon with participants. Thematic analysis was used to analyse the data from the interview transcripts. Thematic analysis allows for the identification and description of themes with an intention to

examine deeper meaning, individual perspectives, assumptions and knowledge of a particular subject in relation to the research question (Braun and Clarke, 2006). The transcripts were read extensively by four researchers who coded and annotated the data to identify underlying themes (Braun and Clarke, 2006). The themes were iteratively subjected to review and refinement during data analysis as per the six phases of thematic analysis described by Braun and Clarke (2006). The themes emerging from the narratives provided illustrates the collective experiences and perspectives of male perpetrators of rape.

## **RESULTS AND DISCUSSION**

### **Demographic layout of the sample**

The sample consisted of eighteen men incarcerated for rape perpetration. The majority of the participants were Black<sup>1</sup>, middle aged, heterosexual and single. Most participants were either unemployed, temporarily employed or supported by their parents/guardians at the time of committing the rape. Most were born and raised in rural areas with low or no education. Participants were sentenced to imprisonment, from 8 years to life (25 years). The majority of the victims were girls under 18 years of age. The majority of participants knew the victim (parents/guardian, partner, neighbor, relative or family friend) before the rape occurred. All participants were single assailant offenders for their convicted rape cases with no gang/group rape. Some participants and a few victims were under the influence of substances (alcohol / drugs) when the offenses were committed. Only a few participants used a weapon at the time of the offense. The demographic layout of the sample is presented in Table 1 and 2.



Table 1: Demographic information of the perpetrators and victims

Participant identifier	Current age of perpetrator	Ethnicity of perpetrator <sup>1</sup>	Sexual Orientation of perpetrator	Education level of perpetrator	Age at the time of perpetration	Relationship status at the time of perpetration	Employment status at the time of perpetration	Home location at the time of perpetration	Legal plea	Sentence (in years)	Victim's age	Victim's sex	Offender - Victim Relationship	Use of Weapon during incident	Offender / Victim Intoxicated during incident
P1	44	Indian	Homosexual	Primary	21	Single	Part-time	Township	Guilty	25	10	Male	Non-Stranger	No	No
P2	46	White	Heterosexual	Secondary	34	Divorced	Part-time	Suburb	Not Guilty	18	15	Female	Non-Stranger	No	Offender
P3	25	Black	Homosexual	Secondary	15	Single	Unemployed	Township	Not Guilty	20	8	Male	Non-Stranger	No	No
P4	65	Indian	Heterosexual	Primary	21	Divorced	Unemployed	Township	Not Guilty	6	18	Female	Non-Stranger	No	No
P5	25	Black	Heterosexual	Secondary	17	Single	Unemployed	Township	Not Guilty	15	16	Female	Stranger	Yes	No
P6	29	Black	Heterosexual	Secondary	27	Single	Part-time	Rural	Not Guilty	8	23	Female	Non-Stranger	No	Both
P7	56	Black	Heterosexual	Primary	49	Married	Full-time	Rural	Not Guilty	18	12	Female	Non-Stranger	No	No
P8	36	Colored	Heterosexual	Secondary	28	Single	Unemployed	Township	Guilty	17	Could not remember	Female	Non-Stranger	Yes	Yes
P9	56	Black	Heterosexual	None	38	Married	Full-time	Rural	Not Guilty	25	14	Female	Non-Stranger	No	No
P10	40	Black	Heterosexual	Secondary	31	Single	Full-time	Rural	Not Guilty	22	11	Female	Non-Stranger	No	No
P11	61	Black	Heterosexual	Primary	48	Single	Full-time	Rural	Guilty	25	28	Female	Stranger	Yes	No
P12	51	Black	Heterosexual	Secondary	48	Single	Part-time	Rural	Not Guilty	17	12	Female	Non-Stranger	No	No
P13	27	Black	Heterosexual	Secondary	23	Single	Unemployed	Township	Not Guilty	15	38	Female	Non-Stranger	No	Both
P14	63	Black	Heterosexual	Secondary	48	Married	Full-time	Rural	Not Guilty	25	14	Female	Non-Stranger	No	No
P15	48	Black	Heterosexual	Secondary	34	Single	Full-time	Rural	Not Guilty	19	27	Female	Non-Stranger	Yes	No
P16	37	Black	Heterosexual	Primary	27	Single	Part-time	Rural	Not Guilty	22	6	Female	Non-Stranger	No	Offender

P17	29	Black	Heterosexual	Secondary	26	Single	Part-time	Rural	Not Guilty	17	27	Female	Non-Stranger	No	Offender
P18	42	White	Heterosexual	Secondary	30	Married	Full-time	Suburb	Guilty	19	13	Female	Non-Stranger	No	No

---

<sup>1</sup> We acknowledge the problematic nature of the racial categorization reminiscent of the apartheid era. We use these categories to illustrate the influence of cultural norms and the gender inequality embedded in them in various communities and groups in South Africa.

## Emerging themes

Five major themes were identified through our analysis, these include (1) childhood trauma and adverse events, (2) understanding rape, (3) substance abuse, (4) perceptions of gender roles and avoiding responsibility, and (5) recidivism. The themes and sub-themes are presented in Table 2.

*Table 2: Main themes and sub-themes associated with rape perpetration*

	Main Theme	Sub-Themes
Theme 1	Childhood trauma and adverse events	Absent father Orphaning (being raised without parents) Exposure to criminal or violent behavior Early physical abuse Early sexual abuse Family poverty
Theme 2	Understanding rape	Rape as sex by force and without consent Rape as a violent act Rape as sex with a minor Myths about rape
Theme 3	Substance abuse	History of alcohol and drug use Intoxication during rape perpetration
Theme 4	Gender roles and avoiding responsibility	Victim blaming Rape as male prerogative Transactional sex Being framed or 'set-up' Ignoring an ancestral call
Theme 5	Recidivism	

### **Theme 1: Childhood trauma and adverse events**

The first theme 'childhood trauma and adverse events' was the most common theme emerging from the findings. The majority of participants reported having been exposed to some sort of adverse experience during childhood and/or adolescence prior to being convicted of rape. The environmental exposure to childhood trauma may have influenced the development and behavior of participants and contributed to the way they perceive rape perpetration and victimization. The sub-themes that emerged were having an absent father, orphaning, exposure to criminal or violent behavior, early physical abuse, early sexual abuse and family poverty.

### ***Absent father***

Most participants indicated that they grew up without a father or father figure in their childhood. Some participants stated that they never knew their father at all because he had died, while others indicated that their father was alive, but not present in their lives:

*My father wasn't there; it was hurtful, and it was painful not to see my father being present. It was very painful to see other families, with my family not there. (Participant 1)*

*My father passed away when I was maybe six months [old]. I was very small. I never grew up with my father...with their fighting I ended up staying with my granny. There is nothing I can say about him. (Participant 8)*

### ***Orphaning (being raised without parents)***

Some participants reported that both of their parents were absent in their childhood and they grew up without a stable parent:

*When I was born, I was taken from my mother and placed in a home of safety where I grew up with my brothers and sisters and they was one [were the ones] that look [looked] after me, change my napkins [nappies/diapers], fed me and things like that. (Participant 1)*

*My parents died when I was very young...I was raised by grandparents and [we] lived together. (Participant 9)*

### ***Exposure to criminal or violent behavior***

Participants reflected on childhood exposure to violence and witnessing family or community members being abused:

*My father stabbed my mother and got arrested. (Participant 16)*

*I witnessed abuse not in my house but in other people's house [houses]...like neighbors, I saw a man hitting his wife. A man gets drunk, fight [fights] with his wife, burns his wife with the oil, all sort things. (Participant 4)*

Many participants reported having family members who have been arrested for interpersonal violence and other criminal activities:

*My brother was arrested because he assaulted a female and he crashed a car on someone. Another brother of mine, up until now I don't know [of] him since 2005 where there was a teacher's strike. (Participant 5)*

*My father's brother who was arrested when I was old [older], my father, my aunt's child and my younger brother was [were] arrested. (Participant 1)*

### ***Early physical abuse***

Some participants indicated that they had been victims of physical abuse during childhood, for example beatings with a sjambok<sup>2</sup>, or being forced into completing manual labor:

*A sjambok was used, they started beating me with it when I was 5. They poured water on me then beat me so that it will stick. (Participant 6)*

*My stepmother came at [to] my father's house around 04:00 and chased me away. I took my belongings, bathed in the river, got dressed and went to school. She [stepmother] would take me and hit me on the floor with [on] my body. (Participant 5)*

*He put the chilies into my eyes, curry powder...and then in my...both eyes, then he put [it] on my mouth, he locked me in the room...[I] can still remember this. I got a good hiding from my father, they tied me to a tree...put sugar water [on me], I was naked, thick sugar water, brown sugar. He pastes it on me, he takes an ant, I can still remember, put an ant there. From one ant it came to many ants and I'm telling you the ants were biting me. I can't forget, up to now, what happened to me that day. (Participant 4)*

Some participant reported strong emotions as a result of punishment:

*You build up anger on [in] you and you swear in your mind, then you think what can I do to this person, it was like that. I had anger on [in] me. Anger to revenge that's [that what's] right. (Participant4)*

*There's sort of hatred...you know when you [you're] growing up as kids, you don't understand why you were punished, because you think you are doing the good [right] things all the time. (Participant 10)*

*I would be angry at her and sometimes wish she dies [would die], because she whipped me, and I was young at that time. I would feel she is abusing me. (Participant 13)*

### ***Early Sexual abuse***

---

<sup>2</sup> Heavy leather / plastic whip

Many participants shared their experience of being sexually abused during childhood and most often by a family member. One participant indicated that he was sexually abused at a young age by his mother and siblings:

*My sexual abuse started when I was [a] small child, I won't say the age cause [because] I won't know the age, but I was abuse [abused] by my mother, by my brothers and sisters. (Participant 1)*

*I was taught by girls how to have sex; I became a laughingstock because I could not be turned on when they were on. They would play with it and they wanted me to sleep with my cousin. Even though it was considered playing, but it was very uncomfortable to [for] me. (Participant 6)*

*My brother put me into [onto] sex when I was about 14 years. My brother found a girl for me...He taught me what do you do when you have a girlfriend...When we slept [together], it was my first time and it was her first time as well. We got stuck to each other and we could not separate. My brother saw that I am [was] trying to pull myself out of her, but I can't [couldn't] and I was crying...remember I don't [did not] know anything. He pulled me out. (Participant 12)*

### ***Family poverty***

Most participants indicated that they grew up poor, with government social grants as a main source of income or their parent(s) earning minimum wage while working as a manual laborer or as a domestic worker:

*When I was small, I use [used] to look for food in the bin because there was no food at home, so it's been like that most of my life. (Participant 1)*

*After his [father's] arrest, we had no income. It was hard, hard, hard. When I tell you hard, it was very hard. (Participant 4)*

Many participants reported that they had to drop out of school to provide for themselves and their families:

*I have standard 8 [grade 10]. I didn't finish school because my mother was alone. When we went to high school, there was [were] 3 of us, since I was older than the 2, it was clear that I should stop [school] so she can continue with the 2. (Participant 12)*

*I was taken out of school to work. During the apartheid that's how things were, the white man said my mother can't stay in [on] the farm without anyone working for the*

*farm. He wanted me to work, for my mother to have a place to stay. That's how I stopped school even though I loved school. (Participant 7)*

*I stopped at standard 6 [grade 8], what I needed the most was education. Unfortunately, the elders were not educated, and they wanted us to herd the cows and didn't [not] go to school. I started school at 16, at that time you are already stubborn.... It was painful, especially when I see other kids going to school. I would leave the cows alone and go to school, the cows would go to people's field [fields] and I would be whipped for it. It was very painful, I really loved to study. (Participant 15)*

The results related to childhood trauma and aversive events support the findings of several prior studies that report a strong link between difficult childhood experiences and rape perpetration (Bendall, 2010; De Bellis and Zisk, 2014; Jewkes et al., 2010). All participants reported at least one form of early adversity, for example, an absent father, exposure to community violence, physical abuse, sexual abuse and poverty. Developmental theories of criminal behavior suggest that abuse and neglect has an especially prominent effect during the first three year of life when bonding and forming a secure attachment with a primary caregiver is of substantial importance in laying the foundation for socially acceptable behavior, driven by a reciprocal relationship of trust, safety, empathy and care (De Bellis and Zisk, 2014; Grady et al., 2021). When a caregiver neglects, abuses or acts inconsistently towards a child, the child is likely to display social withdrawal which may be considered a precursor to antisocial behavior (behavior that causes alarm or distress for others) often displayed by criminals and perpetrators of rape e.g. lack of meaningful relationships, intimacy, empathy, guilt, remorse and morality as well as aggressive, impulsive and violent behavior (Johnson, 2019). The effect of childhood trauma generally accumulates in a dose-response manner with chronic and repeated trauma associated with an incremental increase in antisocial behavior (Cross et al., 2017; Lutz et al., 2017).

Poverty, educational challenges and absent or deceased parents further add to the burden of childhood trauma. South Africa has a high rate of HIV with approximately 13.7% of the population living with HIV and a high rate of concomitant tuberculosis (Karim et al., 2009; Thindwa et al., 2021). Prior to 2004 there were no treatments available for HIV in South Africa and an estimated 3 million South Africans lost their lives to HIV (Johnson et al., 2017). This resulted in many children losing their parents at a young age and an influx in single-parent or child-headed households (Richter and Desmond, 2008). Due to these difficult socio-economic

circumstances many children were forced to abandon their education and resort to the streets to beg for food or work in order to take care of themselves, an ill parent or their younger siblings (Hartell and Chabilall, 2005). This leaves children vulnerable to becoming involved in criminal activities (e.g. stealing, prostitution) and becoming both victims and perpetrators of sexual abuse (Hartell and Chabilall, 2005; Cluver and Gardner, 2006). In the absence of parental care, there is also an absence of support which is a key protective factor against rape perpetration (Cluver and Gardner, 2006).

### **Theme 2: Understanding rape**

The second theme ‘understanding rape’ highlights interviewees’ understandings of what rape is as well as the laws around what constitute rape and common myths associated with rape perpetration. Most participants had some understanding of rape e.g. sex without consent and sex using coercion, force or violence. Other participants lacked a clear understanding of rape. Some participants did not mention consent, and a few did not understand the concept of statutory rape. A few participants were aware of common myths associated with rape and HIV/AIDS. This theme yielded five sub-themes, namely: rape as sex by force, rape as sex without consent, rape as a violent act, rape as sex with a minor and lastly myths about rape.

#### ***Rape as sex by force and without consent***

When asked for a definition of rape, most participants explained that rape was sex by use of force and without consent, which indicates a basic understanding of rape:

*When you force yourself [on] to a woman, that’s what I understand. (Participant 10)*

*It [is] said to be a forcible genital penetration without the consent. (Participant 5)*

*I understand rape as taking a female by force without her consent. (Participant 8)*

Some interviewees also understood that rape without the use of force still constitutes a criminal offence if the victim did not consent:

*Rape is something, for [from] my understanding, is where you have sex with a person, but it’s done without the person’s will. (Participant 1)*

*I understand it as having sex without consent. The one being raped doesn’t enjoy its pleasure, it’s the rapist that enjoy the pleasure. (Participant 13)*

*To me rape is anything with gender, it’s not against a female but without their consent, it’s that simple. (Participant 2)*



### ***Rape as a violent act***

One participant described that rape is often violent and is an act against women:

*What I knew about rape was that a violent person will meet a female, beat her up, tear her underwear and have sex with her.... Also, for those with cars, they would grab a female and take her to their homes and have sex with her as she cries, that's rape.*  
(Participant 9)

### ***Rape as sex with a minor***

A lack of understanding of statutory rape emerged from the data as some participants expressed that the underage victims of their sexual deviant behavior agreed to a sexual act and they were unaware of the legal definition of statutory rape. For example, participant 10, indicated that the victim had no problem, the problem was with the parents:

*Although she was a child [age 13], no one was forced. She was not feeling bad until her parents saw the incident and arrested me, but her, she had no problem.* (Participant 10)

Another participant reported that the underage victim of his sexually deviant behavior gave consent and that both of them did not view the act as rape:

*He [age 8] had no problem when I kissed him. I touched him nicely. He touched me, that means it's all good. According to us, we had no problem, we did this in a [the] right way with a consent between us. No one thinks this is abuse, it never came to him.*  
(Participant 3).

One participant did express understanding that rape includes sex with a minor:

*My understanding of rape is when a man forced himself to [onto] a woman or to a person underage.* (Participant 16)

### ***Myths about rape***

There was some awareness of myths associated with rape among the participants. The choice of words used by participants generally indicated that although they were aware of the myths, they did not necessarily believe them to be true. Some participants reported on myths related to HIV/AIDS and rape:

*To say if you sleep with a small child you won't be infected of [with] HIV. I heard that if you sleep with a small child you get cured of HIV. That's the only one I heard.*  
(Participant 5)

*I've heard in the media about if you've raped a virgin, you'll cure AIDS, all kind of rubbish like that. (Participant 18)*

The legal definition of rape was generally well understood by the participants and is most likely the results of psychoeducation around sexual and aggressive behavior offered as part of the rehabilitation program to prisoners in Westville Correctional Services (Singh, 2014). A common myth, reminiscent of the period before 2004 when HIV denialism in South Africa resulted in a lack of treatment and high mortality rates, is that sex with a virgin will cure HIV infection (Leclerc-Madlala, 2002). An increase in HIV education and a decrease in HIV mortality after 2004 lead many to come to the conclusion that this is nearly a myth and should not be pursued as a cure for HIV (Sivelä, 2016). The myth was mentioned by many participants and acknowledged as a myth.

While rape of an adult women was well understood, rape of a minor was not. Some perpetrators of child rape described the act as consensual and did not view it as an offence. This behavior may be ascribed to the phenomenon where survivors of childhood abuse identify with the perpetrator and internalize the pleasurable experiences of the perpetrator (Maniglio, 2012; Minnaar, 2015; Moffitt, 2018). The act of child rape is generally minimized and rationalized in an effort by the perpetrator to protect themselves against the distraught caused by the reality of their own abuse suffered as a child (Minnaar, 2015). Identifying with a past perpetrator allows the child victim to understand the behavior the perpetrator wants them to display and helps the child to disarm the perpetrator, giving them a sense of control over the situation (McCartan et al., 2015; Johnson, 2019). Unfortunately, the internalization of this sense of control and rationalizing the behavior of the perpetrator is the same internal process the once child victim of abuse uses to justify their actions as a perpetrator of child rape (McCartan et al., 2015; Johnson, 2019). Many perpetrators also reenact their own abusive scenarios in an effort to gain mastery and control over unresolved trauma memories (Ardino, 2012).

### **Theme 3: Substance abuse**

The third theme refers to the use of alcohol and drugs by the participants themselves as well as substance abuse by family members and the influence it had on them as children. The use of substances during rape perpetration was also a common theme. The sub-themes that emerged were history of alcohol use, history of drug use and intoxication during rape perpetration.

### ***History of alcohol and drug use***

Some participants indicated that they used alcohol or drugs frequently. Some also reported selling drugs and being arrested for dealing in drugs:

*I was a 5-year-old, I still remember. I started smoking dagga. I stopped for one year, start [then started] again. I was selling drugs.* (Participant 4)

*I was selling drugs. I was under the influence of alcohol and drugs, that made me do the case [commit the rape].* (Participant 13)

Many participants reported that their parents were alcohol or drug users and dealers:

*He [father] would be drinking heavily.* (Participant 3)

*My mother was drinking but stopped drinking. She would send me to buy her [alcohol].* (Participant 5)

*He [father] became an alcoholic in a way that he never done [did] anything for me.* (Participant 6)

*My father was drinking alcohol. My mother brewed and sell [sold] traditional beer.* (Participant 16)

*My father was arrested [for] selling drugs and dagga.* (Participant 5)

### ***Intoxication during rape perpetration***

Some participants expressed that intoxication was the reason why they committed the rape and are currently incarcerated. These participants believed that intoxication led them to commit rape:

*I think it was alcohol and failing to control my feelings due to alcohol because it happened when I was drunk.* (Participant 6)

*I was under [the] influence of alcohol and drugs, that made me do the case [rape].* (Participant 8)

*I didn't believe it myself, cause when it [rape] happened I was under the influence completely, I drink [drank] a bottle of brandy plus I smoke [smoked] so much weed before [the rape], I was beyond intoxicated. I was out.* (Participant 2)

Historically alcohol and drug abuse are significant health concerns in South Africa (Pienaar and Savic, 2016). Alcohol dependence and early onset of alcohol abuse (in childhood or adolescence) is strongly associated with childhood trauma exposure (Moustafa et al., 2021).

Prolonged alcohol abuse may result in a blunted response to trauma and an impaired ability to recognize antisocial behavior as deviant and potentially harmful to others (Brewer-Smyth et al., 2004; Brewer-Smyth and Burgess, 2019). This may explain the relationship between alcohol abuse and an increased risk for rape perpetration, especially in cases where rape perpetration is explained away by alcohol use (Ramsoomar et al., 2021).

In the past fifteen years there has been a major outbreak of methamphetamine use in South Africa (locally known as Tik) which is often accompanied by gangsterism and is rife in low socio-economic communities characterized by limited policing and addiction care services (Asante and Lentoer, 2017). Methamphetamine use is associated with increased involvement in criminal activities, a high risk for arrest, increased sex drive and aggressive and impulsive behavior, making it a catalyst for rape perpetration (Watt et al., 2017; Stockman et al., 2021). Methamphetamine use is also more prevalent among survivors of childhood sexual abuse and is associated with commercialization of sex and increased HIV risk behavior (Meade et al., 2012; Watt et al., 2017). Given the high prevalence of childhood trauma reported in this study it is not surprising that participants also reported early onset of alcohol and drug use and being under the influence of substances when the rape occurred.

#### **Theme 4: Gender roles and avoiding responsibility**

Traditional gender roles and violation of these roles are often used to justify rape and avoid responsibility for criminal behavior. Women are blamed for provoking men while violence displayed by men is viewed as a legitimized masculine trait. Traditional views on gender roles and methods of avoiding responsibility emerged in the sub-themes and included victim blaming, rape as male prerogative, transaction sex, being framed or ‘set-up’ and ignoring an ancestral call.

##### ***Victim blaming***

A few of the participants indicated that the victims were the ones to initiate sexual contact and they were to blame for rape convictions.

*She was all over me touching me, I realized something was happening. When I turned, she was close to me, we kissed and fell on to the matrass, we kissed for a long time.*  
(Participant 6)

*She came in, she told me she like [likes] me, she came on top of me. I didn't go to her, that's what happened. (Participant 10)*

One participant indicated that he was not to blame for rape since the victim was not a virgin:

*They called, inform me that I'm responsible for damages. I said, we can't speak over the phone, but I didn't take her virginity...I realized that I might be punished for other people's sins. (Participant 5)*

### ***Rape as male prerogative***

Two participants showed a lack of understanding regarding the rape of a spouse because they believed that a husband or long-term intimate partner is entitled to sex at any time with his partner and the partner cannot refuse him sex because they are married or in a long-term relationship:

*The female I'm married too, I can do anything to her, there's something like that in isiZulu [local language and cultural group] saying that my wife can't give me directives, I give directives to her. Whenever if I want to sleep with her, I should. I think others still have that thinking that a woman should listen to me as a man. Even though she is not in a mood that day, but she will do it. I think that is also part of it. (Participant 3)*

*It can happen that you think something is right, but it is not right but as you are educated you realize that it was wrong, like if you knew that, if you are married you can sleep with a woman anytime because you paid for her, but after being educated you realize that it was wrong. I also learned, I thought if you are dating, I can come in anyhow without knocking when she is bathing while she may be uncomfortable, I learnt that. I thought that you can just enter because you are dating. (Participant 16)*

### ***Transactional sex***

One participant indicated that buying a woman something (in this case alcohol) entitled him to sex:

*We had already talked with my friends that since we bought them alcohol, we were going to have sex with them. (Participant 13)*

### ***Being framed or 'set-up'***

Participants indicated that the victims framed them for rape for financial gain:

*I got a very rich sister...she's very rich, so they wanted money, so they set me up with their niece. (Participant 4)*

*The mother of the child wanted me to find a job [for her]. I told her [name of company omitted] doesn't hire women, she wanted me to find a job at [for] cleaning. (Participant 14)*

Participants indicated that they were framed or 'set-up' by the victim due to pressure from the victim's family or on behalf of someone else who was the real rape perpetrator:

*She did what she did to sort her family problems, because her family told her that if she does not arrest me [get me arrested], they would [will] disown her. (Participant 17)*

*To be honest, there is nothing that can make me rape. She did it to protect her uncle because it was obvious, I was arresting [arrested on behalf of] her uncle. Participant 9).*

Another participant reported that his wife framed him for the rape of her child to prevent him from informing both his family and the wife's family of her infidelities.

*She is making sure that I don't go to her family and decided to frame me with rape of her child. (Participant 9)*

### ***Ignoring an ancestral call***

One participant claimed that he was being punished for rape because he ignored his ancestral calling:

*I am supposed to be in prison because I don't [didn't] listen to my ancestors, I ignored their call when they need [needed] something. Now they are punishing me with prison. (Participant 9).*

Many participants avoided taking responsibility for their actions and rationalized the act of rape by externalizing responsibility and rationalizing behavior by blaming it on the victim, gender stereotypes, transactional sex and being set-up by others. These findings correspond with prior findings where avoiding responsibility has been identified as a key characteristic of individuals displaying antisocial behavior (Pronyk et al., 2006; Selepe et al., 2020). Along with the aforementioned factors, substance use (as discussed in the previous section) is also commonly used as a way to avoid responsibility and a direct link between traditional views on gender roles and an increased risk for rape perpetration has been reported (Johnson, 2019; Selepe et

al., 2020). The fact that only four out of the eighteen participants pleaded guilty further illustrates the avoidance of responsibility and potentially the lack of remorse associated with antisocial behavior (Russell and Hand, 2017).

### **Theme 6: Recidivism**

Many participants reported having been involved in criminal activities before being convicted of rape. A few of the participants reported that they had been arrested for rape prior to their current conviction.

*Yes, [arrested for rape for] my sister's kids, my nephews I was charged for my nephews.*  
(Participant 1)

*I was accused for rape and murder, and convicted on rape and assault, so he gave me 2 years for assault and give [gave] me 7 years for rape, that's 9 years.* (Participant 4)

Other participants indicated that they had been accused / arrested for other criminal activities before their current rape conviction.

*I've been arrested for drugs, been arrested for stealing cars now I'm arrested for rape.*  
(Participant 2)

*I was accused once; I was arrested for it and I was not convicted. I was arrested for attempted robbery before and convicted for 5 years.* (Participant 8)

*I was arrested for a house breaking and sentenced nine months.* (Participant 16)

Recidivism was a common theme with participants reporting prior convictions for rape, physical assault, theft, robbery and drug use. Childhood trauma has been identified as a key driver of criminal behavior and multiple conviction, especially if the individual displays antisocial personality traits (Brewer-Smyth and Burgess, 2019; Frazier et al., 2019; Johnson, 2019). Recidivism is also more common when the perpetrator was raised in a context where criminal and violent behavior was common and was condoned by family members, community members or friends (Minnaar, 2015). It is evident from the findings in this study that many participants were exposed to criminal behavior as children since most participants reported the arrest of a parent, sibling or neighbor and this may contribute to a smaller chance of sustained successful rehabilitation following imprisonment and completion of rehabilitation programmes (Naidoo and Van Hout, 2022).

## **CONCLUSION**

In conclusion, in this study it was found that all participants were exposed to at least one form of childhood trauma. The psychological consequences of childhood trauma likely underlie the development of antisocial criminal behavior (Frazier et al., 2019; Johnson, 2019). Many of the key characteristics of antisocial behavior (e.g. lack of empathy, shame and guilt; inability to take responsibility for actions; impulsive, erratic and violent behavior; lack of meaningful intimate relationships; and a lack of morality) were observed in this study and are illustrated by the narratives of the participants (Barnett and Mann, 2013). Rape perpetration was further perpetuated by substance abuse and traditional gender roles. Many participants avoided taking responsibility for the rape and were known to the criminal system with prior offences being a regular occurrence. The findings of the study demonstrate the complicated personality dynamics involved in the cycle of abuse and the evolution of criminal behavior, starting as a victim and ending as a perpetrator (Plummer and Cossins, 2018).

### **Clinical, Legal and Policy Implications**

Since our findings indicate that childhood trauma is the most common underlying experience of convicted rapists, it is worth exploring the current violence prevention strategies in South Africa and to identify room to improve and develop these strategies. Firstly, corporal punishment (including all forms of physical force, pain, discomfort and humiliation as a means to correct inappropriate behavior) has been linked to an increased risk for antisocial and criminal behavior mediated by feelings of fear, guilt and shame and socially inappropriate ways of dealing with danger and displaced anger (Mulvaney and Mebert, 2007; Morris and Gibson, 2011). Although corporal punishment has been outlawed since 1996 in South African schools and in the judicial services, it was only till recently (2019) that corporal punishment in the household was outlawed and to date there is limited effort to enforce the law (Children's amendment bill, 2020). This is likely a reflection of the historical authoritarian approaches to discipline and the still prevalent general acceptance and practice of corporal punishment as a means to correcting problematic behavior (Ngubane, 2019; Mahlangu et al., 2021). The use of corporal punishment is further perpetuated by community violence exposure, domestic violence exposure, low socio-economic status and a lack of parental affection and love (Mahlangu et al., 2021).



A recent review of the literature on successful interventions for prevention of violence against children in the Global South suggest that interventions should be aimed at multiple stakeholders e.g. schools (educator training on positive feedback approaches to discipline and psychosocial support to improve behavior and disclosure of abuse and neglect); parents (positive parenting skills improving the parent-child relationship); learners (psychoeducation); and non-governmental organizations, community leaders and community members (community activism, economic empowerment) (El-Khodary and Samara, 2020). Age and gender specific interventions collectively targeted at the individual, interpersonal, community and society level are also needed (Mathews, et al., 2021). At the adolescent and young adult level prevention of interpersonal violence is key to breaking the cycle of abuse and preventing the exposure of future generations to childhood trauma in the household and community (El-Khodary and Samara, 2020; Mathews, S et al., 2021). In resource limited settings, these interventions should ideally be group-based peer lead interventions that focus on gender norms, healthy relationships and fostering positive coping styles and resilience (Minhyo Cho and Park, 2015; Kaljee et al., 2017). While multiple interventions targeted to multiple groups and on multiple levels may be resource intensive, it does have the potential to be cost-effective if integrated within existing routine service delivery (Bourey et al., 2015; Ferrari et al., 2022).

In general, not much is known about recidivism in South Africa and increasing research efforts are needed in this area, especially given that violence exposure, growing up in a disorganized family structure and substance use are prevalent social problems and are factors contributing to rape perpetration and recidivism (Gantana et al., 2015). Some efforts have been made by the South African judicial system to emphasize the severity of rape in the past 10 to 20 years, for example (1) the duration of incarceration has increased significantly (Thompson, and Simmonds, 2012); (2) since 2007 a register of sexual offenders has been kept although it is only accessible to employers seeking to employ people who work with children and disable people (Sexual Offences and Related Matters Amendment Act 32 of 2007); and (3) since January 2022 all incarcerated rape perpetrators are obligated to provide a DNA samples (if not provided previously) and may not refuse the procedure (Criminal Law Forensic Procedures Amendment Bill, 2022). It is envisioned that storing DNA profiles of rape perpetrators on the National Forensics DNA database will aid in solving cold cases, increase convictions and deter recidivism in the future (Criminal Law Forensic Procedures Amendment Bill, 2022).

The role of current practices around rehabilitation in South African prisons and their potential for reducing recidivism has been questioned, especially in the context of prison overcrowding, prison gang activity and resource constraints (Cameron, 2020). Rehabilitation is further constrained by poor integration into the community following completion of a sentence, due to a lack of employment opportunities, high levels of poverty and low levels of education (Khwela, 2014). Correctional services offer a rehabilitation program that is not compulsory at the point of entry into the system but is rather completed towards the exit point and is an obligation for parole eligibility (Singh, 2014; Murhula and Singh, 2019). The programme follows a 'one size fits all' approach and covers broad categories such as general life skills, health and mental health education, skills development and moral growth (Murhula and Singh, 2019). A few studies investigated rehabilitation programmes in correctional services in South Africa have reported that they lack an individualized targeted approach to discovering the factors that contribute to and sustain criminal behavior (Herbig and Hesselink, 2012). They have also reported that there is an emphasis on completing the rehabilitation programme rather than investigating the behavioral effect/outcome of the programme as a measure of its success (Murhula and Singh, 2019). Rehabilitation approaches such as victim-offender mediation, understanding the impact of individual crimes on the community and enhancing the wellbeing and capabilities of perpetrators have been suggested as complementary measures for successful rehabilitation (Sherman et al., 2015). However, these approaches are costly and may not be a realistic rehabilitation approach given widescale resource constraints in South Africa (Gantana et al., 2015; Murhula and Singh, 2019). Closer investigation into the causes and contributors to rape perpetration and recidivism is needed to proactively prevent rape perpetration and may be more cost-effective and successful than retrospective rehabilitation programmes.

### **Strengths and limitations**

The findings are specific to this study and may not be generalizable to other similar settings. The study is a qualitative study which may inform future complementary quantitative research on the factors that influence sexual violence perpetration in South African males. The study design allowed in-depth exploration of the life experiences of perpetrators of rape that may have contributed to criminal behavior. The translation and transcription of interviews were completed by researchers and not a professional translator which may have resulted in some linguistic nuances being lost.

### **Ethics statement**

The study was approved by the Biomedical Resource Ethics Committee (BREC) of the University of KwaZulu-Natal (BE 129/19), and the Research Ethics Committee of the Department of Correctional Service, South Africa. The participants provided their written informed consent to participate in this study.

### **Author contributions**

LN and LQ conceptualized and designed the study. LN collected, translated and transcribed data, and wrote the manuscript draft. LN, LQ, RM, and AW analyzed data. JN wrote discussion. LN, LQ, RM, AW, and JN read and revised the manuscript. All authors agreed to the submitted version.

**Acknowledgement:** JN is supported by (1) the South African Research Chair in PTSD from the Department of Science and Technology and the National Research Foundation; and (2) the South African Medical Research Council (SAMRC) through its Division of Research Capacity Development under the National Health Scholarship Programme from funding received from the Public Health Enhancement Fund/South African National Department of Health and under the Intra-Mural Postdoctoral Fellowship Programme from funding received from the South African National Treasury. The content hereof is the sole responsibility of the authors and do not necessarily represent the official views of the SAMRC or the funders.

### **REFERENCES**

- Abrahams, N., Devries, K., Watts, C., Pallitto, C., Petzold, M., Shamu, S., et al. (2014). Worldwide prevalence of non-partner sexual violence: a systematic review. *The Lancet* 383, 1648–1654. doi: 10.1016/S0140-6736(13)62243-6.

- Abramsky, T., Devries, K., Kiss, L., Nakuti, J., Kyegombe, N., Starmann, E., et al. (2014). Findings from the SASA! Study: a cluster randomized controlled trial to assess the impact of a community mobilization intervention to prevent violence against women and reduce HIV risk in Kampala, Uganda. 17.
- Adinkrah, M. (2011). Criminalizing Rape Within Marriage: Perspectives of Ghanaian University Students. *Int. J. Offender Ther. Comp. Criminol.* 55, 982–1010. doi: 10.1177/0306624X10371800.
- Altintas, M., and Bilici, M. (2018). Evaluation of childhood trauma with respect to criminal behavior, dissociative experiences, adverse family experiences and psychiatric backgrounds among prison inmates. *Compr. Psychiatry* 82, 100–107. doi: 10.1016/j.comppsy.2017.12.006.
- Ardino, V. (2012). Offending behaviour: the role of trauma and PTSD. *Eur. J. Psychotraumatology* 3, 18968. doi: 10.3402/ejpt.v3i0.18968.
- Asante, K. O., and Lentoor, A. G. (2017). Use of crystal methamphetamine among male adolescents in Cape Town, South Africa: Caregivers' experiences. *Subst. Abuse Treat. Prev. Policy* 12, 18. doi: 10.1186/s13011-017-0102-9.
- Barnett, G. D., and Mann, R. E. (2013). Cognition, Empathy, and Sexual Offending. *Trauma Violence Abuse* 14, 22–33. doi: 10.1177/1524838012467857.
- Bendall, C. (2010). The Domestic Violence Epidemic in South Africa: Legal and Practical Remedies. *Womens Stud.* 39, 100–118. doi: 10.1080/00497870903459275.
- Bilbo, S. D., and Schwarz, J. M. (2012). The immune system and developmental programming of brain and behavior. *Front. Neuroendocrinol.* 33, 267–286. doi: 10.1016/j.yfrne.2012.08.006.
- Bourey, C., Williams, W., Bernstein, E. E., and Stephenson, R. (2015). Systematic review of structural interventions for intimate partner violence in low- and middle-income countries: organizing evidence for prevention. *BMC Public Health* 15, 1165. doi: 10.1186/s12889-015-2460-4.
- Braun, V., and Clarke, V. (2006). Using thematic analysis in psychology. *Qual. Res. Psychol.* 3, 77–101. doi: 10.1191/1478088706qp063oa.
- Brewer-Smyth, K., and Burgess, A. W. (2019). Neurobiology of Female Homicide Perpetrators. *J. Interpers. Violence*, 088626051986007. doi: 10.1177/0886260519860078.
- Brewer-Smyth, K., Burgess, A. W., and Shults, J. (2004). Physical and sexual abuse, salivary cortisol, and neurologic correlates of violent criminal behavior in female prison inmates. *Biol. Psychiatry* 55, 21–31. doi: 10.1016/S0006-3223(03)00705-4.
- Cameron, E. (2020). The crisis of criminal justice in South Africa. *South Afr. Crime Q.* doi: 10.17159/2413-3108/2020/vn69a9253.
- Carr, C. P., Martins, C. M. S., Stingel, A. M., Lemgruber, V. B., and Juruena, M. F. (2013). The Role of Early Life Stress in Adult Psychiatric Disorders: A Systematic Review

According to Childhood Trauma Subtypes. *J. Nerv. Ment. Dis.* 201, 1007–1020. doi: 10.1097/NMD.0000000000000049.

Children's amendment bill 2020 (2020).

Cluver, L., and Gardner, F. (2006). The psychological well-being of children orphaned by AIDS in Cape Town, South Africa. *Ann. Gen. Psychiatry* 5, 8. doi: 10.1186/1744-859X-5-8.

Criminal Law (Forensic Procedures) Amendment Bill (2022).

Cross, D., Fani, N., Powers, A., and Bradley, B. (2017). Neurobiological development in the context of childhood trauma. *Clin. Psychol. Sci. Pract.* 24, 111–124. doi: 10.1111/cpsp.12198.

De Bellis, M. D., and Zisk, A. (2014). The biological effects of childhood trauma. *Child Adolesc. Psychiatr. Clin. N. Am.* 23, 185–222, vii. doi: 10.1016/j.chc.2014.01.002.

Debowska, A., Boduszek, D., Jones, A. D., Willmott, D., and Sherretts, N. (2021). Gender-Based Violence-Supportive Cognitions in Adolescent Girls and Boys: The Function of Violence Exposure and Victimization. *J. Interpers. Violence* 36, 1233–1255. doi: 10.1177/0886260517741628.

Dworkin, E. R. (2020). Risk for Mental Disorders Associated With Sexual Assault: A Meta-Analysis. *Trauma Violence Abuse* 21, 1011–1028. doi: 10.1177/1524838018813198.

El-Khodary, B., and Samara, M. (2020). Effectiveness of a School-Based Intervention on the Students' Mental Health After Exposure to War-Related Trauma. *Front. Psychiatry* 10, 1031. doi: 10.3389/fpsy.2019.01031.

Elklit, A., and Christiansen, D. M. (2010). ASD and PTSD in Rape Victims. *J. Interpers. Violence* 25, 1470–1488. doi: 10.1177/0886260509354587.

Ferrari, G., Vassall, A., and Rueda, S. T. (2022). *The cost-effectiveness of intimate partner violence prevention: Evidence from six low- and middle-income countries*. London School of Hygiene & Tropical Medicine, South African Medical Research Council. South Africa.

Fox, B. H., Perez, N., Cass, E., Baglivio, M. T., and Epps, N. (2015). Trauma changes everything: Examining the relationship between adverse childhood experiences and serious, violent and chronic juvenile offenders. *Child Abuse Negl.* 46, 163–173. doi: 10.1016/j.chiabu.2015.01.011.

Frazier, A., Ferreira, P. A., and Gonzales, J. E. (2019). Born this way? A review of neurobiological and environmental evidence for the etiology of psychopathy. *Personal. Neurosci.* 2, e8. doi: 10.1017/pen.2019.7.

Gantana, H. L., MP, Ryan, J., and Roman, N. (2015). 'The revolving door': factors that contribute to the recidivism of incarcerated sex offenders in the Western Cape. *Acta Criminol. South. Afr. J. Criminol.* 28.

- Grady, M. D., Yoder, J., and Brown, A. (2021). Childhood Maltreatment Experiences, Attachment, Sexual Offending: Testing a Theory. *J. Interpers. Violence* 36, NP6183–NP6217. doi: 10.1177/0886260518814262.
- Gunnar, M. R., and Vazquez, D. M. (2001). Low cortisol and a flattening of expected daytime rhythm: Potential indices of risk in human development. *Dev. Psychopathol.* 13, 515–538. doi: 10.1017/S0954579401003066.
- Hartell, C. G., and Chabilall, J. A. (2005). HIV/AIDS in South Africa: a study of the socio-educational development of adolescents orphaned by AIDS in child-headed households. *Int. J. Adolesc. Youth* 12, 213–229. doi: 10.1080/02673843.2005.9747953.
- Herbig, FJW and Hesselink, AE (2012). Seeing the person, not just the number: Needs-based rehabilitation of offenders in South African prisons. *SA Crime Q.* 41.
- Jackson, R. (2011). The interpretive approach as a research tool: inside the REDCo project. *Br. J. Relig. Educ.* 33, 189–208. doi: 10.1080/01416200.2011.543602.
- Jewkes, R., Fulu, E., Roselli, T., and Garcia-Moreno, C. (2013). Prevalence of and factors associated with non-partner rape perpetration: findings from the UN Multi-country Cross-sectional Study on Men and Violence in Asia and the Pacific. *Lancet Glob. Health* 1, e208–e218. doi: 10.1016/S2214-109X(13)70069-X.
- Jewkes, R. K., Dunkle, K., Nduna, M., Jama, P. N., and Puren, A. (2010). Associations between childhood adversity and depression, substance abuse and HIV and HSV2 incident infections in rural South African youth. *Child Abuse Negl.* 34, 833–841. doi: 10.1016/j.chiabu.2010.05.002.
- Jewkes, R. K., Levin, J. B., and Penn-Kekana, L. A. (2003). Gender inequalities, intimate partner violence and HIV preventive practices: findings of a South African cross-sectional study. *Soc. Sci. Med.* 56, 125–134. doi: 10.1016/S0277-9536(02)00012-6.
- Jewkes, R., Sikweyiya, Y., Morrell, R., and Dunkle, K. (2009). UNDERSTANDING MEN'S HEALTH AND USE OF VIOLENCE: INTERFACE OF RAPE AND HIV IN SOUTH AFRICA. 2.
- Johnson, L. F., May, M. T., Dorrington, R. E., Cornell, M., Boulle, A., Egger, M., et al. (2017). Estimating the impact of antiretroviral treatment on adult mortality trends in South Africa: A mathematical modelling study. *PLOS Med.* 14, e1002468. doi: 10.1371/journal.pmed.1002468.
- Johnson, S. A. (2019). Understanding the violent personality: antisocial personality disorder, psychopathy, & sociopathy explored. *Foresic Res. Criminol. Int. J.* 7. doi: 10.15406/frcij.2019.07.00267.
- Kaljee, L., Zhang, L., Langhaug, L., Munjile, K., Tembo, S., Menon, A., et al. (2017). A randomized-control trial for the teachers' diploma programme on psychosocial care, support and protection in Zambian government primary schools. *Psychol. Health Med.* 22, 381–392. doi: 10.1080/13548506.2016.1153682.

- Karim, S. S. A., Churchyard, G. J., Karim, Q. A., and Lawn, S. D. (2009). HIV infection and tuberculosis in South Africa: an urgent need to escalate the public health response. *The Lancet* 374, 921–933. doi: 10.1016/S0140-6736(09)60916-8.
- Khumalo, B, Msimang, S, and Boolbach, K (2014). Too costly to ignore - the economic impact of gender-based violence in South Africa. *Sonke Gend. Justice*.
- Khwela, M. N. (2014). A Need to Re-integrate Prisoners to the Community: A Case of Polokwane Medium B Prison, South Africa. *ATHENS J. Soc. Sci.* 1, 145–156. doi: 10.30958/ajss.1-2-5.
- Leclerc-Madlala, S. (2002). On the virgin cleansing myth: gendered bodies, AIDS and ethnomedicine. *Afr. J. AIDS Res.* 1, 87–95. doi: 10.2989/16085906.2002.9626548.
- Leech, N. L., and Onwuegbuzie, A. J. (2007). An array of qualitative data analysis tools: A call for data analysis triangulation. *Sch. Psychol. Q.* 22, 557–584. doi: 10.1037/1045-3830.22.4.557.
- Lutz, P.-E., Tanti, A., Gasecka, A., Barnett-Burns, S., Kim, J. J., Zhou, Y., et al. (2017). Association of a History of Child Abuse With Impaired Myelination in the Anterior Cingulate Cortex: Convergent Epigenetic, Transcriptional, and Morphological Evidence. *Am. J. Psychiatry* 174, 1185–1194. doi: 10.1176/appi.ajp.2017.16111286.
- Mahlangu, P., Chirwa, E., Machisa, M., Sikweyiya, Y., Shai, N., and Jewkes, R. (2021). Prevalence and factors associated with experience of corporal punishment in public schools in South Africa. *PLOS ONE* 16, e0254503. doi: 10.1371/journal.pone.0254503.
- Malamuth, N. M., Heavey, C. L., and Linz, D. (1996). The Confluence Model of Sexual Aggression: Combining Hostile Masculinity and Impersonal Sex. *J. Offender Rehabil.* 23, 13–37. doi: 10.1300/J076v23n03\_03.
- Maneta, E. K., White, M., and Mezzacappa, E. (2017). Parent-child aggression, adult-partner violence, and child outcomes: A prospective, population-based study. *Child Abuse Negl.* 68, 1–10. doi: 10.1016/j.chiabu.2017.03.017.
- Maniglio, R. (2012). The Role of Parent–Child Bonding, Attachment, and Interpersonal Problems in the Development of Deviant Sexual Fantasies in Sexual Offenders. *Trauma Violence Abuse* 13, 83–96. doi: 10.1177/1524838012440337.
- Mathews, S, Achyut, P, and October, L (2021). *Evidence Review: Prevention of violence against children in and through schools in the Global South*. Uganda and University of Cape Town, South Africa: Raising Vioces.
- McCartan, K. F., Kemshall, H., and Tabachnick, J. (2015). The construction of community understandings of sexual violence: rethinking public, practitioner and policy discourses. *J. Sex. Aggress.* 21, 100–116. doi: 10.1080/13552600.2014.945976.
- Meade, C. S., Watt, M. H., Sikkema, K. J., Deng, L. X., Ranby, K. W., Skinner, D., et al. (2012). Methamphetamine use is associated with childhood sexual abuse and HIV sexual risk behaviors among patrons of alcohol-serving venues in Cape Town, South Africa. *Drug Alcohol Depend.* 126, 232–239. doi: 10.1016/j.drugalcdep.2012.05.024.

- Minhyo Cho, R., and Park, M. (2015). Analyzing the effectiveness of the Korean National anti-bullying program – WEE project. *Int. Rev. Public Adm.* 20, 287–304. doi: 10.1080/12294659.2015.1039779.
- Minnaar, A. (2015). 'The revolving door': factors that contribute to the recidivism of incarcerated sex offenders in the Western Cape. *Acta Criminol.* 28, 14.
- Moffitt, T. E. (2018). Male antisocial behaviour in adolescence and beyond. *Nat. Hum. Behav.* 2, 177–186. doi: 10.1038/s41562-018-0309-4.
- Morris, S. Z., and Gibson, C. L. (2011). Corporal Punishment's Influence on Children's Aggressive and Delinquent Behavior. *Crim. Justice Behav.* 38, 818–839. doi: 10.1177/0093854811406070.
- Moustafa, A. A., Parkes, D., Fitzgerald, L., Underhill, D., Garami, J., Levy-Gigi, E., et al. (2021). The relationship between childhood trauma, early-life stress, and alcohol and drug use, abuse, and addiction: An integrative review. *Curr. Psychol.* 40, 579–584. doi: 10.1007/s12144-018-9973-9.
- Mulvaney, M. K., and Mebert, C. J. (2007). Parental corporal punishment predicts behavior problems in early childhood. *J. Fam. Psychol.* 21, 389–397. doi: 10.1037/0893-3200.21.3.389.
- Murhula, PBB and Singh, SB (2019). A critical analysis on offenders rehabilitation approach in South Africa: A review of the literature. *Afr. J. Criminol. Justice Stud.* 12, 23.
- Naidoo, L., and Van Hout, M. C. (2022). Understanding child sex offending trajectories in South Africa: from victimisation to perpetration. *J. Sex. Aggress.* 28, 119–132. doi: 10.1080/13552600.2021.1936230.
- Ngubane, L. (2019). Perceptions and Experiences of Learners on the Banning of Corporal Punishment in South African Schools. *J. Sociol. Soc. Anthropol.* 10. doi: 10.31901/24566764.2019/10-1-3.297.
- Nickerson, A., Steenkamp, M., Aerka, I. M., Salters-Pedneault, K., Carper, T. L., Barnes, J. B., et al. (2013). PROSPECTIVE INVESTIGATION OF MENTAL HEALTH FOLLOWING SEXUAL ASSAULT: Research Article: Mental Health Following Sexual Assault. *Depress. Anxiety* 30, 444–450. doi: 10.1002/da.22023.
- Pienaar, K., and Savic, M. (2016). Producing alcohol and other drugs as a policy 'problem': A critical analysis of South Africa's 'National Drug Master Plan' (2013–2017). *Int. J. Drug Policy* 30, 35–42. doi: 10.1016/j.drugpo.2015.12.013.
- Piotrowska, P. J., Stride, C. B., Croft, S. E., and Rowe, R. (2015). Socioeconomic status and antisocial behaviour among children and adolescents: A systematic review and meta-analysis. *Clin. Psychol. Rev.* 35, 47–55. doi: 10.1016/j.cpr.2014.11.003.
- Ploj, K., Roman, E., and Nylander, I. (2003). Long-term effects of maternal separation on ethanol intake and brain opioid and dopamine receptors in male wistar rats. *Neuroscience* 121, 787–799. doi: 10.1016/S0306-4522(03)00499-8.



- Plummer, M., and Cossins, A. (2018). The Cycle of Abuse: When Victims Become Offenders. *Trauma Violence Abuse* 19, 286–304. doi: 10.1177/1524838016659487.
- Pronyk, P. M., Hargreaves, J. R., Kim, J. C., Morison, L. A., Phetla, G., Watts, C., et al. (2006). Effect of a structural intervention for the prevention of intimate-partner violence and HIV in rural South Africa: a cluster randomised trial. *The Lancet* 368, 1973–1983. doi: 10.1016/S0140-6736(06)69744-4.
- Ramsoomar, L., Gibbs, A., Chirwa, E. D., Dunkle, K., and Jewkes, R. (2021). Pooled analysis of the association between alcohol use and violence against women: evidence from four violence prevention studies in Africa. *BMJ Open* 11, e049282. doi: 10.1136/bmjopen-2021-049282.
- Richter, L. M., and Desmond, C. (2008). Targeting AIDS orphans and child-headed households? A perspective from national surveys in South Africa, 1995–2005. *AIDS Care* 20, 1019–1028. doi: 10.1080/09540120701842738.
- Russell, K. J., and Hand, C. J. (2017). Rape myth acceptance, victim blame attribution and Just World Beliefs: A rapid evidence assessment. *Aggress. Violent Behav.* 37, 153–160. doi: 10.1016/j.avb.2017.10.008.
- Sabine Hirschauer (2014). Rape and the State - sexual violence and its political narrative and othering in 21st century South Africa. *Afr. Insights* 44, 84–102.
- Scoglio, A. A. J., Kraus, S. W., Saczynski, J., Jooma, S., and Molnar, B. E. (2021). Systematic Review of Risk and Protective Factors for Revictimization After Child Sexual Abuse. *Trauma Violence Abuse* 22, 41–53. doi: 10.1177/1524838018823274.
- Selepe, M., Lindegger, G., and Govender, K. (2020). Discourses in accounts of rape by sex offenders in Limpopo province, South Africa. *South Afr. J. Psychol.*, 008124632096055. doi: 10.1177/0081246320960551.
- Sexual Offences and Related Matters) Amendment Act 32 of 2007 (2007). South African Government Gazette. Criminal Law.
- Sherman, L. W., Strang, H., Barnes, G., Woods, D. J., Bennett, S., Inkpen, N., et al. (2015). Twelve experiments in restorative justice: the Jerry Lee program of randomized trials of restorative justice conferences. *J. Exp. Criminol.* 11, 501–540. doi: 10.1007/s11292-015-9247-6.
- Singh, S. B. (2014). “Doing time for crime”: The historical development of the different models (approaches) of treatment for incarcerated offenders at the Westville Correctional Centre, Durban, South Africa. 24.
- Sivelä, J. (2016). Dangerous AIDS Myths or Preconceived Perceptions? A Critical Study of the Meaning and Impact of Myths about HIV/AIDS in South Africa. *J. South. Afr. Stud.* 42, 1179–1191. doi: 10.1080/03057070.2016.1246225.
- South African Police Service (2020). Annual Crime Statistics 2019/2020. Pretoria, South Africa.
- South African Police Service (2021). Police recorded crime statistics.

- Stockman, J. K., Syvertsen, J. L., Hayashi, H. D., Ludwig-Barron, N., Tsuyuki, K., Morris, M. D., et al. (2021). “Violence and love and drugs...it all goes hand in hand”: A mixed methods analysis of the substance abuse, violence, and HIV/AIDS syndemic among women who use methamphetamine. *Subst. Abuse* 42, 821–831. doi: 10.1080/08897077.2020.1865242.
- Thindwa, D., Wolter, N., Pinsent, A., Carrim, M., Ojal, J., Tempia, S., et al. (2021). Estimating the contribution of HIV-infected adults to household pneumococcal transmission in South Africa, 2016–2018: A hidden Markov modelling study. *PLOS Comput. Biol.* 17, e1009680. doi: 10.1371/journal.pcbi.1009680.
- Thompson, J and Simmonds, FN (2012). *Rape sentencing study: a review of statutory sentencing provisions for rape, defilement, and sexual assault in East, Central and Southern Africa*. Lusaka: Population Council.
- Tiihonen Möller, A., Bäckström, T., Söndergaard, H. P., and Helström, L. (2014). Identifying Risk Factors for PTSD in Women Seeking Medical Help after Rape. *PLoS ONE* 9, e111136. doi: 10.1371/journal.pone.0111136.
- Ward, T., and Beech, A. (2006). An integrated theory of sexual offending. *Aggress. Violent Behav.* 11, 44–63. doi: 10.1016/j.avb.2005.05.002.
- Watt, M. H., Guidera, K. E., Hobkirk, A. L., Skinner, D., and Meade, C. S. (2017). Intimate partner violence among men and women who use methamphetamine: A mixed-methods study in South Africa: IPV among South African methamphetamine users. *Drug Alcohol Rev.* 36, 97–106. doi: 10.1111/dar.12420.
- Yapp, E. J., and Quayle, E. (2018). A systematic review of the association between rape myth acceptance and male-on-female sexual violence. *Aggress. Violent Behav.* 41, 1–19. doi: 10.1016/j.avb.2018.05.002.

## Chapter 3

### Synthesis

Rape is a health crisis with devastating effects to the victim (Sardinha et al., 2022). Victims of rape mostly suffer from psychiatric and psychological challenges, (Tiihonen Möller et al.,

2014, Goodey, 2017). Women and children are the common victims of sexual violence predominantly perpetrated by men, with one in four women being exposed to some form of sexual violence (Dworkin, 2020). There is limited research to fully understand factors that influence the behavior of sexual offenders. However, early life adversity, alcohol and drug abuse, pornography, culture and religion and gender inequality have been associated with sexual perpetration (Altintas and Bilici, 2018, Fox et al., 2015).

To fully understand and comprehend all causes of rape perpetration, *the integrated theory of sexual offending* approach must be considered. The integrated theory of sexual offending suggest that biological functions and social circumstances affect the normal neuropsychological function of an individual (Ward et al., 2016). Neuropsychological function includes the ability to control emotions and perceptions and behave appropriately to accepted societal standards (Caravaca Sánchez et al., 2019). Therefore, the disturbance of social, emotional and cognitive activity may alter behavior leading to sexual perpetration (Altintas and Bilici, 2018).

Early life adversity (neglect, violence and abuse -physical, emotional, emotional and sexual) has been linked to rape perpetration, with men exposed to childhood trauma being more likely to develop impaired learning and stress related disorders (like PTSD, anxiety disorders, depression) that may lead to anti-social, violent and rape behavior (Blaisdell et al., 2019, Campbell et al., 2016, Chu et al., 2013, Colorado et al., 2006).

Childhood trauma has been implicated to affect neuroplasticity and change neuronal pathways in the brain (Corbo et al., 2016). The hippocampus, amygdala and prefrontal cortex are affected by trauma and may alter the functioning of epinephrine, norepinephrine, oxytocin, serotonin and dopamine leading to an HPA axis downstream effect. The HPA axis controls the response to stress via cortisol (Dannowski et al., 2012, De Bellis et al., 2003, Giannopoulou, 2012, Huang, 2014).

Alcohol abuse during early life has been shown to disrupt the brain development and potentially increase the likelihood of addiction as an adult (Kingdon et al., 2016, Price et al., 2017). Early life trauma has also been indicated as a risk factor for alcohol abuse later in life (Tabakoff and Hoffman, 2013). High alcohol consumption is associated with increased aggression, sex drive, rape behavior and poor decision making (Heinz et al., 2016, Hoaken and Stewart, 2003, Oscar-Berman and Marinković, 2007). Rape perpetration is also influenced by social and contextual factors that directly or indirectly promote gender inequality, men's entitlement and masculinity (Maneta et al., 2017). Such factors create an illusion to men that they are in control of women and they can do as they please to women's bodies, regardless of

how women feel or think (Selepe et al., 2021). Hyper-masculinity has been shown to be associated with insecurities, hypersensitivity, distrust against women and controlling of women (Malamuth et al., 1995). To understand the perspectives of incarcerated men regarding why they rape we adopt ITSO as an analytical framework.

Our findings indicated various factors that may influence the behaviour of incarcerated rape perpetrators. Childhood adversities, gender inequality, understanding of rape, substance abuse, recidivism and avoiding responsibility were the dominant themes found.

All participants reported at least one exposure to early life adversity like absent father, poverty, domestic or community violence and abuse (emotional, sexual or physical). The existing theories of criminal behaviour indicate that a proper bonding relationship between a child and a care giver is very important to establish a foundation for socially acceptable behaviour driven by trust, empathy, care and safety (Bendall, 2010, De Bellis and Zisk, 2014). However, in the absence a bonding relationship due to neglect and abuse, the child is likely to develop social withdrawal that may lead to anti-social behaviour (like lack of; empathy, remorse, impulsive, intimacy) which is commonly exhibited by rape perpetrators (Palmer et al., 2010, Senn et al., 2000). The brain affected by early life trauma leading to anti-social behaviour is amygdala and the pre-frontal cortex (Gard et al., 2017). Anti-social behaviour has been shown to affect the left hemisphere of the amygdala suggesting that an individual with anti-social and violent behaviour may not display emotions (Hyde et al., 2014) and that is common to rape perpetrators. Furthermore, the amygdala is overactive when chronically exposed to prosocial emotions (e.g. depression, anxiety and PTSD). The prefrontal cortex is the part of the cerebral cortex that covers the front part of the frontal lobe. The prefrontal cortex lowers the activation of orbital frontal cortex linked to antisocial behaviour mediated by increased impulsivity, impaired inhibition, guilt (Miller and Cohen, 2001). Childhood trauma has been associated with decreased prefrontal cortex volume. Therefore, a damaged prefrontal cortex is linked to disturbed morality and a need to harm others for personal gain, which is observed from rape perpetrators (McKlveen et al., 2015).

We found that the majority of perpetrators understood the definition of rape, especially against an adult, but some child rape offenders did not understand the definition of rape against a child, which is different as the child cannot give consent. This behaviour may be attributed to a tendency where survivors of childhood abuse identify with the perpetrator and internalize the pleasurable experiences of the perpetrator (Singh, 2014). Internalization of control and

rationalizing the behaviour of the perpetrator is the same internal process the once child victim of abuse uses to justify their actions as a perpetrator of child rape (Moffitt, 2018).

Many perpetrators shifted the blame (from themselves to others or substance abuse) to avoid taking responsibility for rape actions. Victim blaming, transactional sex and gender inequality were also used to rationalize rape behaviour (Selepe et al., 2021). Antisocial behaviour has been associated excessive substance abuse in rape perpetration (Pronyk et al., 2006). Substance abuse has also been associated with avoiding responsibility on rape offences. It is suggested that parental neglect is linked to the failure to understand the consequences of rape and failure to take responsibility for rape (Brosch et al., 2013).

The findings further indicate that recidivism was common among participants. Participants reported previous convictions from rape, assaults, robbery, theft and drug use. Rape perpetrators exposed to criminality and violence are more likely to exhibit criminal behaviour and be convicted on multiple instances (Rush et al., 2003, Frazier et al., 2019).

In conclusion, the findings show that all perpetrators were exposed to at least one early life adversity. Participants displayed key characteristics of antisocial behaviour such as impulsive, erratic and violent behaviour, inability to take responsibility for behaviour, lack of morality, lack of meaningful and intimate relationship, lack of empathy, shame and guilt (Frazier et al., 2019). The neurodevelopmental, psychological, genetic and epigenetic consequences of early life trauma likely underlie the development of antisocial behaviour that is a major risk factor for rape perpetration (Johnson, 2019).

#### Future recommendations

Our findings indicate that early childhood adversity is the most common experience of convicted rapists. Thus, it is worth exploring and improving the current violence prevention strategies in South Africa. Firstly, corporal punishment has been associated with an increased risk for antisocial and criminal behaviour mediated with feelings of guilt, fear and shame (Mahlangu et al., 2021). Corporal punishment includes physical punishment to instil discipline against inappropriate behaviour. Soon after the dispensation of the South African democracy, corporal punishment was banished in schools but was only outlawed in the household in 2019 (Ngubane et al., 2019). To date, corporal punishment is generally acceptable and common as a discipline method, and the use of corporal punishment is perpetuated by exposure to violence (domestic and community), poor socio-economic status and parental neglect (Mahlangu et al.,

2021). A recent literature review suggests a multiple stakeholder approach (parents, schools, learners, community members and non-governmental organizations) are needed for successful interventions to prevent violence against children. Age and gender focused interventions at the individual, interpersonal and community level are also needed (El-Khodary and Samara, 2020). Adolescence is a crucial time period to break and prevent childhood trauma in both the household and community (Mathews et al., 2021). In case of limited resources, interventions can be implemented to groups of peers focusing on gender norms, healthy relationships and developing coping mechanisms (Kaljee et al., 2017).

The findings indicate that recidivism is common amongst rapists. There is a dearth of understanding of recidivism in South Africa and there is a dire need for more research considering that social problems such as exposure to violence, dysfunctional families and substance abuse are associated with rape and recidivism (El-Khodary and Samara, 2020).

The rehabilitation programme of the South African Correctional Services has been a cause for concern in reducing recidivism given the population overcrowding in prisons and limited resources. The rehabilitation programme is not compulsory at the beginning of the convicted individual's sentence, but rather an obligation to qualify for parole towards the mid or end of the sentence (Murhula et al., 2019). The programme uses a "one size fits all" approach with broad categories like general life skills, health and mental health education, moral growth and skills development. Studies that have investigated the effectiveness of the rehabilitation programme in South African prisons have indicated that the programme 1) lacks an individualized, targeted approach to discover factors contributing to criminal behaviour and 2) focuses on the obligation to complete the programme rather than investigating the effect/outcome of the programme as a measure of success (Ferrari et al., 2022). The South African Government has, over the past 10-20 years, emphasized the severity of rape by introducing stringent measures such as 1) increasing the sentence that can be handed down for rape, 2) introducing a sexual offenders register available to employers seeking employees to work with children and disabled people, 3) passing a National Forensic DNA database bill to force all criminally charged suspects to provide DNA samples to create and develop DNA database profiles which is envisaged to solve cold cases, increase conviction rate and deter recidivism (Gantana et al., 2015).

Closer investigation to causes and contributions to rape perpetration and recidivism is needed to prevent rape with cost-effective and successful than retrospective rehabilitation programmes.

#### Study limitations

These findings are specific to this study and may not be generalized to other similar settings. This qualitative study may complement future qualitative research on factors that influence men to be sexual offenders. Data was translated and transcribed by researchers and not by a professional translator, which may have resulted to some linguistic nuances being lost.

#### Reference:

Abbey, A., Jacques-Tiura, A. J. & Lebreton, J. M. 2011. Risk factors for sexual aggression in young men: An expansion of the confluence model. *Aggressive behavior*, 37, 450-464.

- Abrahams, N., Devries, K., Watts, C., Pallitto, C., Petzold, M., Shamu, S. & Garcia-Moreno, C. 2014. Worldwide prevalence of non-partner sexual violence: a systematic review. *The Lancet*, 383, 1648-1654.
- Abrahams, N., Mhlongo, S., Chirwa, E., Lombard, C., Dunkle, K., Seedat, S., Kengne, A. P., Myers, B., Peer, N. & Garcia-Moreno, C. M.. 2020. Rape survivors in South Africa: analysis of the baseline socio-demographic and health characteristics of a rape cohort. *Global health action*, 13, 1834769.
- Alexander, R., Aragon, O. R., Bookwala, J., Cherbuin, N., Gatt, J. M., Kahrilas, I. J., Kastner, N., Lawrence, A., Lowe, L. & Morrison, R. G. 2021. The neuroscience of positive emotions and affect: Implications for cultivating happiness and wellbeing. *Neuroscience & Biobehavioral Reviews*, 121, 220-249.
- Altintas, M. & Bilici, M. 2018. Evaluation of childhood trauma with respect to criminal behavior, dissociative experiences, adverse family experiences and psychiatric backgrounds among prison inmates. *Comprehensive psychiatry*, 82, 100-107.
- Anand, K. S. & Dhikav, V. 2012. Hippocampus in health and disease: An overview. *Annals of Indian Academy of Neurology*, 15, 239.
- Andersen, S. L. & Teicher, M. H. 2009. Desperately driven and no brakes: developmental stress exposure and subsequent risk for substance abuse. *Neuroscience & Biobehavioral Reviews*, 33, 516-524.
- Ashburner, J., Friston, K. J. & Penny, W. 2004. Human brain function. *Academic Press, Burlington*, ed. 2, 707-722.
- Avdibegovic, E. & Brkic, M. 2020. Child neglect-causes and consequences. *Psychiatria Danubina*, 32, 337-342.
- Beech, A. R. & Ward, T. 2004. The integration of etiology and risk in sexual offenders: A theoretical framework. *Aggression and violent behavior*, 10, 31-63.
- Behnken, M. P. 2017. Contextualizing the role of alcohol in sexual violence. *Journal of Adolescent Health*, 61, 1-2.
- Bendall, C. 2010. The domestic violence epidemic in South Africa: legal and practical remedies. *Women's Studies*, 39, 100-118.
- Bevans, K., Cerbone, A. B. & Overstreet, S. 2005. Advances and future directions in the study of children's neurobiological responses to trauma and violence exposure. *Journal of Interpersonal Violence*, 20, 418-425.
- Bilbo, S. D. & Schwarz, J. M. 2012. The immune system and developmental programming of brain and behavior. *Frontiers in neuroendocrinology*, 33, 267-286.
- Blaisdell, K. N., Imhof, A. M. & Fisher, P. A. 2019. Early adversity, child neglect, and stress neurobiology: From observations of impact to empirical evaluations of mechanisms. *International Journal of Developmental Neuroscience*, 78, 139-146.



- Boles, K., Goulet, T. N., Kessler, G., Khumalo, M. N., Posadas, J. & Scholz, S. 2019. *Rape Culture and Religious Studies: Critical and Pedagogical Engagements*, Rowman & Littlefield.
- Bourgois, P. 1996. In search of masculinity: violence, respect and sexuality among Puerto Rican crack dealers in East Harlem. *The British Journal of Criminology*, 36, 412-427.
- Bremner, J. D. 2005. Effects of traumatic stress on brain structure and function: relevance to early responses to trauma. *Journal of trauma & dissociation*, 6, 51-68.
- Bremner, J. D. 2022. Traumatic stress: effects on the brain. *Dialogues in clinical neuroscience*.
- Bremner, J. D., Elzinga, B., Schmahl, C. & Vermetten, E. 2007. Structural and functional plasticity of the human brain in posttraumatic stress disorder. *Progress in brain research*, 167, 171-186.
- Breuer, S. 2021. Economic analyses on the cost of Gender-Based Violence in Namibia. ZÖSS Discussion Paper.
- Brosch, T., Scherer, K., Grandjean, D. & Sander, D. 2013. The impact of emotion on perception, attention, memory, and decision-making. *Swiss medical weekly*, 143, w13786-w13786.
- Burt, M. R. 1980. Cultural myths and supports for rape. *Journal of personality and social psychology*, 38, 217.
- Campbell, C., Roberts, Y., Synder, F., Papp, J., Strambler, M. & Crusto, C. 2016. The assessment of early trauma exposure on social-emotional health of young children. *Children and Youth Services Review*, 71, 308-314.
- Caravaca Sanchez, F., Ignatyev, Y. & Mundt, A. P. 2019. Associations between childhood abuse, mental health problems, and suicide risk among male prison populations in Spain. *Criminal behaviour and mental health*, 29, 18-30.
- Carpenter, L. L., Shattuck, T. T., Tyrka, A. R., Geraciotti, T. D. & Price, L. H. 2011. Effect of childhood physical abuse on cortisol stress response. *Psychopharmacology*, 214, 367-375.
- Catalani, A., Alema, G. S., Cinque, C., Zuena, A. R. & Casolini, P. 2011. Maternal corticosterone effects on hypothalamus–pituitary–adrenal axis regulation and behavior of the offspring in rodents. *Neuroscience & Biobehavioral Reviews*, 35, 1502-1517.
- Ceccarelli, D. 2019. Between social and biological heredity: Cope and Baldwin on evolution, inheritance, and mind. *Journal of the History of Biology*, 52, 161-194.
- Cepada, I., Lacalle-Calderson, M. & Torralba, M. 2022. Measuring violence against women: a global index. *Journal of interpersonal violence*, 37, NP18614-NP18638.

- Chemtob, C. M., Gudino, O. G. & Laraque, D. 2013. Maternal posttraumatic stress disorder and depression in pediatric primary care: association with child maltreatment and frequency of child exposure to traumatic events. *JAMA pediatrics*, 167, 1011-1018.
- Chen, Y. & Baram, T. Z. 2016. Toward understanding how early-life stress reprograms cognitive and emotional brain networks. *Neuropsychopharmacology*, 41, 197-206.
- Chevignard, M., Kerrouche, B., Krasny-Pacini, A., Mariller, A., Pineau-Chardon, E., Notteghem, P., Prodhomme, J., LE Gall, D., Roulin, J.-L. & Fournet, N. 2017. Ecological assessment of everyday executive functioning at home and at school following childhood traumatic brain injury using the BRIEF questionnaire. *The Journal of head trauma rehabilitation*, 32, E1-E12.
- Chrousos, G. P. & Gold, P. W. 1992. The concepts of stress and stress system disorders: overview of physical and behavioral homeostasis. *Jama*, 267, 1244-1252.
- Chu, D. A., Williams, L. M., Harris, A. W. F., Bryant, R. A. & Gatt, J. M. 2013. Early life trauma predicts self-reported levels of depressive and anxiety symptoms in nonclinical community adults: Relative contributions of early life stressor types and adult trauma exposure. *Journal of Psychiatric Research*, 47, 23-32.
- Chung, D., Fisher, C. & Zufferey, C. 2018. Preventing sexual violence against young women from African backgrounds. *Trends and Issues in Crime and Criminal Justice [electronic resource]*, 1-13.
- Colorado, R. A., Shumake, J., Conejo, N. M., Gonzalez-Pardo, H. & Gonzalez-Lima, F. 2006. Effects of maternal separation, early handling, and standard facility rearing on orienting and impulsive behavior of adolescent rats. *Behavioural processes*, 71, 51-58.
- Connor, C. E. & Knierim, J. J. 2017. Integration of objects and space in perception and memory. *Nature neuroscience*, 20, 1493-1503.
- Corbo, V., Amick, M. A., Milberg, W. P., McGlinchey, R. E. & Salat, D. H. 2016. Early life trauma is associated with altered white matter integrity and affective control. *Journal of Psychiatric Research*, 79, 70-77.
- Cromwell, H. C., Abe, N., Barrett, K. C., Caldwell-Harris, C., Gendolla, G. H., Koncz, R. & Sachdev, P. S. 2020. Mapping the interconnected neural systems underlying motivation and emotion: A key step toward understanding the human affectome. *Neuroscience & Biobehavioral Reviews*, 113, 204-226.
- Cromwell, H. C. & Papadelis, C. 2022. Mapping the brain basis of feelings, emotions and much more: A special issue focused on 'The Human Affectome'. *Neuroscience & Biobehavioral Reviews*, 104672.
- Cupaioli, F. A., Zucca, F. A., Caporale, C., Lesch, K.-P., Passmonti, L. & Zecca, L. 2021. The neurobiology of human aggressive behavior: neuroimaging, genetic, and neurochemical aspects. *Progress in neuro-psychopharmacology and biological psychiatry*, 106, 110059.

- Danese, A., Moffit, T. E., Harrington, H., Milne, B. J., Polanczyk, G., Pariante, C. M., Poulton, R. & Caspi, A. 2009. Adverse childhood experiences and adult risk factors for age-related disease: depression, inflammation, and clustering of metabolic risk markers. *Archives of pediatrics & adolescent medicine*, 163, 1135-1143.
- Dannlowski, U., Stuhrmann, A., Beutelmann, V., Zwanzger, P., Lenzen, T., Grotegerd, D., Domschke, K., Hohoff, C., Ohrmann, P. & Bauer, J. 2012. Limbic scars: long-term consequences of childhood maltreatment revealed by functional and structural magnetic resonance imaging. *Biological psychiatry*, 71, 286-293.
- De Bellis, D. M. & Thomas, L. A. 2003. Biologic findings of post-traumatic stress disorder and child maltreatment. *Current psychiatry reports*, 5, 108-117.
- De Bellis, M. D., Baum, A. S., Birmaher, B., Keshavan, M. S., Eccard, C. H., Boring, A. M., Jenkins, F. J. & Ryan, N. D. 1999. Developmental traumatology part I: Biological stress systems. *Biological psychiatry*, 45, 1259-1270.
- De Bellis, M. D. & Zisk, A. 2014. The Biological Effects of Childhood Trauma. *Child and Adolescent Psychiatric Clinics of North America*, 23, 185-222.
- Delavari, F., Sheibani, V., Esmaeili-Mahani, S. & Nakhaee, N. 2016. Maternal separation and the risk of drug abuse in later life. *Addiction & health*, 8, 107.
- Delima, J. & Vimpani, G. 2011. The neurobiological effects of childhood maltreatment: An often overlooked narrative related to the long-term effects of early childhood trauma? *Family Matters*, 42.
- Demombynes, Gabriel & Özler, B. 2005. Crime and local inequality in South Africa. *Journal of Development Economics*, 76, 265-292.
- Diab, S. Y., Palosaari, E. & Punamaki, R R.-L. 2018. Society, individual, family, and school factors contributing to child mental health in war: The ecological-theory perspective. *Child abuse & neglect*, 84, 205-216.
- Dommissie J. 1986. The psychological effects of apartheid psychoanalysis: social, moral and political influences. *International journal of social psychiatry*, 32, 51-63.
- Dou, J., Montanholi, Y. R., Wang, Z., Li, Z., Yu, Y., Martell, J. E., Wang, Y. J. & Wang, Y. 2019. Corticosterone tissue-specific response in Sprague Dawley rats under acute heat stress. *Journal of thermal biology*, 81, 12-19.
- Dragan, M. & Hardt, J. 2016. Childhood adversities and risk for problematic alcohol use. *Addictive Behaviors*, 59, 65-71.
- Drieschner, K. & Lange, A. 1999. A review of cognitive factors in the etiology of rape: Theories, empirical studies, and implications. *Clinical Psychology Review*, 19, 57-77.
- Dube, S. R., Anda, R. F., Felitti, V. J., Edwards, V. J. & Croft, J. B. 2002. Adverse childhood experiences and personal alcohol abuse as an adult. *Addictive behaviors*, 27, 713-725.

- Dunkle, K. L., Jewkes, R. K., Brown, H. C., Gray, G. E., Mcintryre, J. A. & Harlow, S. D. 2004. Gender-based violence, relationship power, and risk of HIV infection in women attending antenatal clinics in South Africa. *The lancet*, 363, 1415-1421.
- Dworkin, E. R. 2020. Risk for mental disorders associated with sexual assault: A meta-analysis. *Trauma, Violence, & Abuse*, 21, 1011-1028.
- Edwards, K. M., Turchik, J. A., Dardis, C. M., Reynolds, N. & Gidycz, C. A. 2011. Rape myths: History, individual and institutional-level presence, and implications for change. *Sex Roles*, 65, 761-773.
- El-Khodary, B. & Samara, M. 2020. Effectiveness of a school-based intervention on the students' mental health after exposure to war-related trauma. *Frontiers in psychiatry*, 10, 1031.
- Elton, A., Tripathi, S. P., Mletzko, T., Young, J., Cisler, J. M., James, G. A. & Kilts, C. D. 2014. Childhood maltreatment is associated with a sex-dependent functional reorganization of a brain inhibitory control network. *Human brain mapping*, 35, 1654-1667.
- Epel, E. S. 2009. Psychological and metabolic stress: a recipe for accelerated cellular aging? *Hormones*, 8, 7-22.
- Eralp, A. & Gokmen, S. 2022. The impact of poverty on partner violence against women under regional effects: the case of Turkey. *Journal of interpersonal violence*, 08862605221119515.
- Essack, Z. & Toohey, J. 2018. Unpacking the 2-year age-gap provision in relation to the decriminalisation of underage consensual sex in South Africa. *South African Journal of Bioethics and Law*, 11, 85-88.
- Farrington, David, Gaffney, Hannah, Ttofi & M., M. 2017. Systematic reviews of explanatory risk factors for violence, offending, and delinquency. *Aggression and Violent Behavior*, 33, 24-36.
- Ferrari, G., Torres-Rueda, S., Chirwa, E., Gibbs, A., Orangi, S., Barasa, E., Tawwiah, T., Dwommoh Prah, R. K., Hitimana, R. & Daviaud, E. 2022. Prevention of violence against women and girls: A cost-effectiveness study across 6 low-and middle-income countries. *PLoS medicine*, 19, e1003827.
- Foubert, J. D., Blanchard, W., Houston, M. & Williams, R. R. 2019. Pornography and sexual violence. *Handbook of sexual assault and sexual assault prevention*, 109-127.
- Fox, B. H., Perez, N., Cass, E., Baglivio, M. T. & Epps, N. 2015. Trauma changes everything: Examining the relationship between adverse childhood experiences and serious, violent and chronic juvenile offenders. *Child Abuse & Neglect*, 46, 163-173.
- Franiuk, Renae, Shain & Ashley 2011. Beyond Christianity: The status of women and rape myths. *Sex roles*, 65, 783-791.

- Frazier, A., Ferreira, P. A. & Gonzales, J. E. 2019. Born this way? A review of neurobiological and environmental evidence for the etiology of psychopathy. *Personality Neuroscience*, 2, e8.
- Freedman, D. & Zaami, S. 2019. Neuroscience and mental state issues in forensic assessment. *International Journal of Law and Psychiatry*, 65, 101437.
- Friedman, E. & Billick, S. B. 2015. Unintentional child neglect: Literature review and observational study. *Psychiatric Quarterly*, 86, 253-259.
- Friis-Rodel, A. M., Leth, P. M. & Astrup, B. S. 2021. Stranger rape; distinctions between the typical rape type and other types of rape. A study based on data from Center for Victims of Sexual Assault. *Journal of forensic and legal medicine*, 80, 102159.
- Gadek-Michalska, A., Bugajski, A., Tadeusz, J., Rachwalska, P. & BUGAJSKI, J. 2017. Chronic social isolation in adaptation of HPA axis to heterotypic stress. *Pharmacological Reports*, 69, 1213-1223.
- Gannon, A., T., Collie, M., R., Ward, Tony, Thakker & JO 2008. Rape: Psychopathology, theory and treatment. *Clinical Psychology Review*, 28, 982-1008.
- Gantana, H., Londt, M. P., Ryan, J. & Roman, N. 2015. 'The revolving door': factors that contribute to the recidivism of incarcerated sex offenders in the Western Cape. *Acta Criminologica: African Journal of Criminology & Victimology*, 28, 78-91.
- Garcia-Sancho, E., Dhont, K., Salguero, J. M. & Fernandez-Berrocal, P. 2017. The personality basis of aggression: The mediating role of anger and the moderating role of emotional intelligence. *Scandinavian Journal of Psychology*, 58, 333-340.
- Gard, A. M., Waller, R., Shaw, D. S., Forbes, E. E., Hariri, A. R. & Hyde, L. W. 2017. The long reach of early adversity: Parenting, stress, and neural pathways to antisocial behavior in adulthood. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 2, 582-590.
- Giacolini, T. & Sabatello, U. 2019. Psychoanalysis and affective neuroscience. The motivational/emotional system of aggression in human relations. *Frontiers in psychology*, 9, 2475.
- Giannopoulou, I. 2012. Neurobiological inscriptions of psychological trauma during early childhood. *Psychiatrike= Psychiatriki*, 23, 27-38.
- Guiliano, P. 2017. Gender: An historical perspective.
- Goodey, J. 2017. Violence against women: Placing evidence from a European Union-wide survey in a policy context. *Journal of interpersonal violence*, 32, 1760-1791.
- Gravelin, C. R., Biernat, M. & Bucher, C. E. 2019. Blaming the victim of acquaintance rape: Individual, situational, and sociocultural factors. *Frontiers in psychology*, 9, 2422.

- Guggisberg, M. 2020. Sexually explicit video games and online pornography–The promotion of sexual violence: A critical commentary. *Aggression and violent behavior*, 53, 101432.
- Hall, B. J., Garabilles, M. R., De Hoop, J., Pereira, A., Prencipe, L. & Palermo, T. M. 2019. Perspectives of adolescent and young adults on poverty-related stressors: a qualitative study in Ghana, Malawi and Tanzania. *BMJ open*, 9, e027047.
- Hambrick, E. P., Brawner, T. W. & Perry, B. D. 2019. Timing of early-life stress and the development of brain-related capacities. *Frontiers in behavioral neuroscience*, 13, 183.
- Hart, B. L. 1988. Biological basis of the behavior of sick animals. *Neuroscience & Biobehavioral Reviews*, 12, 123-137.
- Heider, D., Matschinger, H., Bernert, S., Alonso, J. & Angermeyer, M. C. 2006. Relationship between parental bonding and mood disorder in six European countries. *Psychiatry Research*, 143, 89-98.
- Heim, C., Shugart, M., Craighead, W. E. & Nemeroff, C. B. 2010. Neurobiological and psychiatric consequences of child abuse and neglect. *Developmental psychobiology*, 52, 671-690.
- Heinz, A., Kluge, U., Schouler-Ocak, M. & Beck, A. 2016. Alcohol and aggression. *European Psychiatry*, 33, S21.
- Herman, J. P., Mcklveen, J. M., Ghosal, S., Kopp, B., Wulsin, A., Makinson, R., Scheimann, J. & Myers, B. 2016. Regulation of the hypothalamic-pituitary-adrenocortical stress response. *Comprehensive physiology*, 6, 603.
- Hildyard, K. L. & Wolfe, D. A. 2002. Child neglect: developmental issues and outcomes☆. *Child abuse & neglect*, 26, 679-695.
- Hills, F., Meyer-Weitz, A. & Asante, K. O. 2016. The lived experiences of street children in Durban, South Africa: Violence, substance use, and resilience. *International journal of qualitative studies on health and well-being*, 11, 30302.
- Hine, B. & Murphy, A. 2019. The influence of ‘High’ vs. ‘Low’ rape myth acceptance on police officers' judgements of victim and perpetrator responsibility, and rape authenticity. *Journal of Criminal Justice*, 60, 100-107.
- Hoaken, P. N. S. & Stewart, S. H. 2003. Drugs of abuse and the elicitation of human aggressive behavior. *Addictive Behaviors*, 28, 1533-1554.
- Hoffman, A. N., Lam, J., Hovda, D. A., Giza, C. C. & Fanselow, M. S. 2019. Sensory sensitivity as a link between concussive traumatic brain injury and PTSD. *Scientific reports*, 9, 1-11.
- Huang, L.-T. 2014. Early-life stress impacts the developing hippocampus and primes seizure occurrence: cellular, molecular, and epigenetic mechanisms. *Frontiers in molecular neuroscience*, 7.

- Hunter, M. 2005. Cultural politics and masculinities: Multiple-partners in historical perspective in KwaZulu-Natal. *Culture, health & sexuality*, 7, 389-403.
- Hunter, M. 2015. Cultural politics and masculinities: Multiple partners in historical perspective in KwaZulu-Natal. *Culture, Health and Sexuality*. Routledge.
- Hyde, L. W., Byrd, A. L., Votruba-Drzal, E., Hariri, A. R. & Manuck, S. B. 2014. Amygdala reactivity and negative emotionality: divergent correlates of antisocial personality and psychopathy traits in a community sample. *Journal of abnormal psychology*, 123, 214.
- Jewkes, Rachel & Abrahams, N. 2002. The epidemiology of rape and sexual coercion in South Africa: an overview. *Social science & medicine*, 55, 1231-1244.
- Jewkes, R., Fulu, E., Roselli, T. & Garcia-Moreno, C. 2013. Prevalence of and factors associated with non-partner rape perpetration: findings from the UN Multi-country Cross-sectional Study on Men and Violence in Asia and the Pacific. *The lancet global health*, 1, e208-e218.
- Jewkes, R., Sikweyiya, Y., Morrell, R. & Dunkle, K. 2009. Understanding men's health and use of violence: interface of rape and HIV in South Africa. *Cell*, 82, 3655.
- Jewkes, R., Sikweyiya, Y., Morrell, R. & Dunkle, K. 2010. Why, when and how men rape- Understanding rape perpetration in South Africa. *SA Crime Quarterly*, 2010, 23-31.
- Jewkes, R., Sikweyiya, Y., Morrell, R. & Dunkle, K. 2011. Gender inequitable masculinity and sexual entitlement in rape perpetration South Africa: findings of a cross-sectional study. *PloS one*, 6, e29590.
- Jiang, S. 2020. Psychological well-being and distress in adolescents: An investigation into associations with poverty, peer victimization, and self-esteem. *Children and Youth Services Review*, 111, 104824.
- Joels, M., Karst, H. & Sarabdjitsingh, R. A. 2018. The stressed brain of humans and rodents. *Acta physiologica*, 223, e13066.
- Johansson-Love, J. & Geer, J. H. 2003. Investigation of attitude change in a rape prevention program. *Journal of Interpersonal Violence*, 18, 84-99.
- Johnson, L. G. & Beech, A. 2017. Rape myth acceptance in convicted rapists: A systematic review of the literature. *Aggression and Violent Behavior*, 34, 20-34.
- Johnson, S. 2019. Understanding the violent personality: antisocial personality disorder, psychopathy, & sociopathy explored. *Forensic Research & Criminology International Journal*, 7, 76-88.
- Kaljee, L., Zhang, L., Langhaug, L., Munjile, K., Tembo, S., Menon, A., Stanton, B., LI, X. & Malungo, J. 2017. A randomized-control trial for the teachers' diploma programme on psychosocial care, support and protection in Zambian government primary schools. *Psychology, health & medicine*, 22, 381-392.

- Kalmanofsky, A. 2017. *Sexual Violence and Sacred Texts*, Dog Ear Publishing.
- Kakra, G. & Bhugra, D. 2013. Sexual violence against women: Understanding cross-cultural intersections. *Indian journal of psychiatry*, 55, 244-249.
- Kempke, S., Luyten, P., De Coninck, S., Van Houdenhove, B., Mayes, L. C. & Claes, S. 2015. Effects of early childhood trauma on hypothalamic–pituitary–adrenal (HPA) axis function in patients with Chronic Fatigue Syndrome. *Psychoneuroendocrinology*, 52, 14-21.
- Kilpatrick, D. G., Ruggiero, K. J., Acierno, R., Saunders, B. E., Resnick, H. S. & Best, C. L. 2003. Violence and risk of PTSD, major depression, substance abuse/dependence, and comorbidity: results from the National Survey of Adolescents. *Journal of consulting and clinical psychology*, 71, 692.
- Kim, E. J., Pellman, B. & Kim, J. J. 2015. Stress effects on the hippocampus: a critical review. *Learning & memory*, 22, 411-416.
- Kim, J. J. & Yoon, K. S. 1998. Stress: metaplastic effects in the hippocampus. *Trends in neurosciences*, 21, 505-509.
- Kingdon, D., Cardoso, C. & McGrath, J. J. 2016. Research Review: Executive function deficits in fetal alcohol spectrum disorders and attention-deficit/hyperactivity disorder—a meta-analysis. *Journal of Child Psychology and Psychiatry*, 57, 116-131.
- Kinlein, S. A. & Karatsoreos, I. N. 2020. The hypothalamic-pituitary-adrenal axis as a substrate for stress resilience: Interactions with the circadian clock. *Frontiers in neuroendocrinology*, 56, 100819.
- Klaw, E. L., Lonsway, K. A., Berg, D. R., Waldo, C. R., Kothari, C., Mazurek, C. J. & Hegeman, K. E. 2005. Challenging rape culture: Awareness, emotion and action through campus acquaintance rape education. *Women & Therapy*, 28, 47-63.
- Kodituwakku, P. & Kodituwakku, E. 2014. Cognitive and behavioral profiles of children with fetal alcohol spectrum disorders. *Current Developmental Disorders Reports*, 1, 149-160.
- Kunar, A., Nizamie, S. H. & Srivastava, N. K. 2013. Violence against women and mental health. *Ment. Health Prev*, 1, 4-10.
- Le Roux, E. 2013. Sexual violence in South Africa and the role of the church. *Teddington: Tearfund*. Accessed January, 13, 2016.
- Lee, R. S., Oswald, L. M. & Wand, G. S. 2018. Early life stress as a predictor of co-occurring alcohol use disorder and post-traumatic stress disorder. *Alcohol research: current reviews*.



- Lesuer, W. 2020. An international study of the contextual effects of gender inequality on intimate partner sexual violence against women students. *Feminist criminology*, 15, 97-118.
- Lesuer, W. 2022. The impact of national-level gender inequality on the sexual abuse of girls. *Violence against women*, 28, 691-710.
- Lightman, S. L., Birnie, M. T. & Conway-Campbell, B. L. 2020. Dynamics of ACTH and cortisol secretion and implications for disease. *Endocrine reviews*, 41, bnaa002.
- Lim, L., Hart, H., Mehta, M. A., Simmons, A., Mirza, K. & Rubia, K. 2015. Neural correlates of error processing in young people with a history of severe childhood abuse: an fMRI study. *American Journal of Psychiatry*, 172, 892-900.
- Liu B. & Fu, S. 2022. Perceived poverty and life satisfaction in college students with impoverished backgrounds: The mediating role of self-esteem. *Psychology Research and Behavior Management*, 327-337.
- Lundrigan, S., Dhimi, M. K. & Agudelo, K. 2019. Factors predicting conviction in stranger rape cases. *Frontiers in Psychology*, 526.
- Lupien, S. J., Juster, R.-P., Raymond, C. & Marin, M.-F. 2018. The effects of chronic stress on the human brain: From neurotoxicity, to vulnerability, to opportunity. *Frontiers in Neuroendocrinology*.
- Lupien, S. J., McEwen, B. S., Gunnar, M. R. & Heim, C. 2009. Effects of stress throughout the lifespan on the brain, behaviour and cognition. *Nature reviews neuroscience*, 10, 434.
- Mackey, S., Chaarani, B., Kan, K.-J., Spechler, P. A., Orr, C., Banaschewski, T., Barker, G., Bokde, A. L. W., Bromberg, U., Buchel, C., Cattrell, A., Conrod, P. J., Desrivieres, S., Flor, H., Frouin, V., Gallinat, J., Gowland, P., Heinz, A., Ittemann, B., Paillere Martinot, M.-L., Artiges, E., Nees, F., Papadopoulos-Orfanos, D., Poustka, L., Smolka, M. N., Jurk, S., Walter, H., Whelan, R., Schumann, G., Althoff, R. R. & Garavan, H. 2017. Brain Regions Related to Impulsivity Mediate the Effects of Early Adversity on Antisocial Behavior. *Biological Psychiatry*, 82, 275-282.
- Mahlangu, P., Chirwa, E., Machisa, M., Sikweyiya, Y., Shai, N. & Jewkes, R. 2021. Prevalence and factors associated with experience of corporal punishment in public schools in South Africa. *PLoS one*, 16, e0254503.
- Majcher-Maslanka, I., Solarz, A., Wedzony, K. & Chocyk, A. 2017. The effects of early-life stress on dopamine system function in adolescent female rats. *International Journal of Developmental Neuroscience*, 57, 24-33.
- Malamuth, Neil M, Hald, Martin, G., Koss & MARY 2012. Pornography, individual differences in risk and men's acceptance of violence against women in a representative sample. *Sex Roles*, 66, 427-439.

- Malamuth, N. M., Linz, D., Heavy, C. L., Barnes, G. & Acker, M. 1995. Using the confluence model of sexual aggression to predict men's conflict with women: a 10-year follow-up study. *Journal of personality and social psychology*, 69, 353.
- Malarbi, S., Abu-Rayya, H. M., Muscara, F. & Stargatt, R. 2017. Neuropsychological functioning of childhood trauma and post-traumatic stress disorder: A meta-analysis. *Neuroscience & Biobehavioral Reviews*, 72, 68-86.
- Malave, L., Van Dijk, M. T. & Anacker, C. 2022. Early life adversity shapes neural circuit function during sensitive postnatal developmental periods. *Translational psychiatry*, 12, 306.
- Maneta, K., E., White & Mezzacappa, E. 2017. Parent-child aggression, adult-partner violence, and child outcomes: A prospective, population-based study. *Child Abuse & Neglect*, 68, 1-10.
- Mann, R. E., Hanson, R. K. & Thornton, D. 2010. Assessing risk for sexual recidivism: Some proposals on the nature of psychologically meaningful risk factors. *Sexual Abuse*, 22, 191-217.
- Marrocco, J. & Mcewen, B. S. 2016. Sex in the brain: hormones and sex differences. *Dialogues in clinical neuroscience*, 18, 373.
- Marusak, H. A., Martin, K. R., Etkin, A. & Thomason, M. E. 2015. Childhood trauma exposure disrupts the automatic regulation of emotional processing. *Neuropsychopharmacology*, 40, 1250.
- Mathews, S., Achyut, P., October, L. & Makola, L & MAKOLA, L. 2021. Evidence Review: Prevention of violence against children through schools in the Global South. *Cape Town: Uganda and University of Cape Town*.
- Mcewen, B. S. 2017. Neurobiological and systemic effects of chronic stress. *Chronic stress*, 1, 2470547017692328.
- MCKLVEEN, J. M., MYERS, B. & HERMAN, J. P. 2015. The medial prefrontal cortex: coordinator of autonomic, neuroendocrine and behavioural responses to stress. *Journal of neuroendocrinology*, 27, 446-456.
- McTeague, L. M., Rosenberg, B. M., Lopez, J. W., Carreon, D. M., Huemer, J., Jiang, Y., Chick, C. F., Eickhoff, S. B. & Etkin, A. 2020. Identification of common neural circuit disruptions in emotional processing across psychiatric disorders. *American Journal of Psychiatry*, 177, 411-421.
- Mifsud, K. R. & Reul, J. M. 2018. Mineralocorticoid and glucocorticoid receptor-mediated control of genomic responses to stress in the brain. *Stress*, 21, 389-402.
- Miller, E. & McCaw, B. 2019. Intimate partner violence. *New England Journal of Medicine*, 380, 850-857.

- Miller, E. K. & Cohen, J. D. 2001. An integrative theory of prefrontal cortex function. *Annual review of neuroscience*, 24, 167-202.
- Mmoffitt, T. E. 2018. Male antisocial behaviour in adolescence and beyond. *Nature human behaviour*, 2, 177-186.
- Morilak, D. A., Barrera, G., Echevarria, D. J., Garcia, A. S., Hernandez, A., MA, S. & Petre, C. O. 2005. Role of brain norepinephrine in the behavioral response to stress. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 29, 1214-1224.
- Moustafa, A. A., Parkes, D., Fitzgerald, L., Underhill, D., Garami, J., Levy-Gigi, E., Sstramecki, F., Valikhani, A., Frydecka, D. & Misiak, B. 2021. The relationship between childhood trauma, early-life stress, and alcohol and drug use, abuse, and addiction: An integrative review. *Current Psychology*, 40, 579-584.
- Mummendey, A. 2012. *Social psychology of aggression: From individual behavior to social interaction*, Springer Science & Business Media.
- Murhula, P. B. B., Singh, S. B. & Nunlall, R. 2019. A critical analysis on offenders rehabilitation approach in South Africa: A review of the literature. *African Journal of Criminology and Justice Studies: AJCJS*, 12, 21-43.
- Mvune, M. N. 2020. *Teenage fathers: culture, sexuality and masculinity in rural KwaZulu-Natal*.
- Ngubane, L., Mkhize, S. & Singh, S. B. 2019. Perceptions and Experiences of Learners on the Banning of Corporal Punishment in South African Schools. *J. Sociol. Soc. Anthropol*, 10, 84-100.
- Novic, A. M., Levandowski, M. L., Laumann, L. E., Philip, N. S., Price, L. H. & Tyrka, A. R. 2018. The effects of early life stress on reward processing. *Journal of Psychiatric Research*, 101, 80-103.
- O'Connor, T., O'Halloran, D. & Shanahan, . 2000. The stress response and the hypothalamic-pituitary-adrenal axis: from molecule to melancholia. *Qjm*, 93, 323-333.
- Oscar-Berman, M. & Marinkovic, K. 2007. Alcohol: effects on neurobehavioral functions and the brain. *Neuropsychology review*, 17, 239-257.
- Ootten, M. & Meeter, M. 2015. Hippocampal structure and function in individuals with bipolar disorder: a systematic review. *Journal of affective disorders*, 174, 113-125.
- Palmer, R. S., McMahon, T. J., Rounsaville, B. J. & Ball, S. A. 2010. Coercive sexual experiences, protective behavioral strategies, alcohol expectancies and consumption among male and female college students. *Journal of interpersonal violence*, 25, 1563-1578.
- Pennington, B. F. 2002. *The development of psychopathology: Nature and nurture*, Guilford Press.

- Persson, S. & Dhingra, K. 2022. Attributions of blame in stranger and acquaintance rape: A multilevel meta-analysis and systematic review. *Trauma, Violence, & Abuse*, 23, 795-809.
- Price, A., Cook, P. A., Norgate, S. & Mukherjee, R. 2017. Prenatal alcohol exposure and traumatic childhood experiences: A systematic review. *Neuroscience & Biobehavioral Reviews*, 80, 89-98.
- Pronyk, P. M., Hargreaves, J. R., Kim, J. C., Morison, L. A., Phetla, G., Watts, C., BUSZA, J. & Porter, J. D. 2006. Effect of a structural intervention for the prevention of intimate-partner violence and HIV in rural South Africa: a cluster randomised trial. *The lancet*, 368, 1973-1983.
- Raison, C. L. & Miller, A. H. 2011. When Not Enough Is Too Much: The Role of Insufficient Glucocorticoid Signaling in the Pathophysiology of Stress-Related Disorders. *Focus*, 9, 399-410.
- Ridderinkhof, K. R., Van Den Wildenberg, W. P., Segalowitz, S. J. & Carter, C. S. 2004. Neurocognitive mechanisms of cognitive control: the role of prefrontal cortex in action selection, response inhibition, performance monitoring, and reward-based learning. *Brain and cognition*, 56, 129-140.
- Rome, H. P. 1976. The Working Brain: An Introduction to Neuropsychology; Luria's Neuropsychological Investigation: Text, Manual, and Test Cards. *American Journal of Psychiatry*, 133, 349-349.
- Rush, A. J., Trivedi, M. H., Ibrahim, H. M., Carmody, T. J., Arnow, B., Klein, D. N., Markwitz, J. C., Ninan, P. T., Kornstein, S. & Manber, S. 2003. The 16-Item Quick Inventory of Depressive Symptomatology (QIDS), clinician rating (QIDS-C), and self-report (QIDS-SR): a psychometric evaluation in patients with chronic major depression. *Biological psychiatry*, 54, 573-583.
- Russell, D. E. 2013. Pornography and rape: A causal model. *Sexual Assault and Abuse*. Routledge.
- Russell, G. & Lightman, S. 2019. The human stress response. *Nature reviews endocrinology*, 15, 525-534.
- Russell, K., Hand, K. & Christophe 2017. Rape myth acceptance, victim blame attribution and Just World Beliefs: A rapid evidence assessment. *Aggression and Violent Behavior*, 37, 153-160.
- Ryan, Kathryn & M 2011. The relationship between rape myths and sexual scripts: The social construction of rape. *Sex Roles*, 65, 774-782.
- Sardinha, L., Maheu-Giroux, M., Stocki, H., Meyer, S. R. & Garcia-Moreno, C. 2022. Global, regional, and national prevalence estimates of physical or sexual, or both, intimate partner violence against women in 2018. *The Lancet*, 399, 803-813.

- Selepe, M., Lndergger, G. & Govender, K. 2021. Discourses in accounts of rape by sex offenders in Limpopo province, South Africa. *South African Journal of Psychology*, 51, 521-532.
- SELVI, Ü. Y. & KARANFIL, D. 2016. Intimate partner violence against women: Effects of power distance, individualism and economy Kadına yönelik yakın partner şiddeti: Güç mesafesi, bireycilik ve ekonominin etkisi. *Journal of Human Sciences*, 13, 60-71.
- Senn, C. Y., Desmarais, S., Verberg, N. & Wood, E. 2000. Predicting coercive sexual behavior across the lifespan in a random sample of Canadian men. *Journal of Social and Personal Relationships*, 17, 95-113.
- Sherin, J. E. & Nemeroff, C. B. 2011. Post-traumatic stress disorder: the neurobiological impact of psychological trauma. *Dialogues in Clinical Neuroscience*, 13, 263-278.
- Shors, T. J., Olson, R. L., Bates, M. E., Selby, E. A. & Alderman, B. L. 2014. Mental and Physical (MAP) Training: A neurogenesis-inspired intervention that enhances health in humans. *Neurobiology of Learning and Memory*, 115, 3-9.
- Short, A. K. & Baram, T. Z. 2019. Early-life adversity and neurological disease: age-old questions and novel answers. *Nature Reviews Neurology*, 15, 657-669.
- Siever, L. J. 2008. Neurobiology of aggression and violence. *American Journal of Psychiatry*, 165, 429-442.
- Singh, S. B. 2014. "Doing time for crime": The historical development of the different models (approaches) of treatment for incarcerated offenders at the Westville Correctional Centre, Durban, South Africa.
- Smith, S. M. & Vale, W. W. W. 2022. The role of the hypothalamic-pituitary-adrenal axis in neuroendocrine responses to stress. *Dialogues in clinical neuroscience*.
- Specker, J., Focquaert, F., Sterckx, S. & Schermer, M. H. 2018. Forensic practitioners' expectations and moral views regarding neurobiological interventions in offenders with mental disorders. *BioSocieties*, 13, 304-321.
- Spencer, R. L. & Deak, T. 2017. A users guide to HPA axis research. *Physiology & behavior*, 178, 43-65.
- Steele, S. J., Abrahams, N., Duncan, K., Woollett, N., Hwang, B., O'Connell, L., VAN Cutsem, G. & Shroufi, A. 2019. The epidemiology of rape and sexual violence in the platinum mining district of Rustenburg, South Africa: Prevalence, and factors associated with sexual violence. *PloS one*, 14, e0216449.
- Sterelny, K. 2012. *The evolved apprentice*, MIT press.
- Stiernstrer, E., Vafors Fritz, M., Mellgren, C. & Khoshnood, A. 2020. Characteristics of convicted male-on-female rapists in the South of Sweden between 2013 and 2018: a pilot study. *Forensic sciences research*, 5, 126-133.

- Tabakoff, B. & Hoffman, P. L. 2013. The neurobiology of alcohol consumption and alcoholism: an integrative history. *Pharmacology Biochemistry and Behavior*, 113, 20-37.
- Tarullo, A. R. & Gunnar, M. R. 2006. Child maltreatment and the developing HPA axis. *Hormones and behavior*, 50, 632-639.
- Tteicher, M. H., Anderson, C. M., Ohashi, K., Khan, A., McGreenery, C. E., Bolger, E. A., Rohan, M. L. & Vitaliano, G. D. 2018. Differential effects of childhood neglect and abuse during sensitive exposure periods on male and female hippocampus. *Neuroimage*, 169, 443-452.
- Thornton, D. 2002. Constructing and testing a framework for dynamic risk assessment. *Sexual Abuse: A Journal of Research and Treatment*, 14, 139-153.
- Tiihonen Moller, A., Backstrom, T., Sonderrgarrd, H. P. & Helstrom, L. 2014. Identifying risk factors for PTSD in women seeking medical help after rape. *PloS one*, 9, e111136.
- Toots, L. 2020. Guilt and Remorse: The Acts of Sexual Violence Against Men in Bosnian War in 1992-1995.
- Tottenham, N. & Sheridan, A. 2010. A review of adversity, the amygdala and the hippocampus: a consideration of developmental timing. *Frontiers in human neuroscience*, 68.
- Trautmann, S., Muehlhan, M., Kirschbaum, C., Wittchen, H. U., Hofler, M., Stalder, T. & Steudte-Schmiedgen, S. 2018. Biological stress indicators as risk markers for increased alcohol use following traumatic experiences. *Addiction Biology*, 23, 281-290.
- Tresp, V., Sharifzadesh, S. & Konopatzki, D. A model for perception and memory. Conference on Cognitive Computational Neuroscience, 2019.
- Turton, S. & Lingford-Hughes, A. 2016. Neurobiology and principles of addiction and tolerance. *Medicine*, 44, 693-696.
- Twardosz, S. & Lutzker, J. R. 2010. Child maltreatment and the developing brain: A review of neuroscience perspectives. *Aggression and violent behavior*, 15, 59-68.
- Upton, J. 2020. Psychosocial factors. *Encyclopedia of behavioral medicine*. Springer.
- Van Der Gonde, T., Kempes, M., Van EL, C., Rinne, T. & Pieters, T. 2014. Neurobiological correlates in forensic assessment: a systematic review. *PloS one*, 9, e110672.
- Vanderwoerd, J. R. & Cheng, A. 2017. Sexual Violence on Religious Campuses. *Canadian Journal of Higher Education*, 47, 1-21.
- Vazquez, D. M. 1998. Stress and the developing limbic–hypothalamic–pituitary–adrenal axis. *Psychoneuroendocrinology*, 23, 663-700.

- Vechiu, C. 2019. The Role of Hypermasculinity as a Risk Factor in Sexual Assault Perpetration. *Handbook of Sexual Assault and Sexual Assault Prevention*, 257-273.
- Veenema, A. H. & Neumann, I. D. 2007. Neurobiological mechanisms of aggression and stress coping: a comparative study in mouse and rat selection lines. *Brain Behav Evol*, 70, 274-85.
- Vera-Gray, F., McGlynn, C., Kureshi, I. & Butterby, K. 2021. Sexual violence as a sexual script in mainstream online pornography. *The British Journal of Criminology*, 61, 1243-1260.
- Vermetten, E. & Bremner, J. D. 2002. Circuits and systems in stress. II. Applications to neurobiology and treatment in posttraumatic stress disorder. *Depression and anxiety*, 16, 14-38.
- Vinnakota, D., Arafat, S. Y., Kar, S. K., Sivasubramanian, M., Hossain, S. R., Parsa, A. D. & Kabir, R. 2021. Pornography and sexual violence against women in India: a scoping review. *Journal of psychosexual health*, 3, 216-221.
- Voth Schrag, R. J., Robinson, S. R. & Ravi, K. 2019. Understanding pathways within intimate partner violence: Economic abuse, economic hardship, and mental health. *Journal of Aggression, Maltreatment & Trauma*, 28, 222-242.
- Ward, T. 2014. The explanation of sexual offending: From single factor theories to integrative pluralism. *Journal of sexual aggression*, 20, 130-141.
- Ward, T. & Beech, A. R. 2016. The integrated theory of sexual offending–revised: A multifield perspective. *The Wiley handbook on the theories, assessment and treatment of sexual offending*, 123-137.
- Ward, T., Fisher, S. & Beech, A. 2016. An integrated theory of sexual offending. *Sexual Offending*. Springer.
- White, J. W. & Smith, P. H. 2004. Sexual assault perpetration and re-perpetration: From adolescence to young adulthood. *Criminal Justice and Behavior*, 31, 182-202.
- Yapp, E. J. & Quayle, E. 2018. A systematic review of the association between rape myth acceptance and male-on-female sexual violence. *Aggression and violent behavior*, 41, 1-19.
- Ybarra, M. L. & Thompson, R. E. 2018. Predicting the emergence of sexual violence in adolescence. *Prevention Science*, 19, 403-415.
- Yonelinas, A. P. 2013. The hippocampus supports high-resolution binding in the service of perception, working memory and long-term memory. *Behavioural brain research*, 254, 34-44.
- Zietsch, B., Verweij, K., Bailey, J., Wright, M. & Martin, N. 2010. Genetic and environmental influences on risky sexual behaviour and its relationship with personality. *Behavior Genetics*, 40, 12-21.

## **Chapter 4**

### **Appendix A**

#### **Semi-Structured Interview Schedule questions**

#### **Section A: Personal History**

##### **Personal Information**

1. How old are you?
2. What is your race?
3. Where were you born?
4. Are you married?
5. What is your level of education?



6. How were you employed?
7. How much was your income?
8. Do you have medical illness?
9. Have you ever been bullied?
10. Explain how bullying made you feel?

### **Myths awareness**

11. How do you understand myths associated with rape or sexual offence?

### **Role model / Mentor**

12. What kind of a person was your role model?
13. What kind of things did you talk to with your role model?
14. What guidance did your role model give you?
15. What did you like the most about your role model?
16. What did you least like about your role model?
17. Do you think your role model would ever be accused of rape?
18. Who did you tell about rape and why this person?
19. How did you feel about telling him / her / them?
20. What was their reaction?

### **Section B: Family upbringing**

#### **Family history**

21. Do you know any of family member arrested? For what?
22. Have you ever witnessed any abuse at home?
23. Did you have everything when you grew up?
24. How big was the family?
25. How was the financial situation at home?
26. Describe how it was like growing with or without a father figure?
27. Describe how growing with or without a father make you treat other people.
28. Who was instilling discipline when you were growing up?

29. How were you disciplined?
30. How did discipline make you feel?
31. Have you ever been bullied?
32. Explain how bullying made you feel?
33. What do you think about watching pornography?

### **Childhood history**

34. Have you ever been sexually abused?
35. What was the nature of the abuse?
36. Who abused you?
37. How did the abuse make you feel?
38. How did the abuse make you treat other people?
39. How often were you abused?
40. Did you attend any treatment programme?
41. Give details of any head injury you sustained.

### **Section C: Reason for Incarceration**

#### **Sexual experience and behaviour**

42. What was your understanding of rape?
43. What was your first sexual experience?
44. Have ever been in an intimate relationship?
45. Describe the type of fights/arguments you had with your partner.
46. Have you ever been accused or raped before you were convicted?
47. Did you use a condom during rape?
48. Were you aware of your HIV/AIDS status before the act of rape?
49. Explain the transactional sex you were involved with before rape.

**Criminal practice**

- 50. How is the victim(s) known to you?
- 51. How old was the victim?
- 52. What is the age, gender and race of the victim?
- 53. Was the victim disable?
- 54. Was the victim intoxicated?
- 55. Was happened to the victim after the incident of rape?
- 56. Explain how did the incident of rape happened.
- 57. Why do you think you committed rape?
- 58. How did you feel during rape?
- 59. How did you feel after you raped?

**Cultural and Religious belief**

- 60. What is your cultural/religious/spiritual belief?
- 61. What do you think the victim felt?
- 62. Do you wish to be forgiven for rape? By who and why?
- 63. Why is the rehabilitation programme important or not?
- 64. What type of help would you like to receive? And from whom?
- 65. Would you commit the same offence again? Why?

## **Appendix B**

### **Information Document**

**Title of the Study: The experience and social factors influencing the behavior of the incarcerated rapist in KwaZulu-Natal, South Africa.**

Hello.

I, Mr. Lindokuhle B. Ngubane, am conducting a study to assess background information of inmates convicted for rape cases. This study is being done to fulfil the requirements of my Master's degree – Master of Medical Science (Physiology) - at the University of KwaZulu-Natal.

This study will allow us to investigate possible social factors that may contribute to the act of rape. This may assist in the rehabilitation of inmates convicted of rape and may lead to the development of preventative strategies to minimise the perpetration of rape high risk individuals. Participation in this study will benefit the community at large.

If you agree to take part in the study, I will ask you some questions about your: personal history (childhood), sexual activity and relationship behaviour, criminal practices, knowledge of myths, personal role model/mentor, cultural and spiritual beliefs and family history. This interview should take about 1 to 2 hours in total. Some of these questions are of a sensitive nature, and if any of the questions make you feel uncomfortable or you do not wish to answer them, you will not be forced to do so, and this will not be held against you. Please let me know if you wish to stop the interview for any reason, this will not be held against you.

I will be recording the interview using a voice recorder and I will be taking hand written notes to capture all information you share with me. While a lot of personal details will be obtained from you, any identifying information will not be recorded. Only members of the research team, which includes myself and two supervisors, will have access to the information you provide. The research team will do everything in their power to ensure that your information remains anonymous and confidential. Your decision to participate in this study or not participate will have no effect on your sentence and have nothing to do with your case. If you choose not to take part in the study, this will not be held against you. You have a choice of not answering any of the questions or withdrawing from the study at any time even during the interview and this will not be held against you.

Should you have any questions regarding this study, or should you not understand anything, please do not hesitate to ask me. If there are any words that you do not understand feel free to ask me.

This study has been ethically reviewed and approved by the: 1) UKZN Biomedical Research (BE 126/19), and 2) Department of Correctional Service.

If you have questions or concerns after you are finished, you may contact me:

Mr L.B. Ngubane

031 333 8237 / 38

Or you may contact my supervisors:

Dr. Lihle Qulu

or

Dr. Suvira Ramlall

Department of Physiology

Head of Clinic Unit

UKZN – Westville

Department of Psychiatry

031 260 8790

King Dinuzulu Hospital

031 242 6168

Or you may contact the administrator of an independent ethics committee,

BIOMEDICAL RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

University of KwaZulu-Natal

Private Bag X 54001, Durban, 4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2602486 - Fax: 27 31 2604609

Email: [BREC@ukzn.ac.za](mailto:BREC@ukzn.ac.za)

### **Informed Consent Sheet**

**Title of the Study: The experience and social factors influencing the behavior of the incarcerated rapist in KwaZulu-Natal, South Africa.**

I .....

Hereby acknowledge that I have been informed by the investigator, Mr. L. B. Ngubane, of the nature of the study and the advantages and disadvantages of participating in this study. I am aware that I may withdraw my consent at any time without prejudice to further care.

I give consent to participate in this study.

I further give consent to be asked questions from my personal information, childhood history, family history, sexual behaviour, myths beliefs, personal mentor, drug use, criminal background and cultural / religion and spirituality belief.

I also give consent for my criminal record to be viewed for the purposes of comparing my interview data and criminal record data. I am aware that all information will be kept confidential and will not be linked to my personal identification details. I furthermore AGREE / DISAGREE to allow the investigator to contact me to participate in a follow up study.

I give consent to have my responses audio recorded. I am aware that should I have any concerns about participating in this study, I may contact the Biomedical Research Ethics Committee at:

BIOMEDICAL RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

University of KwaZulu-Natal

Private Bag X 54001, Durban, 4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2602486 - Fax: 27 31 2604609

Email: [BREC@ukzn.ac.za](mailto:BREC@ukzn.ac.za)

Signed by participant.....

Date.....



UNIVERSITY OF  
KWAZULU-NATAL

INYUVESI  
YAKWAZULU-NATALI

28 October 2019

Mr LB Ngubane  
School of Laboratory Medicine and Medical Sciences  
College of Health Sciences  
[lindombovu@gmail.com](mailto:lindombovu@gmail.com)

Dear Mr Ngubane

**Protocol: The experience and social factors influencing the behaviour of men incarcerated for rape, KwaZulu-Natal, South Africa**  
**Degree: MMedSc**  
**BREC Ref No: BE126/19**

**EXPEDITED APPLICATION: APPROVAL LETTER**

A sub-committee of the Biomedical Research Ethics Committee has considered and noted your application received on 28 February 2019.

The study was provisionally approved pending appropriate responses to queries raised. Your response received on 18 October 2019 to BREC letter dated 29 August 2019 has been noted by a sub-committee of the Biomedical Research Ethics Committee. The conditions have been met and the study is given **full ethics approval** and may begin as from 28 October 2019. **Please ensure that outstanding site permissions are obtained and forwarded to BREC for approval before commencing research at a site.**

This approval is valid for one year from **28 October 2019**. To ensure uninterrupted approval of this study beyond the approval expiry date, an application for recertification must be submitted to BREC on the appropriate BREC form 2-3 months before the expiry date.

Any amendments to this study, unless urgently required to ensure safety of participants, must be approved by BREC prior to implementation.

Your acceptance of this approval denotes your compliance with South African National Research Ethics Guidelines (2015), South African National Good Clinical Practice Guidelines (2006) (if applicable) and with UKZN BREC ethics requirements as contained in the UKZN BREC Terms of Reference and Standard Operating Procedures, all available at <http://research.ukzn.ac.za/Research-Ethics/Biomedical-Research-Ethics.aspx>.

BREC is registered with the South African National Health Research Ethics Council (REC-290408-009). BREC has US Office for Human Research Protections (OHRP) Federal-wide Assurance (FWA 678).

The sub-committee's decision will be **noted** by a full Committee at its next meeting taking place on **10 December 2019**.

Yours sincerely

  
**Prof V Rambiritch**  
Chair: Biomedical Research Ethics Committee

cc: Postgrad administrator: [dudhrajhp@ukzn.ac.za](mailto:dudhrajhp@ukzn.ac.za) Supervisor: [Qulel@ukzn.ac.za](mailto:Qulel@ukzn.ac.za) [RamlallS4@ukzn.ac.za](mailto:RamlallS4@ukzn.ac.za)

**Biomedical Research Ethics Committee**

**Professor V Rambiritch (Chair)**

**Westville Campus, Govan Mbeki Building**

**Postal Address: Private Bag X54001, Durban 4000**

**Telephone: +27 (0) 31 260 2486 Facsimile: +27 (0) 31 260 4609 Email: [brec@ukzn.ac.za](mailto:brec@ukzn.ac.za)**

**Website: <http://research.ukzn.ac.za/Research-Ethics/Biomedical-Research-Ethics.aspx>**



1910 - 2010  
100 YEARS OF ACADEMIC EXCELLENCE

Founding Campuses:  Edgewood  Howard College  Medical School  Pietermaritzburg  Westville





## **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

**Mr LB Ngubane**  
**115 Morningside 101**  
**80 Fyfe Road**  
**Morningside**  
**Durban**  
**4001**

Dear Mr LB Ngubane

**RE: APPLICATION TO CONDUCT RESEARCH IN THE DEPARTMENT OF  
CORRECTIONAL SERVICES ON: "THE EXPERIENCE AND SOCIAL FACTORS  
INFLUENCING THE BEHAVIOUR OF THE INCARCERATED RAPIST IN A MALE  
PRISON IN KWAZULU NATAL, SOUTH AFRICA"**

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 ethical approval is valid from **15 October 2019 to 14 October 2021**.
- 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 JCN Chonco: Regional Head Development and Care, KwaZulu-Natal**.
- You are requested to contact her at telephone number (033) 355 7340 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 Centre.
- You are required to use the terminology used in the White Paper on Corrections in South Africa (February 2005) and the Correctional Services Act (No.111 of 1998) 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 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

**N LEBOGO**  
**ACTING DC: POLICY COORDINATION & RESEARCH**

DATE: 13/10/2019