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FAMILY CHANGE, CHILD MAINTENANCE AND MENTAL HEALTH OUTCOMES OF MEN IN SOUTH AFRICA

by

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Family Change and Child Maintenance Effect on Men's Mental Health Outcomes in South Africa

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A thesis submitted to the Faculty of Humanities, the University of the Witwatersrand in fulfilment of the requirements for the degree of Doctor of Philosophy (PhD) in Demography and Population Studies.

Johannesburg, South Africa
January 2023

BIOSKETCH

I started as a sociology tutor at the University of Johannesburg (UJ) where I tutored undergraduate second-year students' courses in sociology namely, group dynamics, conflict studies, clinical sociology, and population dynamics. While doing my masters in Sociology at UJ, I developed an interest in population issues triggered by the exposure gained from tutoring a second-year course in population dynamics. This instilled in me the desire to pursue a masters in Demography and Population Studies to understand issues regarding population dynamics in detail. Thus, I ended up having a Masters degree in Sociology from the UJ and another in Demography and Population Studies from the University of the Witwatersrand (Wits). My interests in both fields continue to shape my research skills and my perceptions of different social and health issues that affect the population. To me, both disciplines complement each other, and I continuously apply the techniques and concepts I have obtained in both disciplines to do my research work.

In 2016 I was part of the Demography and Population Studies (DPS) team that assisted the United Nations Population Fund (UNFPA) with the verification of selected indicators for the Adolescents and Youth Dashboard Data. In 2017, I worked as a research intern at Wits where I assisted in data management, data analysis, and report writing. As part of the internship, I tutored second-year sociology students on a course in population studies. In 2018, I enrolled as a full-time PhD candidate in the same department. During my doctoral studies, I assisted the department with lecturing and supervising honours and masters students. I assisted in the lecturing of Basic Demographic Methods and Introduction to Demographic Methods. In 2018, I assisted in the writing of a UNFPA research report headed by Professor Odimegwu.

I have managed to disseminate findings from various manuscripts that I have authored and co-authored at local and international conferences. In 2017 I attended the South African Sociological Association (SASA) conference where I presented my research findings for my masters in Sociology research report titled: Exploring social networks of Zimbabwean migrants in residential choice and integration in Hillbrow, Johannesburg. In the same year, I also presented at the Population Association of Southern Africa (PASA) Conference research findings from my masters in Demography and population studies for a paper titled: *Female intimate partner violence in Zimbabwe: does empowerment matter?* I also virtually attended the International Union for the Scientific Study of Population (IUSSP) International Population Conference in December 2021 where I presented two posters for manuscripts from my PhD thesis titled: *The interaction effect of family change and child maintenance payment on depressive symptoms of South African men: Insights from a Tobit mixed model* and the second one was titled *Heterogeneous trajectories of depressive symptoms among men in South Africa: Evidence from the Latent Growth Mixture Modelling.*

In 2021, I published one paper from my PhD thesis in the Eurasian Journal of Social Sciences, titled *Heterogeneous Trajectories of Depressive Symptoms among Men in South Africa: Evidence from Latent Growth Mixture Modeling.* I have three manuscripts from the thesis which are currently under review titled *Demographic and socioeconomic characteristics of men paying child maintenance in South Africa: A Generalized Estimating Equation approach*. The second one is titled: Family change and Child maintenance effect on men's depressive symptoms in South Africa. The third one is titled: *Fatherhood and child maintenance in South Africa: Experiences and Challenges.*

I have worked on other research manuscripts not related to my PhD. This includes a paper from my Masters in Demography and Population Studies which was published in SN Social Sciences journal titled: *Female intimate partner violence in Zimbabwe: does empowerment matter?* In 2022 I wrote a book chapter titled *Gender-Based Violence in Africa* in an edited volume The Routledge Handbook of African Demography which was edited by Prof Clifford Odimegwu and Dr. Yemi Adewoyin published. I participated in the Demographic and Health Surveys 2022 Fellows Program where with other two doctoral students from DPS, we collaborated on a working paper which has been published on the DHS website titled *Information Communication Technologies and Intimate Partner Violence among Women in sub-Saharan Africa Countries. The paper has also been submitted to a peer-reviewed journal.* Besides contributing to conferences and peer-reviewed journals as an author, I have also served as an ad-hoc peer reviewer for Heliyon, Archives of Public Health and BMC Public Health.

The doctoral thesis examined family change and child maintenance effect on men's mental health outcomes in South Africa. Using multilevel mixed effects logistic regression, the findings showed that men who were living alone experienced both mental health outcomes, depressive symptoms, and psychiatric or psychological disorders than those who lived with others. Men who changed to cohabiting experienced depressive symptoms more than those who did not go through a family change. Meanwhile, men who became married were less likely to experience depressive symptoms than those who did not go through a family change. Payment of child maintenance was linked to a lower likelihood of experiencing psychiatric or psychological disorders compared to not paying. However, qualitative findings showed that married men's mental health was affected due to lack of support by their current partners not accepting their children from previous relationships and being denied custody of the children by their ex-partners. From the men's narratives, the payment of child maintenance seems not to grant them the satisfaction of being fathers to their children as they are given limited access to the children. The men did not want to be financial fathers they wanted to be involved in the lives of their children. The exclusion they experienced from the lives of their children affected their mental wellbeing. Child maintenance was perceived as favouring women, controlled by women and men had to submit to the controlling behaviours of their *baby mamas*. From the findings, I suggest that mental health intervention programs targeting men should also involve their partners so that they can support each other in dealing with child maintenance issues. Mothers who are no longer with the fathers of their children should be informed of the importance of the father being involved in the lives of the children. This is vital for the well-being of both men and children. If men's mental health is protected, it means they will be able to work and help in providing for their families and be responsible fathers. It can be argued that there is no development without positive mental health. To fully realize their potential and contribute to development, individuals need to have positive mental health in line with SDG 3 which calls for healthy lives for all.

ABSTRACT

Background: Mental health problems are increasing among men in South Africa, yet they remain inadequately studied, particularly within the context of observed family change in the country. National studies have identified the changes taking place in the family system such as increasing rates of divorce, cohabiting, non-marital childbearing, living alone, and delays in family formation. This has resulted in most children growing up in single-parent families, giving rise to child maintenance issues. The changing family situations together with complexities surrounding child maintenance may be pertinent to men's mental health outcomes, hence the need to examine the nexus. This is important considering that men's mental health has not been examined in the context of family change and child maintenance in the country. A lack of investigation in this area raises the following question: Do family change and child maintenance complexities contribute to men's mental health outcomes?

Methodology: An explanatory sequential mixed method was conducted to examine family change and child maintenance effects on men's mental health outcomes in South Africa. The two mental health outcomes which were examined are depressive symptoms and Psychiatric or psychological disorders. The quantitative part of the research used longitudinal secondary data from the National Income Dynamics Study (NIDS) Waves 1-5 (2008-2017) with a sample size of 30 381 men aged 18 and older. The family change examined included a man's transition from another marital status to being married, living with a partner, divorced, and multiple changes. It also encompassed men who transitioned from living with others to living alone. To analyse the data, the multilevel mixed-effects logistic regression and the General Estimating Equations (GEE) models were used. In the qualitative research, 30 men residing in Johannesburg were recruited using purposive and snowballing sampling methods. The men were interviewed using semi-structured in-depth interviews. The data were analysed using thematic analysis.

Key Findings: Quantitative findings indicate that men who changed to cohabiting had an increased likelihood of experiencing depressive symptoms compared to those who did not go through a family change. Men who changed to live alone had an increased likelihood of experiencing both mental health outcomes compared to men who remained living with others. Men who became married had a lower likelihood of experiencing depressive symptoms than men who did not go through any family change. The qualitative findings show that it is not only family change, but its consequences linked to child maintenance complexities that is more stressful affecting men's mental well-being. The consequences include being denied access and custody of the children. Trying to adjust to living away from their children and being excluded from the children's lives by their ex-partners left men distressed. Quantitative findings show that men who paid child maintenance were less likely to experience psychiatric or psychological disorders than men who were not paying. However, from the qualitative findings, men who were paying child maintenance complained of how their partners gave them limited access to the children and only sought money from them making it appear as if it is the only role they can do for their children. Yet they wanted to be part of their children's lives.

Some of the men cried as they explained how being excluded from the lives of their children affected their health.

Conclusions:
The findings indicate that changing to live alone is a risk factor for both mental health outcomes. Men who changed to live with a partner (cohabiting) had an increased risk of experiencing depressive symptoms. Those who transitioned to be married across the five waves had a reduced likelihood of experiencing depressive symptoms. Child maintenance complexities that men encounter also affect their mental health. The complexities include undermining the fatherhood role through the exclusion in decision-making, denial of access to the children, and child custody.

Policy recommendations: The findings imply that the changing nature of the family in South Africa characterised by increasing cohabitation and living alone affects men's mental health. Men living alone and cohabiting require mental health support. Counselling should be done simultaneously with interventions that help men who are denied access to their children. Community programs that address mental health needs of men undergoing family change should be done. Including educational campaigns that raise awareness about mental health implications of family change and the importance of seeking help. Child access denial should be addressed, existing laws should ensure that both parents have equal access to the children. Crying in men should be normalized through public awareness campaigns that challenge traditional notions of masculinity. Interventions to assist men experiencing challenges to have access to their children should be carried out simultaneously with counselling as the findings highlight that men live with the pain of being denied access and custody of their children.

Frontiers for Further Research: The findings showed that men were weak and powerless on matters to do with child access and custody for their children from previous relationships. Studies should be conducted which explore how the hegemonic masculinities are affected in the context of child maintenance and investigate how men feel when they experience challenges as fathers documenting their experiences regarding the various health problems, they have developed. There is a need to study gender differences in the context of family change and mental health in South Africa considering an increase in mental health problems and the changing nature of the family. The study findings show that depressive symptoms are concentrated more among young men than the elderly. Further research can be done that focus on male adolescents' mental health.

Key Words: Family Transition, Family Dynamics, Papgeld, Depression, Psychological Disorders

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DEDICATION

This work is dedicated to my mother Tendayi Muchemwa and my late father Stanislaus Muchemwa. It is sad that he did not make it to this day. I know he really wanted to see this work coming to an end. May his soul continue to rest in peace. I also dedicate the work to my children Candice and Mukudzei Nyakurukwa, always remember through resilience you will conquer.

ACKNOWLEDGEMENTS

I would like to acknowledge my supervisor Professor Clifford Odimegwu for the support that he gave me in doing this work. It was a difficult road, but your support went a long way in ensuring that this work is completed. I am forever grateful for your patience. I would also like to thank Professor Lenore Manderson for her contributions in the early stages of the proposal development. I would like to thank the DST-NRF Centre of Excellence in Human Development (CoE-HUMAN) for the funding that it gave me for three years. This work was not going to be a success without funding. My gratitude goes to the Consortium for Advanced Research Training in Africa (CARTA) family for the fellowship and their unwavering support in the proposal development, I really appreciate all the reviews, assignments, and presentations that we did while working on our proposals. Through the CARTA fellowship, I was exposed to mentors from different parts of the world who looked at my proposal and gave positive feed. My gratitude goes to Dr Sumaya Mall for the suggestions, advice and support you offered throughout the proposal development. I am thankful to Dr Joshua Akinyemi for his assistance when I required clarity on multilevel modelling. Not forgetting my CARTA fellows for the comments and advice you gave in all our Joint Advanced Seminar presentations.

I would like to acknowledge my husband Kingstone Nyakurukwa for the support he gave me. Thank you, baba Candice and Mukudzei, for standing by me always in all the difficult times I experienced while doing this research. Thank you for loving me and always believing in me. A special thanks to my mother who spent more than a year staying with me helping with household chores and taking care of Candice. *Mama* words cannot express how I am so thankful. You both decided with baba that you should leave him and come to stay with me while working on this research. Unfortunately, in your absence baba felt sick. I am so sorry that you had to see him for less than three months before his passing away. Even after his passing away you continued to support me saying you will sleep peacefully once I have completed this research. Thank you for always asking every morning how far I have gone with the research. This even made me work harder and focus on finishing what I had started. A special thanks goes to my friends and family members who would continually check on me. To my brother Donald Muchemwa, those statements you always said "*manyanya kutora time*" you are taking too long to finish, always made me use the time that I had to work on this research. Thank you for the reminders. Many thanks to my maternal uncles who stood by me while going through a difficult time.

I would like to thank the almighty for the strength and wisdom while working on this research. Going through the loss of my father and my maternal grandmother was heartbreaking but because the Lord is faithful, I was still able to pick up myself and continue with the research. To my two PhD babies, my son Mukudzei Adriel thank you for bearing with all the sleepless nights I spent working on the research, sickness, and the loss of your grandfather that I went through while carrying you. Even after your birth, you continued to be a calm baby allowing me to work on this research. A special thanks to my five-year-old daughter Candice Kunashe for allowing me to work on this research.

DECLARATION

I, Marifa Muchemwa, declare that this thesis is my own original work. It is being submitted for the degree of Doctor of Philosophy in Demography and Population Studies, Schools of Social Sciences and Public Health, Faculty of Humanities of the University of the Witwatersrand, Johannesburg. It has not been submitted before in part or in full for any degree or examination at this or any other University

Signature: 

Date: 13 October 2023

CHAPTER 1

Introduction to the study

1.1 Background of the study

Globally, mental health illness is increasing (Jacob & Coetzee, 2018). It is estimated that almost 14% of the worldwide burden of diseases is attributed to neuropsychiatric disorders, (Murray et al., 2012; Whiteford et al., 2013) including common mental health disorders such as depression, anxiety and psychoactive substance use or alcohol disorder (Bhana et al., 2019). Despite the significance of mental health as a public health issue (Lund et al., 2010), it receives insufficient attention and support on a global scale (Tomlinson & Lund, 2012). This is evident in most African countries, where 44% lack mental health policies and 33% do not have a mental health plan (WHO, 2011). The 2020 WHO Mental Health Atlas survey indicated that only 21% WHO Member States have a mental health policy or plan that is in the process of being implemented. In Africa, low budgets are allocated to address mental health issues (Murray et al., 2013). The inadequate mental health budgets in Africa affects mental health services. For instance, in South Africa there is a shortage of mental health workers, with only 1.4 healthcare workers per 100,000 people, which is lower than the global average of 9 workers per 100,000 (Sankoh et al., 2018). As a result, individuals suffering from mental health illness struggle to access adequate mental healthcare (Sankoh et al., 2018; Wang et al., 2007). Due to poor mental health facilities and inadequate resources to cater for the affected individuals in the country (Sankoh et al., 2018; Collins et al., 2013).

Various factors have been identified as linked to the prevalence of mental health problems. Mental health and poverty interact negatively. Mental health illnesses can affect an individual's ability to work, while poverty, on the other hand, exposes individuals to risks of developing mental health disorders (Flisher et al., 2007). In other words, suffering from mental disorders can contribute to a cycle of poverty (Turner & Honikman, 2016). Furthermore, exposure to stress and trauma, such as the death of a friend or family member or being a victim of a crime or intimate partner violence, is also associated with the prevalence of mental disorders (Williams et al., 2008). Life stressors such as economic hardships and relationship problems can contribute to the development of mental disorders (Seedat et al., 2009). In addition, common mental disorders in adulthood have been associated with adverse childhood experiences, such as parental death, divorce or separation (Korkeila et al., 2005).

In South Africa, mental health problems remain a significant issue, but unfortunately, they are viewed as taboo resulting in suicidal acts among affected individuals. This contributes to some men suffering from mental illnesses such as depression less likely to seek treatment (Staiger et al., 2020). They turn to alcohol or drugs with some engaging in their work or hobbies as a way of hiding it from family and friends (South African Depression and Anxiety Group (SADAG), nd.). To deal with depression in the country, the South African Depression and Anxiety Group launched the Real Men, Real Depression campaign nationwide specifically targeting men. The campaigns would feature men who suffer from depression and sought treatment and were cured reaching out to others (South African Depression and Anxiety Group (SADAG), nd.). Despite the existence of such campaigns, the country still faces higher rates of suicide among men.

Going through a family change can involve drastic changes. This implies that one must adjust to a new way of living to cope with the encountered changes. The process of adjusting might be difficult for some men, leaving them struggling to handle the life-changing event. One common consequence of family change is the obligation to pay child maintenance, especially in cases involving children. The payment of child maintenance may trigger mental health problems, especially in circumstances where the man is denied access to the children. In most instances, the men paying child maintenance also have their own families to support, fulfilling their financial obligations and providing for their immediate families can create additional pressure which might affect their emotional wellbeing.

The lack of support from their partners regarding child maintenance payments can be a significant source of distress for men. This is because the children would not be their partners. This situation may lead to men silently suffering from various forms of mental illness and, in some instances contemplating suicide. Given the potential severity of these consequences it is worthwhile to conduct a study that examines the effect of family change and child maintenance on men's mental health in South Africa. Existing studies on child maintenance in South Africa have not specifically addressed the association between the payment of child maintenance and mental health outcomes among men. The study expects to find an association between family change, payment of child maintenance and men's mental health outcomes.

1.2 Problem statement

Over the past two decades, there has been an increase in mental health illness in South Africa (Murray et al., 2014), with depression emerging as a highly prevalent outcome (Bateman,

2015). However, data on the epidemiology of depressive disorders in the country remains limited (Tomlinson et al. 2009). The prevalence of depression in the country has been based largely on the South African Stress and Health Study (SASH), a nationally representative psychiatric epidemiological survey conducted between 2002 and 2004. The study was as an initiative by the World Health Organization Composite International Diagnostic Interview (CIDI), aimed to establish a diagnosis of depression. From the SASH survey, it was found that the lifetime prevalence of major depression in South Africa was 9.7% (Williams et al., 2008). Studies have also used the National Income Dynamics Study to show the prevalence of depressive symptoms (Mungai & Bayat, 2019; Dowdall et al., 2017; Adjaye-Gbewonyo et al., 2016; Ardington & Case, 2010). A recent study using the National Income Dynamics Study (NIDS) indicated that 26.05% of adults in South Africa experience Significant Depressive Symptoms SDS (Mungai & Bayat, 2019).

In the absence of specific data on the mental health prevalence of men, the overall prevalence mentioned above highlights the widespread nature of mental health issues in the country. One person in three South Africans is likely to experience a mental disorder during their lifetime (Lund, 2015). Neuropsychiatric disorders rank third in terms of their contribution to the burden of diseases in the country. However, the existing studies on mental health are not disaggregated by gender. Although the prevalence of mental health issues among the general population is well-documented, there is a significant gap in research concerning the specific effect of family change on men's mental health outcomes in South Africa. Including one of the consequences of family change, child maintenance and how it influences men’s mental health.

Family change is a complex phenomenon that can have a substantial impact on individuals' mental health outcomes. However, an examination on how family change, together with child maintenance complexities, effect on men's mental health remains scarce. While various studies have explored mental health issues in different contexts, an in-depth examination of family change and child maintenance on men's mental health outcomes is lacking. This hinders the understanding of unique challenges faced by men in the context of family change. Without this information, policymakers and mental health professionals are limited in their ability to design targeted interventions and support structures that address men's mental health needs. By understanding the mental health outcomes experienced by men in the context of family change, it provides a platform to design effective support systems and interventions that helps address

men’s mental health needs. This also contributes to the reduction of depression and suicide rates among men.

1.3 Justification

The study examines an overlooked aspect of mental health research that is men’s mental health in the context of family change. This area has received limited attention in both family and mental health studies. By examining the effect of family change and child maintenance on men’s mental health outcomes, this research provides a better understanding of how family dynamics can influence men's mental well-being. This study will contribute to the existing body of knowledge on family welfare and mental health. In South Africa, there has been limited research on family and mental health. Existing studies focus on the negative impacts of family change on children and women, neglecting the impact on men’s health. By conducting this research, we seek to gain a more comprehensive understanding of the mental health implications for men who are going through a family change and fulfilling child maintenance responsibilities. Exploring the diverse family changes experienced by men in this context will provide valuable insights into the unique challenges they face, which can inform the development of interventions and support mechanisms to improve men's mental well-being in similar situations. Ultimately, the findings of this study can contribute to more holistic and inclusive family welfare approaches that address the mental health needs of men in South Africa.

Men are of interest to the study since the social construction of masculinity expects them to be strong and not to show any signs of deprivation. By considering men’s health, the study fulfils Sustainable Development Goal 3 which calls for healthy lives and promotion of wellbeing across all age groups. Concerns for mental health problems also form part of the World Health Organisation’s mandate through its Non-Communicable Diseases and Mental Health Cluster (NMH), which seeks to prevent and control non-communicable diseases, mental health disorders, malnutrition, violence and injuries and disabilities (Allen et al., 2014). Mental health problems can lead to disability. Studies need to consider the importance of men’s health considering that society views men as masculine and expect them to be strong and not show any signs of weaknesses.

The study provides valuable insights for policymakers regarding the need for equitable treatment of men. Studies have shown that some men encounter negative stereotypes or

presumptions of irresponsibility when it comes to their parental responsibilities following a divorce or separation (Khunou, 2006; Mnyango & Alpaslan, 2018). Such stereotypes can particularly affect men who are fulfilling their child maintenance obligations and seek active involvement in their children's lives, especially when the children reside with their mothers. Women are perceived as favoured by the law, this can lead to situations where mothers can make unsubstantiated claims, hindering maintenance-paying fathers' access to their children. In some instances, men find themselves going through legal process, incurring expenses, to simply have access to their children. In such challenging circumstances, men's mental health might be affected contributing to suicide and, violence against their own families. Therefore, this study is important in understanding men's mental health with an aim to come up policy implications that not only address their mental health but also contribute to fostering healthier relationships between parents and children, benefiting the entire family.

1.4 Purpose statement and scope of the study

The purpose of this study is to examine the effect of family change and payment of child maintenance on men's mental health outcomes in South Africa. It also focuses on child maintenance complexities and their impact on men's mental health. Family change refer to the transformations which have altered the traditional aspect of the family. There are various types of family change that are occurring to the family in South Africa such as increased rates of cohabitation, marital dissolution, non-marital bearing, and a delay in family formation. In this study, family change includes a man's transition from one marital status to any of the following: married, cohabiting, divorced, multiple changes and living alone. Child maintenance in this study refers to men who are paying towards the upkeep of their children. Mental health outcomes in this study refer to self-reports of depressive symptoms and psychiatric or psychological disorders reported by men.

1.5 Research objectives

1.5.1 General objective

To examine whether family change and child maintenance are associated with men's mental health outcomes in South Africa

1.5.2 Specific objectives

1. To describe the demographic and socio-economic characteristics of men paying child maintenance in South Africa.

2. To estimate the prevalence of mental health outcomes among men in South Africa.
3. To examine an association between family change, child maintenance and men's mental health outcomes.
4. To explore men's perceptions and complexities of child maintenance on their mental health.

1.6 Definitions and delimitations

1.6.1 What constitutes mental health?

Mental health refers to the well-being of individuals in which they recognize their potential to work productively and make contributions to their communities as well as possess the ability to cope with the stresses of life (WHO, 2014). Mental disorders are behaviours or symptoms associated with distress that affect personal functions (Martin et al., 2006). Anxiety, depression, schizophrenia and alcohol, as well as drug abuse, are considered mental disorders (WHO, 2014). Mental illness covers widespread psychiatric conditions such as psychotic disorders, anxiety disorders and mood disorders (Hamad et al., 2008). Studies have used the terms mental disorder, mental illness and mental health problems to refer to attributes associated with mental health (WHO, 2014). The terms are used interchangeably with mental illness less commonly used (Joint Commissioning Panel for Mental Health, 2013). The attributes of mental health used in each study differ but the most commonly used are depression and anxiety which are fundamental in describing what constitutes mental health. This study focuses on depression, one of the mental health disorders.

The symptoms of depression include feelings of sadness, worthlessness or guilt while anxiety comprises feelings of tension, fear and apprehension (Hamad et al., 2008). Depression is diagnosed through the following symptoms: diminished interest in almost all activities, weight loss or weight gain, restlessness or agitation, fatigue or loss of energy, a reduced ability to think or concentrate, and recurrent thoughts of death or suicide (Zimmerman et al., 2018). The depressed individuals withdraw from interpersonal support, avoid problems, blame themselves or others, develop chronic or weakening physical health conditions (D'Iuso et al., 2018).

1.6.2 What is a family and what constitutes family change?

A family refers to a group of individuals who are united by ties of marriage, blood or adoption in a single household interacting together within the different roles they occupy such as mother, father, brother, sister, brother and sister (Burgess & Locke, 1976). The concept of family in

South Africa does not only refer to nuclear family but also extended families, single parents and caregivers or guardians (Holborn & Eddy, 2011; Roman et al., 2016). Families are described in terms of structure, practices, relationships and resources (Sharma, 2013). Families have characteristics that distinguish them from others such as their productive, reproductive and protective functions (Belsey, 2005). The family is vital for the development of its members and provides meaning to societal constructs (Alesina & Giuliano, 2010; Bogenschneider et al., 2012). It provides support to its members who are vulnerable, sick, disabled and aged (Walsh, 2012). Not only does the family provide emotional support, but it also offers material support (Belsey, 2005). But this is not the case with all families as they differ in structure and functioning, which in turn determines whether they will support their members.

Family change refers to the changes and transformations that occur to the family's structure, composition, dynamics, and functioning (Skolnick & Skolnick, 2011; Yusuf, 1998). It includes various adjustments in family relationships, roles, living arrangements, and societal roles (Yusuf, 1998). Family change can result from factors, such as demographic shifts, cultural changes, economic influences, legal developments, and individual life choices (Bray & Hetherington, 1993). The examples of family change include increasing rates of divorce, living alone, the widespread practice of cohabitation, non-marital childbearing that has contributed to children being raised in single parent families (Skolnick & Skolnick, 2011). We now have mother only and father only families as well as gay and lesbian families (Skolnick & Skolnick, 2011).

1.6.3 A Description of child maintenance

In South Africa, the terms maintenance, support and alimony are used interchangeably (Khunou, 2006). However, maintenance and alimony are different terms; maintenance refers to payments made for children while alimony is a payment made to the ex-spouse (Khunou, 2006). The maintenance Act No.99 of 1998 states that parents must support their children and the amount to be paid is determined by the maintenance court (Government Gazette, 1998). Based on the Act, the children should be maintained even if they were born out of wedlock or first marriage. Child maintenance includes providing for the child things like food, clothing, accommodation, medical care and education.

The maintenance system stereotypes fathers as financial providers and such notions have been in place due to the patriarchal society and the capitalistic models which have attached money

to the role of fatherhood (Van den Berg & Makusha, 2018). The maintenance Act does not include the socio-emotional value that fathers can provide for their children, but it is mainly concerned with monetary value. Yet it is suggested that the monetary provision by fathers needs to be complemented with other things centering on the social support of the fathers to the children (Van den Berg & Makusha, 2018).

1.7 Significance of the study

A family is a fundamental unit of analysis in demography. Yet the changing nature of families has been rarely studied in relation to men's mental health outcomes. By examining the effect of family change on men's mental health outcomes, the research contributes to the body of knowledge regarding the intersection of family dynamics and population health. It shows the importance of considering mental health as a critical aspect when examining demographic changes. Mental health is an important component of population studies. Research on family change and child maintenance helps inform policies related to family support, child welfare and social services. Let alone linking family change to mental health shows how individual choices and behaviours related to demographic components such as divorce, cohabiting, living alone and marriage influence population health. The study contributes to the scientific knowledge on men's mental health, considering that most studies have increasingly focused on socio-economic factors such as income, poverty, education level, drug and alcohol abuse including unemployment as predictors of mental health problems among men. The study also looks at one of the consequences of family change such as child maintenance effect on men's mental health outcomes. This has not been investigated by existing studies on child maintenance in South Africa.

1.8 Overview of the study

The thesis consists of eight chapters which unpack how the changing nature of the family and child maintenance influence men's mental health outcomes. The chapters are discussed briefly below:

Chapter 1: Presents the introduction to the study. In the chapter, the background, the problem statement, justification and the purpose of the study. The terms which are commonly used are defined to provide an understanding of meaning of the concepts in the study. The chapter also presents the objectives of the study, why the study was conducted and the significant of the study.

Chapter 2: Discusses the literature on mental health, family change and child maintenance conducted at a global, regional and national level. The chapter describes what is known about mental health and its determinants. The theoretical and conceptual framework is also presented.

Chapter 3: The chapter presents the methodology of the study. It describes the mixed method approach that was used including the data source as well as the data analysis methods which were used.

Chapter 4: The chapter presents the background characteristics of the respondents in the study. Including the profile of the sample for the participants who were interviewed for the qualitative arm of the study.

Chapter 5: This chapter presents the levels and patterns of family change, child maintenance and mental health outcomes in South Africa.

Chapter 6: The chapter examined the determinants of family change and payment of child maintenance in South Africa. The chapter examines the determinants of family change among men in South Africa using logistic regression. It also presents the demographic and socioeconomic characteristics associated with men's payment of child maintenance in South Africa. Data analysis was conducted using Generalised Estimating Equations (GEE).

Chapter 7: Presents the results for the association between family change and child maintenance effect on men's mental health outcomes. To address the objective, multilevel mixed-effects modelling was used where seven models were estimated.

Chapter 8: Is the last chapter of the study. It is a discussion of the research findings in the context of existing literature on what is known about mental health. It presents the summary of all the chapters discussed in the thesis including the conclusion and recommendation.

CHAPTER 2

Family Change, Child Maintenance and Mental Health

2.1 Introduction

The main aim of the research is to examine the changing nature of the family in South Africa and its impact on men's mental health. By the changing nature of the family, the study refers to how the following indicators of family change; divorce, cohabitation, solitary living, and multiple changes are associated with men's mental health. The research also seeks to understand how the changing nature of the family and payment of child maintenance interact in explaining men's mental health. It is evident that families are changing across the globe and South Africa included. The changing nature of the family can be noted by changing patterns in family formation, an increase in divorce, cohabitation, solitary living and non-marital childbearing. However, these changes in family have been limitedly understood as possible predictors of men's mental health.

2.2 Family Change: An overview

The dynamics of families have undergone changes across the different parts of the world, leading to the emergence of various forms of families. This shift includes transformations that have altered the traditional notion of the family. Historically, families used to be heterosexual and large, but have currently taken a different structure (Neyer, 2013; OECD, 2011). During the 1960s in Europe, a pivotal shift marked the end of the Golden Age of the Family, which was characterised by high levels of marriage, birth rates at early ages, low prevalence of divorce and traditional forms of families (Oláh, 2015). However, the late 20th and early 21st centuries ushered in a new era with the emergence of different forms of families. During this period, men and women refrained from long-term commitments in relationships and childbearing (Oláh, 2015).

Recently, there has been a notable shift in family formation patterns, as individuals, both men and women, choosing to be well-established before starting a family. This is reflected in the increasing number of women who choose to remain childless, coupled with a rise in the average age at which childbirth occurs (OECD, 2011). In Europe, a growing number of women and men are delaying the age at first marriage (Furstenberg, 2013; Jones, 2005; Raymo et al., 2015; OECD, 2011; Jones & Yeung, 2014), driven by the desire to actively participate in the labour market and advance their careers (Esteve, Garcia-Roman, & Permanyer, 2012; Harknett

& Kuperberg, 2011). This has contributed to a decline in fertility rates over the past three decades (Neyer, 2013; OECD, 2011). There is an increasing trend in living alone and cohabitation across many parts of Europe (Daly, 2005; Hoem et al., 2009; Oláh, 2015). These changes are a response to the ongoing economic and social transformations that continuously affect family formation (Cherlin, 2012). As a result, these shifts in the family are shaping its existence and functions in different parts of the world. In an African context, the traditional construct of a family consists of a man, his wives, children, and extended relatives (Okon, 2012).

However, global changes have led to transformations within families, giving rise to declining marriage rates, increasing divorce rates, cohabitation trends, growing instances of living alone, and an increase non-marital childbearing (Mutanda & Odimegwu, 2019; Odimegwu et al., 2018; Odimegwu et al., 2020; Odimegwu et al., 2017). These changes are indicators that families are responding to the socio-economic and political changes (Wusu & Isiugo-Abanihe, 2006). South Africa, like many other countries, is undergoing family changes as a result of social and economic factors, leading to diverse family forms and structures (Acheampong Yaw Amoateng & Heaton, 2015; Sooryamoorthy & Makhoba, 2016). Family change can be traced back to the apartheid era, characterised by the migrant labour system that separated families (Holborn & Eddy, 2011; Pillay, 2010; Sooryamoorthy & Makhoba, 2016). During this era, the scarcity of accommodation in urban areas among the blacks contributed to marriage delays (Haas, 1987). However, the scope of this study is confined to examining the changes that are transpired in post-apartheid South Africa.

In South Africa, similar to most sub-Saharan African countries, family formation and marriage patterns have undergone changes (Hosegood et al., 2009; Posel et al., 2011). The traditional family patterns which have been in existence in the country are continuously being abandoned (Sooryamoorthy & Makhoba, 2016). Extended and polygamous families are being disregarded and viewed as economically unviable (Sooryamoorthy & Makhoba, 2016). The marriage levels are declining in the country (Hosegood, 2013; Posel et al., 2011) with many men having biological children outside of formal marriage or union (Van den Berg & Makusha, 2018). Factors contributing to delays in marriages and non-marriage among black Africans include the increasing costs of bride wealth (*ilobolo*[1]), acceptance of cohabitation, education attainment

[1] ilobolo refers to bride price paid for a woman in exchange for marriage

by black African women, high unemployment rates, poverty and gender imbalances (Hosegood, 2013; Moore & Govender, 2013; Posel & Rudwick, 2011; Posel et al., 2011; Makiwane, nd). Studies have shown that men experience financial constraints in paying the bridewealth and are discouraged to enter into marriage because of the financial responsibility that is attached to marriage (Posel et al., 2011). The changing nature of the family in South Africa is a continuous process that has brought transformation to the traditional family.

Families are becoming increasingly independent in making decisions compared to previous eras. Nowadays, individuals have a strong preference in making their own choices concerning when they should marry, who to live with and when to dissolve a marriage or a relationship. The institution of marriage, once considered obligatory, has evolved into an optional choice allowing people to exercise their discretion in matters of family formation, including a growing preference for cohabitation. Such independence has given rise to diverse forms or patterns in the family formation notably a rise in cohabitation where men and women live together without being formally married (Popoola & Ayandele, 2019; Posel & Rudwick, 2014). This recent spark in people cohabiting, (Ogunsola, 2011; Posel & Rudwick, 2014), divorcing from unsatisfactory relationships (Brown et al., 2016), re-marrying, living alone have contributed to a rise in children being raised in households without their father's presence. Hence, the growing prevalence of single-mother-parent households in the country (Davids & Roman, 2013; Holborn & Eddy, 2011b; Roman, 2011).

Due to divorce, cohabitation and non-marital childbearing, some children are being brought up in disintegrated spaces characterised by family instability and dysfunction (Brown et al., 2016). This situation necessitates child maintenance obligations when relationship come to an end. Even in instances where the relationships persist, some men have multiple partners, contributing to the neglect of their parental responsibilities. Consequently, mothers find themselves compelled to seek child maintenance even as they reside with the father and the children. While such scenarios may be less common, a more prevalent scenario involves fathers paying child maintenance for children not residing under their custody (Cancian & Meyer, 2004, 2018; Um, 2019; Vogel, 2020). It is important to acknowledge that the changing nature of the family carries repercussions not solely for women and children, but also for men. This gives rise to the need to understand how the changing nature of the family and child maintenance complexities contribute to the understanding of mental health in men. The family

change includes examining how a man change from different marital statuses to being married, divorced, cohabiting, multiple changes and living alone.

2.2.1 Cohabitation: A Common Feature of the Family

Formal marriages are existing side by side with cohabitation in different parts of the world, however, there is growing number of cohabitations. The practice of cohabitation moves away from the traditional cultural norms (Rudwick & Posel, 2013) that expect payment of a bride price by the man as a prerequisite for a man and a woman to live together, in the African context. Cohabitation transpires before a marriage or after going through a divorce and before re-marriage (Odimegwu et al., 2018). The high prevalence of cohabitation in sub-Saharan Africa, including South Africa, is largely attributed to socio-economic factors such as secularisation, the inability to pay the bride price, and economic constraints (LeGrand & Younoussi, 2009; Mokomane, 2006; Rudwick & Posel, 2013). It is predominantly common among individuals aged 20 to 40 year old in South Africa (Palamuleni, 2010). Given this context, it is imperative to control for age to examine if this still holds a decade after Palamuleni's study.

The factors contributing to cohabitation among women have been increasingly discussed in Sub-Saharan Africa (Odimegwu et al., 2018) and South Africa (Posel et al., 2011). Some studies have looked at both men and women (Hosegood et al., 2009). However, there is a scarcity of studies that specifically direct attention to men, yet they are also engaging in cohabitation with women. This limits the understanding of such family change's impact on men's mental health. This is important considering that cohabitation means defying the cultural expectations, tradition, and norms that a man should marry before living with a woman. Therefore, what would it mean for a man to cohabitate knowing what is expected of them, and how would it affect their mental health are some of the questions that the literature should be interrogating in South Africa. When such decisions are made, there are children involved from both previous and current relationships who still require paternal support despite the changes the family has undergone. It is under such circumstances that examining the changing nature of the family coupled with child maintenance becomes important in understanding men's mental health.

Cohabitation can be both a means to an end, or a burden to men. The construct of black men's hegemonic masculinities in South Africa and other parts of Africa are shaped by men's position

of power within the marriage facilitated by the payment of lobola (the bridewealth). This practice of *ilobolo* is a black custom that is particularly widespread in the KwaZulu-Natal province (Posel et al., 2011). In other parts of the country, different names are used such as *mahadi* in Sepedi. The *ilobolo* (bridewealth) practice has different names which depends on the ethnic group. This makes it vital to control for the province to understand the changing nature of the family in contexts with different cultural practices. By paying lobola some men have control of their wives (Mazibuko, 2016) but when they fail to do so their ego in many instances is affected limiting their ability to exercise power. However, this can be contested since the nature of just being a man allows them to be dominant over their partners regardless of having paid lobola or not. Most of these men who cohabitate struggle to be socially accepted by their in-laws because they would have deviated from the social norms on family formation (Hosegood et al., 2009). These men sometimes fear meeting their in-laws because of a union that is not formalised. Such circumstances can be detrimental to their mental health. However, it is important to also address matters of race. In South Africa, among white women, cohabitation does not act as an alternative to marriage or a substitute for it, unlike among black women it precedes marriage (Posel et al., 2011). Hence the study controls for race to examine how the dynamics play out on men considering the scarcity of literature in the country on family change among men.

2.2.2 Men and Divorce

Divorce is a common occurrence influenced by various factors, these include improvement in the economy, urbanisation and the quality of life (Su et al., 2018). Social, cultural and economic factors such as unemployment, poverty, educational level, age, occupation, cultural differences and sexual incompatibility are also fundamental in explaining divorce (Mostafaei, 2016). The changes in marital practices, the growing freedom of women, and the weakening of kinship ties are also part of the factors influencing divorce (Clark & Brauner-Otto, 2015). South Africa is facing an increase in rates of divorce which have contributed to sole-parent families, cohabitation, and re-marriage. However, the factors influencing divorce are not under the scope of this study. Instead, the study examines how family change together with child maintenance is associated with men's mental health outcomes.

For men, divorce can be a difficult process, particularly when children are involved. In the context of South Africa, divorce is viewed as depriving men of the opportunity to be actively involved in their children's daily lives (Mnyango & Alpaslan, 2018). Men who contest

custody sometimes find themselves going through a financially draining process (Van den Berg & Makusha, 2018). The issues of child maintenance and custody are deliberated at separate courts. Custody matters are deliberated within the High Court, while child maintenance proceedings are carried out at the Maintenance Court (Van den Berg & Makusha, 2018). The ability to contest custody through the High Court is determined by financial means; men who can afford to engage in the legal contestations do so, leaving those who cannot afford to simply accept their limited involvement with their children. Generally, the justice system in terms of divorce in South Africa is perceived as favouring women and biased against men (Troilo & Coleman, 2012). These perceptions leave men with a sense of being treated unfairly and unequally. They perceive the courts as reluctant to assist them to see their children and feel that they are being punished by the court system through the huge child support payments (Mnyango & Alpaslan, 2018). Such perceptions lead men to doubt the justice system, perceiving it as biased in favour of women when it comes to divorce and child maintenance matters. In such a context it is worthwhile to investigate possible risk of mental health outcomes in men from the changing nature of the family and the complexities of child maintenance.

In cases of divorce where children are involved, men experienced increased stress concerning the wellbeing of their children since the mothers have full child custody (Mnyango & Alpaslan, 2018). For instance, a study conducted in Canada indicated that 80% of fathers who went through marital dissolution did not retain custody of their children after the divorce (Department of Justice, Government of Canada, 2017). The issue of child custody after marital dissolution poses challenges for families (Vasconcelos et al., 2016). The transition from being a full-time father to becoming a custodial father after a divorce is a stressful process (Kulik & Kasa, 2014). The loss of custody of their children together with the experiences encountered in family court proceedings places stress on men, which in turn, can contribute to substance abuse and suicidal tendencies (Felix et al., 2013). The loss of custody, just like losing a job, affects men's sense of purpose in life (Affleck et al., 2018).

In South Africa, men face challenges of adapting to living away from their children (Van den Berg & Makusha, 2018). After a divorce, sleeping patterns are affected with some men resorting to excessive alcohol consumption as a remedy for sleeplessness (Mnyango & Alpaslan, 2018). In the face of pain and stress, men react differently to pain and stress with some turning to alcohol and drugs to solve their problems. The state of living apart from their children is considered as undesirable and emotionally distressing (Mnyango & Alpaslan,

2018). Dealing with parting ways with their children gives rise to anxiety (Mnyango & Alpaslan, 2018). These findings are from a study conducted in one of the provinces of South Africa, using a qualitative approach which does not allow generalisations of the findings to the entire country. Mnyango and Alpaslan's (2018) study primarily focused on divorce-related aspects and did not examine other aspects of family change, such as cohabitation, and solitary living, including maintenance payment, which could serve as possible predictors of men's mental health. Consequently, these components are essential in understanding men's mental health outcomes.

Divorce or separation has never been an easy process for families, as it is a stressful life changing event that individuals have to adapt to (Amato, 2001). It is within families that some men derive a sense of purpose and value of life (Affleck et al., 2018). However, the experience of divorce impacts their psychological well-being (Leopold, 2018; Steiner et al., 2015). In times of divorce, men find it challenging and may suppress their emotions due to the societal norms which expect them to be strong always (Lai et al., 2010; Vukalovich & Caltabiano, 2008). The adverse effects of marital dissolution on men's mental health can be attributed, in part, to a lack of social and emotional support (Rotermann, 2007). For men, the dissolution of a marriage signifies not only a loss of social support but also the separation from their children. These factors impact their mental health (Affleck et al., 2018).

2.2.3 Solitary Living and Mental Health

Solitary living is one of the emerging family changes which has an impact on the wellbeing of individuals. Studies conducted in Western countries have shown an association between living alone and increased physical and mental health risks. This correlation encompasses higher levels of stress, low self-esteem, cardiovascular reactivity, depression, psychiatric disorders and mortality (Lee et al., 2010; Ramos & Wilmoth, 2003). Living alone is linked to physical and social isolation, resulting in a lack of support. This, in turn, slows the reparative functions in the body (Dean et al., 1992; Jennifer Yeh & Lo, 2004). In Japan, solitary living among young adults has been linked to a reduced likelihood of experiencing happiness in comparison to those residing with others (Raymo, 2015). Similarly, among young Koreans, living alone has been associated with lower life satisfaction when compared to their married counterparts (Ho, 2015). The living arrangements were not significantly associated with thoughts of suicide among young adults (Ho, 2015). Interestingly, individuals who are single and choose to live

alone had increased life satisfaction compared to their unmarried peers who reside with their family members (Ho, 2015).

The association between living alone and the wellbeing of the elderly is sometimes context-dependent (Teerawichitchainan et al., 2015). In Asian countries like Vietnam and Myanmar, the childless elderly individuals living alone face severe psychological distress and financial stress. Conversely, those elderly individuals living close to their children did not experience financial distress, loneliness, lack of support and poor wellbeing (Teerawichitchainan et al., 2015). Elderly individuals who live alone are vulnerable and experience psychological distress since they are prone to undesirable health and life events, disability and financial strain (Russell & Taylor, 2009). In some instances, the elderly live in appalling or poor neighbourhoods with crime (Russell & Taylor, 2009). In Singapore, a study showed that the elderly who lived alone were more likely to feel lonely and as such, this becomes a risk factor for mortality (Chan et al., 2015). However, even when the children reside away from their parents their presence provides a protective buffer against psychological problems (Teerawichitchainan et al., 2015).

Married elderly individuals who live alone and maintain regular contact with their children exhibit higher levels of subjective wellbeing (Zhou et al., 2015). Conversely, elderly individuals without children, who have a high school education, poor income and rarely met their children experience negative subjective wellbeing (Zhou et al., 2015). Several studies highlight that living alone is negatively associated with quality of life such as physical and psychological wellbeing (Demey et al. 2013; Ho 2015; Nzabona et al. 2016). The elderly living alone are at a greater risk of depression (Zhou et al., 2015) with a study revealing a depression prevalence of 74.46% among the elderly living alone, surpassing that of their counterparts in shared living arrangements (Xie et al., 2010). In most instances the elderly individuals who live alone have lower chances of seeking medical attention, and have lower levels of income and social support (Zhou et al., 2015). The elderly living alone are at an increased risk of developing mental health problems (Zhou et al., 2015). Not having a greater social support system in the form of social networks results in isolation which limits access to healthcare and affects the physical and mental well-being of the elderly (Teerawichitchainan et al., 2015).

Studies have highlighted that the link between solitary living and well-being among the elderly is moderated by gender, ethnicity, and social networks. In the United States of America, the ethnicity of those living alone has an impact on the well-being of the elderly (Waite & Hughes,

1999). For instance, among the Hispanic, the experience of living alone is associated with higher levels of depressive symptoms compared to other ethnic groups sharing the same living arrangement. This divergent can be attributed to cultural values that emphasize the importance of close family ties, multi-generational living arrangements, and regular interaction with extended family members within the Hispanic community (Waite & Hughes, 1999). Solitary living is more detrimental to men's psychological health than that of women (Dean et al., 1992; Jeon et al., 2007). This is because women, unlike men, have a reduced likelihood of being socially alienated since they maintain social ties with friends and relatives resulting in higher levels of social support despite their marital status (Michael et al., 2001). This makes the study imperative to understand how a family change such as solitary living is associated with men's mental health outcomes in South Africa.

2.3 Child Maintenance: A Global Overview

There is a growing number of children not residing with their biological fathers (Stykes et al., 2013). In the United States of America, statistics indicate that two out of every five children do not reside with their biological fathers (Kreider & Ellis, 2011). Similarly, in South Africa, there is an increase in absent fathers and non-custodial fathers who are less involved in the lives of their children (Richter et al., 2010, 2012). As a result of relationship dissolution, children are growing up in single-parent households (Statistics South Africa, 2018; Hosegood et al., 2009). This has seen most countries coming up with various policies in reaction to the changes. South Africa, in particular, is experiencing an increase in marital dissolution, cohabitation, solitary living and non-marital childbearing (Hosegood et al., 2009), as well as HIV-related deaths, resulting in many children growing up in the absence of their biological parents. In situations where both parents are alive, the government has implemented the Child Maintenance Act, requiring parents to make monthly contributions to support the upbringing of their children.

In South Africa, before decisions are made on what amount the parents should contribute towards the child, the court takes into consideration the ability of each parent to pay. As outlined in the Act, parents are obligated to pay child maintenance until their children can support themselves. In South Africa, the courts have the power to enforce maintenance payments under section 8(4). But such laws are taken for granted as maintenance for children is not paid by some fathers, leaving mothers and maternal relatives responsible for the wellbeing of the children (Van den Berg & Makusha, 2018). This makes child maintenance a

serious challenge in the country. The challenges are centred on its application rather than the law (Morei, 2014). Despite the constitutional provision guaranteeing children's right to support, the justice system is inadequately equipped to address the problem of maintenance defaulters, who are mainly fathers (Morei, 2014). Studies have shown that men are defaulting on child maintenance payment, leading paternal and maternal uncles to assume responsibility of supporting the children (Van den Berg & Makusha, 2018). The defaulting by fathers is seen as a deliberate move (Van den Berg & Makusha, 2018). This greatly affects the children and women who will be forced to provide for the children. Studies have pointed to a need to reinforce child maintenance payments by fathers (Morei, 2014).

There are various reasons which explain why non-custodial fathers fail to pay child maintenance. Re-partnering and having additional children could be a barrier to payment, as the financial responsibilities associated with the new family may impede men's ability to provide for non-resident children (Cancian & Meyer, 2004). The financial burden contributes to the non-custodial parents struggles in meeting their own basic needs while simultaneously fulfilling their financial commitments to their children's needs (Huang et al., 2005). Studies have shown that paternal attachment and contact increase the likelihood for a parent to pay child support (Nepomnyaschy & Garfinkel, 2010), while lack of access to the children may discourage payment (Edin & Nelson, 2013). In cases where child support arrears accumulate to high levels, non-custodial fathers might lose hope of ever repaying the owed amount (Waller & Plotnick, 2001). This situation might lead to an increased likelihood for these custodial fathers to avoid formal employment, in comparison to fathers without such outstanding arrears (Miller & Mincy, 2012). In response to the issue of nonpayment of child maintenance, the South African government introduced punitive measures to deal with the defaulters. These measures includes being blacklisted and the withholding of financial credit until the outstanding maintenance payments are settled (Van den Berg & Makusha, 2018).

The enforcement measures to apprehend fathers who fail to pay child maintenance may affect the ability of fathers to pay. Enforcement actions that are punitive, such as asset seizure, preventing tax refunds and restrictions on the driver's license, while intended to encourage child support payments, may affect fathers' ability to pay child support (Holzer et al., 2005; Sorensen et al., 2007). In the United States, for instance, when the state interferes by suspending driver's licenses of fathers not paying child maintenance, it makes it difficult for them to secure and keep work (Pate, 2002). Nevertheless, some studies indicate that the payment behaviour

of non-custodial fathers is influenced by a combination of factors, encompassing enforcement efforts, their financial capacity, and their willingness to pay (Graham & Beller, 1996). In some cases, mothers respond to non-custodial fathers with child support debts by restricting their access to the children (Turner & Waller, 2017). It is under such circumstances that it becomes worthwhile to investigate men's perceptions of child maintenance and how it impacts their mental health outcomes.

2.3.1 Characteristics of Men Paying Child Maintenance

Understanding the characteristics of men paying child maintenance is vital to ensure that children receive financial support and avoid living in poverty. Single mothers constitute a greater proportion of those living in poverty. Yet after a divorce or non-marital childbearing, children live in the custody of their mothers. Studies have shown that single-headed families compared to nuclear families, live below the poverty line (Madalozzo, 2007). The payment of child support by non-resident fathers is important as it is a source of income for mothers and their children. This is associated with positive child well-being such as educational attainment, schooling, and cognitive outcomes. Also, informal child support or any form of contribution from non-resident fathers is an important source of support for families (Nepomnyaschy & Garfinkel, 2010).Several factors contribute to whether non-residential fathers pay child maintenance. Beyond fathers' income and financial capability, their willingness to pay plays an important role (Nepomnyaschy & Garfinkel, 2010). A study indicated that fathers would contribute less to child support if they believed that the mother is spending part of the child support for herself rather than for the needs of the children. In addition, the inability to monitor how the money is utilised impacts the father's willingness to make payments (Weiss & Willis, 1985). Fathers who have previously lived with the child and the mother have a strong attachment which increases their willingness to pay compared to those who have never lived with the child (Johnson Jr, 2001). Moreover, the frequency of contact that the fathers have with their children and the quality of the relationship with the co-parent are key predictors of child support payment (Huang, 2006). The intersection of a father's ability and willingness to pay influences their decision making regarding child maintenance payments (Graham & Beller, 1996).

Studies have shown that the characteristics of fathers who pay child maintenance differ. In the United States, black and Hispanic non-residential fathers had a lower likelihood of paying child support compared to their white counterparts (Huang et al., 2005; Stykes et al., 2013).

Furthermore, fathers with lower levels of education provided less formal child support compared to the better-educated (at least a high school diploma/GED) fathers (Huang et al., 2005). Conversely, non-resident fathers with education beyond high school had an increased likelihood of providing formal child support (Stykes et al., 2013). Fathers who had low income had high arrears of child support, this shows that these fathers were struggling in making payments (Kim et al., 2015; Sorensen et al., 2007). Fathers who had children with multiple women were less likely to pay child support compared to those who had children with one woman (Magnuson & Gibson-Davis, 2007). This reluctance in fulfilling financial responsibilities could be attributed to a perception that their contributions, when divided among all their children, would be meaningless (Nepomnyaschy & Garfinkel, 2010). Instead, these fathers prioritised providing for the children with whom they lived with to show their family commitment (Nepomnyaschy & Garfinkel, 2010).

South Africa is among countries in the world with a high number of absent fathers (Richter et al., 2010, 2012). The estimates indicate that 2.13 million children are fatherless and 9 million grow up in the absence of their fathers (Dube, 2016). The absence of fathers poses a threat to the structure of families (Ratele et al., 2012). This has led to the increasing prevalence of female headed households (Nwosu & Ndinda, 2018), contributing to a perception of a fatherless society (Feni, 2016). There are many reasons why there are absent fathers in the country. This is due to factors such as male labour migration, non-marital births and male mortality attributed to HIV/AIDS (Richter et al., 2010), a delay in marriage, women's improved economic autonomy (Rabe, 2006) as well as poverty and unemployment (Makusha & Richter, 2015). Men's employment status and income determine who can marry and co-reside with their children among black South African men (Desmond & Desmond, 2006).

Poverty and unemployment of some black South African men have rendered the men weak due to their perceived failure to financially support their children (Makusha et al., 2013). Such failures also damage their identity, masculinity, self-esteem and ability to act as fathers (Makusha et al., 2013). To be a breadwinner and financially provide for the family is a deeply embedded masculine identity in most African societies which affects men's involvement with their families when they fail to fulfil the role (Bhana & Nkani, 2014; Hunter, 2006; Morrell, 2006). This results in many poor black South African men distancing themselves from their children (Hunter, 2006). In some circumstances, men completely abandon their children (Ramphele & Richter, 2006). The absence of fathers has led to instability of families, and single

female-headed households with the children and youth poorly performing in education (Richter & Morrell, 2006).

The absence of fathers has negative impacts on the well-being of children. The children grow up with an emotional need to connect with their fathers (Fagan et al., 2009; Goodsell & Meldrum, 2010; Perrin et al., 2009). They grow up missing a lifestyle that involves their fathers, depriving them the emotional attachment that fathers provide (Freeks, 2011). The presence of fathers in their children's lives yields positive outcomes, including improved access to resources, protection and increased household expenditures (Richter & Morrell, 2006). This is because fathers provide monetary resources in the household (Desmond & Desmond, 2006), resulting in benefits associated with fatherhood for children. Fatherhood research is important due to the benefits it offers children. These advantages encompass not only financial support but also social support, cognitive development, and emotional well-being (Richter, 2006).

Most studies in South Africa are on fatherhood and how it impacts the well-being of children. There are mainly centred on the absence of the fathers and how they neglect their children. But what is not known is the characteristics of non-resident fathers who are making an effort to support children who are not in their custody and their perceptions towards child maintenance. It is important to know the characteristics of the men who are paying child maintenance as this could be incorporated into the development of fatherhood programmes aimed at encouraging payment of child support among non-resident fathers. Exploring men's perceptions towards child maintenance will help in understanding how they perceive it and factors that influence their willingness to pay and how they perceive their role as fathers.

The studies on fatherhood in South Africa have largely portrayed the fathers negatively as not responsible for their families. A limited number of studies have presented non-resident fathers in a positive manner. The studies on fatherhood reveal the negative side of black fathers (Marcisz, 2013). This portrayal emphasizes their absence and lack of parental involvement in their children's lives (Marcisz, 2013). There are accusations of physical and sexual violence against women and children, contributing to a negative perception (Lesejane, 2006). Media coverage has extensively highlighted these issues, further exposing cases of child abuse, especially and the rape of infants (Posel & Devey, 2006). This results in fathers viewed as not committed and interested in their children. They rarely attend the birth of their children and

fail to acknowledge their children as their own and remain absent from their children's lives (Richter & Morrell, 2006). By so doing, this portrays black fathers as a source of moral decay (Posel & Devey, 2006). Such representations not only tarnish the character of black fathers, particularly those striving towards positive fatherhood (Marcisz, 2013), but they also overlook the efforts that some absent fathers are doing for their children. Hence, the need for studies that move away from this negative narrative and instead focus on the positive role that fathers can play. This begins by identifying these fathers who are making child support or maintenance payments. This can inform strategies aimed at encouraging non-paying fathers to engage in the payment of child maintenance. Also investigating what it means to be a father would possibly encourage and enhance the involvement of fathers in the lives of their children (Hinckley et al., 2007).

In South Africa, a book on fatherhood "*Baba: Men and Fatherhood in South Africa*" focuses on fathers and fatherhood. However, in this book, only a small section by Khunou (2006) discusses child maintenance in the country. What is missing is information that connects us to fathers who are paying child support. This could be attributed to issues of availability of data that could facilitate an examination of this issue. The NIDS survey collects data that presents the contributions (Child support or maintenance) being made by fathers. It is important to acknowledge that the NIDS data does not differentiate between regulated or non-regulated child maintenance. However, the use of such data makes an interesting starting point for identifying and understanding fathers who are involved in child maintenance payments in the absence of regulated data. This type of data is nationally representative allowing generalisations of the findings to the country.

There are a lot of studies that identify the characteristics of fathers not residing and those residing with their children. For instance, a study conducted in South Africa indicated that black children living with their father constituted a lower proportion (30%) compared to coloured children (53%), whites (83%) and 85% for Indians (Holborn & Eddy, 2011). Studies in the country have shown that the majority of children in rural areas do not reside with their fathers (Richter et al., 2010). A study in South Africa indicated that in rural areas, 55% of black children had absent fathers while in urban areas it was 43% (Holborn & Eddy, 2011). The absence of fathers has been largely linked to labour migration. During the apartheid era, the political and economic policies affected the structure of the family and shaped fatherhood, especially that of blacks (Richter et al., 2010).

Percentages of non-resident fathers paying child maintenance are limitedly available. A study conducted in South Africa indicated that 84% of the children had fathers who were alive but only 40.5% of fathers provided financial support to their children (Eddy et al., 2013). The data was from Wave 1 (2008) and Wave 2 (2010) of the NIDS survey. The characteristics of the fathers who provided child support are not provided in the study. What is known is the increased expenditure in households where men reside with their children. In households where fathers were present, their monthly expenditure was over R10 000 (Desmond & Desmond, 2006). Households with lower monthly expenditure of less than R400 had fathers present (38%) while those with an expenditure of over R10 000 had fathers present in 93% of the cases (Desmond & Desmond, 2006). This suggests that poverty is more prevalent in households with non-resident fathers (Eddy et al., 2013).

Factors that determine whether men would pay maintenance are mainly centred on employment and income. Unemployment results in financial constraints that hinder non-resident fathers from financially supporting their children and being involved in their lives (Eddy et al., 2013). In such circumstances, they become absent in the lives of their children unwillingly. Also, men financially support the children they have access to. A study in South Africa indicated an association between fathers seeing their children and financially supporting them (Eddy et al., 2013). However, men's contact with their children may be hindered if he gets into a relationship with a woman with children from a previous relationship as he becomes the source of support for the new family (Mkhize, 2006).

Failure to financially support the children results in restrictions on having access to children by the custodians who in most instances are women (Eddy et al., 2013). When the men fail to provide for the children they are labelled as useless, yet it is the circumstances of being unemployed which contribute to not being able to provide for their children. The men highlighted that a lack of financial capacity to provide for the children has resulted in them losing the title of being a father. This makes the men feel like they are failures who do not want to be with their families and revealed how it was painful to fail as a man (Eddy et al., 2013). Considering such notions, not much is known concerning how these complexities surrounding child maintenance affect men's mental health which is also a focus of this current study. The study uses the NIDS survey, yet it is limited in many ways since it is the best existing panel

data in South Africa with information on men who are paying child maintenance or support whether regulated or not regulated.

2.3.2 Men's perceptions of child maintenance

Child maintenance is perceived by men as having economic implications. Paying child support is sometimes regarded as a financial burden as it impacts the men's household budget. To some men it is a source of anger, frustration and disappointment. When paying child support the fathers would feel financial pressure (Natalier & Hewitt, 2010). The transfer or deduction of funds for child support tends to make it difficult for them to meet their financial obligations. These perceptions also apply even to men with higher income, as they also experience financial pressure. In most instances, it makes the men question how they would survive after the money has been deducted for child support (Natalier & Hewitt, 2010). Some men feel that the child support system is unfair and hinders their financial freedom. Child support payment comes with stressful lawsuit costs. It has left some men in debt and the payment of child maintenance is described as a monthly punch in the face. Also, child support cannot be separated from the emotions associated with the dissolution of the relationship, negotiations about shared parenting as well as the changes to fatherhood (Natalier & Hewitt, 2010). In numerous instances, these men find themselves contemplating how they will navigate their financial responsibilities once child support payments are deducted (Natalier & Hewitt, 2010).

For some men, the child support system appears deeply unjust, appearing to impede their financial autonomy. The process of child support payment is accompanied by stressful legal costs, plunging men into debt and rendering child maintenance payments akin to a monthly emotional blow. Additionally, the emotional backdrop of relationship dissolution, negotiations regarding shared parenting, and the transformative aspects of fatherhood cannot be disentangled from the concept of child support (Natalier & Hewitt, 2010). These factors collectively contribute to the complex emotional and financial landscape surrounding child maintenance.

2.3.3 Child Maintenance and Men's Mental Health

Child support or maintenance is linked to men's mental health problems particularly when the men fail to fulfil their child support obligations (Anderson et al., 2005). The non-resident fathers fail to pay child support due to unemployment resulting in child support debt which impacts negatively on employment opportunities (Miller & Mincy, 2012) and their mental

health (Lin, 2000; Um, 2019; Waller & Plotnick, 2001). Not only is employment affected but the fathers' involvement with their children stands is jeopardised since most custodians deny fathers access to children when they fail to pay child support (Turner & Waller, 2017). The fathers view child support debt as overwhelming and find it very worrying since the accumulated debt is huge compared to their earnings (Waller & Plotnick, 2001). Some of these fathers with child support debt apply for a modification but tend to be frustrated by waiting longer for a modification while the debt continues to accumulate and this results in an increased risk of depression and anxiety (Um, 2019). A modification of child support can only be awarded depending on the father's ability to pay (Ha et al., 2010). Such circumstances explain why mental health problems are prevalent in non-custodial fathers. In South Africa, there is a scarcity of scientific studies on child maintenance with mainly newspaper articles mentioning how men are not paying for maintenance. It is not known how child maintenance can be linked to depression in men warranting research in this area.

Men living in rural areas have higher rates of depressive symptoms. In rural areas, there is a lack of job opportunities which results in financial insecurities and hardships. This contributes to the father's inability to meet the child support obligations. This situation affects men's mental well-being. The geographic isolation and lack of public transport hinder the social contact and interaction of the fathers with their children (Anderson et al., 2005). Living far away from their children makes it difficult for fathers to maintain close relationships and this negatively affects their emotional well-being (Anderson et al., 2005). Fathers who live away from their children are at an increased risk of mental health problems particularly depression compared to other fathers (DeKlyen et al., 2006). Men in rural areas might not seek mental health services since it is hard for privacy and confidentiality within an environment which is in most instances small, with one's activities being visible to the community members and the extended family (Weigel & Baker, 2002). Contextual factors are important in understanding depression among men yet limited studies have been conducted in South Africa.

Despite studies in the USA indicating an association between child support and men's mental health problems, there are no studies in South Africa that have examined this nexus. Yet there is evidence that the failure by men to pay child support affects the men's involvement with their children. The gender roles that are associated with being a man pose a burden when they fail to fulfil them. In patriarchal societies, men are pressured to be breadwinners with the responsibility of providing for their families and themselves. The provider role is linked to

notions of masculinity, the lack of capacity to provide makes men feel like failures (Eddy et al., 2013). When they are unable to provide for their children, men distance themselves or self-isolate from the lives of the children (Eddy et al., 2013; Rabe, 2006; Ramphele & Richter, 2006; Richter et al., 2010). Sometimes men are embarrassed to visit their children without carrying anything for them, avoiding what their children would say (Eddy et al., 2013). Failure to provide for their children makes the fathers feel ashamed, living them with no option but to be absent in their lives as a solution rather than to face the humiliation that is associated with not being able to provide (Ramphele & Richter, 2006). However, some studies have shown that children are more interested in their father's attention and affection rather than receiving possessions from them (Richter & Smith, 2006). The children also understand how unemployment hinders their fathers' ability to provide for them (Richter & Smith, 2006).

However, some fathers do not willingly distance themselves from their children even if they cannot afford to provide for them (Eddy et al., 2013). It is their ex-partners (mothers) and their families who do not allow them to have access to the children because of their inability to financially support them (Eddy et al., 2013). This is emotionally draining for their ex-partners and families to consider the fathers as sources of finance with only a financial responsibility yet there is more to fatherhood rather than the financial aspect (Eddy et al., 2013). Apart from being financial providers, fathers can play other roles such as childcare and partake in recreational activities with their children (Eddy et al., 2013). This is emotionally important for both the father and the child. Allowing fathers to be emotionally involved in the lives of their children may motivate the fathers to financially support their children (Eddy et al., 2013). Such a move will encourage fathers to make sacrifices regarding the provision of child support. Studies in the US have shown that non-custodial fathers who have frequent contact with their children are more likely to pay child support compared to those who do not have.

Studies have shown the desire by fathers for their fatherhood role not to be based on financial contributions such as child maintenance only (Eddy et al., 2013). The fathers do not only want to pay child maintenance but want more such as being involved in the lives of their children. This has been shown in South African media television channels such as Moja love where various men have approached the media seeking help in terms of accessing their children. It is evident from television shows that most women tend to punish partners for dissolving their relationships. The children are denied the opportunity to know their fathers. In some instances, the fathers are not allowed to support their children since the children are being taken care of

by other men which are the current boyfriends or partners of their ex-partners. The lack of capacity of non-resident fathers to financially support their children makes them denied access to be fathers for their children (Eddy et al., 2013). The burden associated with failure for providing for their families is mostly prevalent among uneducated and unskilled labourers (Desmond & Desmond, 2006). This results in men engaging in alcohol and drug abuse as well as distancing themselves from their families (Richter et al., 2010). The existing studies do not address how the complexities surrounding child maintenance affect men's mental health outcomes considering that men need to be part of their children's lives (Eddy et al., 2013).

2.4 Mental Health: A Global Overview

The Global Burden of Disease Study in 2016 indicated that approximately 950 million people across the world experienced a mental health condition (UNAIDS, 2018). Mental health is integral to the health of individuals as there is no health without mental health (Tomlinson et al., 2016). Globally, mental health disorders such as depression, anxiety as well as drug and alcohol abuse among others result in disabling health conditions (Institute for Health Metrics and Evaluation, 2013; Kessler & Zhao, 2010). Also in Sub-Saharan Africa, mental health is a growing public health concern (Chilema & Mwape, 2017) and a risk factor for physical comorbidity and disability (Gureje et al., 2010; Patel et al., 2010). Most mental disorders are undiagnosed and untreated worldwide (Ferrari et al., 2013; WHO, 2014). It is predicted that by 2030 common mental disorders such as depression will rank as the number one cause of ill health, disability and premature death worldwide (WHO, 2014).

The Global Burden of Diseases states that major depression ranks second, drug use disorders rank seventh, alcohol use disorders rank eighth and anxiety ranks eleventh among men (Ferrari et al., 2013). Some studies have shown that men have higher reports of mental disorders while others have shown that reports are higher among women. For instance, a study conducted in the United States of America reported higher rates of mental disorders among men compared to women (Brugha et al., 2009). The lower prevalence of common mental disorders such as anxiety and depression among men could be because of a bias in reporting and exaggeration due to measurement (Affleck et al., 2018). Depression and anxiety are measured using self-reported scales which could be influenced by gendered differences which in turn affect the prevalence (Parker et al., 2014). When faced with psychosocial problems, men act out and this includes taking high levels of alcohol and drug abuse, engaging in risky behaviours, easily angered and irritated (Affleck et al., 2018). Such behaviours are consistent with dominant

notions of masculinity compared to crying and talking (Affleck et al., 2018). Reporting symptoms of depression among men is inconsistent with notions of masculinity (Nolen-Hoeksema & Girgus, 1994). Such notions of masculinity and stigma associated with mental illness prevent men to seek help concerning mental health problems (Addis & Mahalik, 2003; Galdas et al., 2005).

Mental disorders have negative consequences such as increased mortality due to suicide, reduced life expectancy, disability and a burden on caregivers and families (Burns, 2011). Globally, mental health disorders are associated with disability (Ferrari et al., 2013; Whiteford et al., 2013). Neuropsychiatric disorders are ranked third in contributing to disability-adjusted life years in South Africa (Jacobs & Coetzee, 2018). Mental health disorders do not only affect the well-being of individuals, they also have an economic impact through absenteeism, unemployment, loss of productivity and medical expenses (Lim et al., 2008). Mental disorders are also associated with role impairment. A study conducted in South Africa indicated that men aged over 50 years old with mental disorders had a higher number of days out of roles (128 days) compared to other age groups with gender differences noted when the reported number of days were three times the number of out of role days for females (66 days) in the same age group (Tomlinson et al., 2009).

Mental health problem in men usually contributes to premature death (Bilsker & White, 2011; Möller-Leimkühler, 2002). Men are less willing to disclose any emotional distress to physicians despite the severe encompassing suicidal thoughts linked to the distress (Wide et al., 2011). This explains why the suicide rates are 3 to 5 times higher than that of women (Mościcki, 1997). A study conducted in South Africa indicated that depressive symptoms increase the risk of non-fatal suicidal behaviour among men in poor communities (Bantjes et al., 2018). Since depression is a proximal risk of non-fatal suicide, interventions need to focus on addressing depression in poor settings (Bantjes et al., 2018). Men's resistance to seeking help is a result of lower socioeconomic status and is also intensified by the worsening of depressive symptoms leading to cognitive disability (Scott & Collings, 2010). The mental disorders also affect adherence to treatment and management of the illness by the individuals (Gonzalez et al., 2011; Leserman, 2008; Starace et al., 2002).

2.4.1 Mental Health in South Africa

In South Africa, various measures have been put in place to address mental health issues. The White Paper on the Transformation of the Health System, in 1997, included a chapter on mental health which stated that mental health services should be integrated with other health services at national, provincial, district and community levels (South African National Department of Health, 1997). A 72-hour observation and referral service was introduced to assist emergency psychiatric patients in designated general hospitals (Petersen & Lund, 2011). Patients with psychiatric conditions receive disability grants (Petersen & Lund, 2011). There are organisations such as the Programme for Improving Mental Health Care (PRIME) funded by the United Kingdom Department for International Development (DFID) operating in five countries namely (Ethiopia, India, Nepal, South Africa and Uganda) (Lund et al., 2012). In South Africa, a PRIME site is located in Dr Kenneth Kaunda District in North West Province and it works to strengthen mental health components of the Primary Care Clinical guidelines and offers counselling to people with depression and people living with severe mental disorders (Lund et al., 2016).

Despite South Africa being a signatory to the United Nations Convention on the Rights of Persons with Disabilities (CRPD) and its Optional Protocol, the government is not executing its responsibilities as a signatory to the CRPD (Burns, 2011). The health and social services for people who are mentally disabled are inadequately funded and underdeveloped (Kohn et al., 2004). People who are mentally disabled have their rights violated, and are isolated and stigmatised in the country (Burns, 2011). It is estimated that 75% of people with a mental disorder are not receiving mental health services (Williams et al., 2008). Mental disorders in the country co-occur with infectious diseases such as HIV and TB (Freeman et al., 2007; Kagee & Martin, 2010; Peltzer & Phaswana-Mafuya, 2013), non-communicable diseases which include cardiovascular disease and diabetes as well as injury (Tomlinson et al., 2016). The mental disorders affect adhering to HIV and TB treatment (Nakimuli-Mpungu et al., 2012; Uthman et al., 2014).

2.4.2 Determinants of Mental Health

Socio-economic Conditions and Mental Health

There exists a two-way relationship between mental disorders and socioeconomic status. Mental disorders result in reduced income and employment which leads to poverty and in turn increases the risk of mental disorders (WHO, 2014). Studies have shown that low

socioeconomic status increases the rates of depression (Campion et al., 2013; Patel et al., 2010). For instance, in Poland and Russia, socioeconomic circumstances were associated with depression (Nicholson et al., 2008). Similar to countries in Europe, socio-economic conditions in South Africa such as poverty increase the risk of mental health problems (Burns, 2011). A study conducted in South Africa indicated that poverty and food insecurity was associated with depressive symptoms among men in peri-urban settlements (Lund et al., 2010). Another study in South Africa indicated that men who perceived themselves from the bottom of the socioeconomic status ladder had increased reports of symptoms of depression (Ardington & Case, 2010). However, these studies do not incorporate the changing nature of the family and how it affects men's mental health in South Africa.

Men who have poor socio-economic conditions and live in poverty are more likely to experience mental health problems such as depression. In South Africa studies have shown that socio-economic factors such as food insecurity, being fired from work and having more than two financial dependents were associated with symptoms of depression in men (Bantjes et al., 2018). However, Bantjes et al. (2018)''s study, used a variety of poverty measures without using a wealth index or value of household assets owned. The study recommends the use of a wealth index rather than income measures as a proxy for poverty (Bantjes et al., 2018). Measuring socioeconomic status is complex resulting in it being measured in different ways. Some studies state that education is the best indicator of socioeconomic status (Winkleby et al., 1992), while some studies measure socioeconomic using both education and income (Adler et al., 1994). Consequently, socio-economic status is a predictor of mental health problems in men, particularly depression.

Some studies have shown that socioeconomic status can be a protective factor against mental health problems. For instance, a decline in mental disorders can be a result of better socio-economic resources (Jacobi et al., 2004; Pirkola et al., 2005). In the United States of America, a higher socioeconomic status is associated with lower neighbourhood safety fears which influence more physical activity thereby having a positive effect on mental health (Meyer et al., 2014).

Education's Role in Mental Health

Globally, studies have shown that the level of education is associated with common mental health disorders. In Europe, based on a review of population surveys, a higher prevalence of

common mental disorders such as depression and anxiety was associated with lower levels of educational attainment (Araya et al., 2003; Fryers et al., 2005). In Iran, a lower level of education in men was associated with increased reports of poor mental health status (Hassanzadeh et al., 2018). This could be attributed to social and economic limitations linked to lower levels of education which inhibit the ability of men to apply coping strategies when experiencing stressful life events (Noorbala et al., 2012). Similarly, in South Africa, a study indicated that a low level of education and never having been to school were associated with an increased likelihood of depression among adults (Thapa et al., 2014; Tomita et al., 2015; Tomlinson et al., 2009). For instance, below high school education was associated with increased reports of symptoms of depression compared to those beyond high school education (Tomita et al., 2015; Williams et al., 2008). Also, an Agincourt study in South Africa indicated that no education or primary education together with visible poverty was associated with an increased risk of mental disorders (Havenaar et al., 2008). The impact of lower levels of education on poor mental health outcomes is also shown in the SASH survey where reduced educational attainment was linked to mental disorders in adolescents (Myer et al., 2009). Consequently, globally, having primary and no education influences mental health problems. However, in the South African context, the studies focus on both women and men and report the results without disaggregating them by gender which prevents understanding of mental health problems in men.

A study in Kenya indicated that increased levels of education reduced the risk of common mental disorders (Tomlinson et al., 2009). However, some studies did not find an association between educational level and common mental illnesses (Hunduma et al., 2017). A study conducted in South Africa indicated that both African men and women have lower reports of symptoms of depression when they have increased years of education (Ardington & Case, 2010). Another study in South Africa also found reduced levels of depressive symptoms among those who had more than primary education (Hamad et al., 2008).

Age and Mental Health

Studies have shown that age is a predictor of mental health problems with the elderly being at a higher risk compared to the young ones (McCrone et al., 2008; WHO, 2014). In England, the risk of depression was higher among individuals aged beyond 80 years old (WHO, 2014). Another study conducted in England indicated that an increase in depression among men older than 75 years and women older than 65 years was prevalent in the country (McCrone et al.,

2008). Similarly, a study in Iran found an increased prevalence of mental disorders associated with ageing and this was especially among individuals older than 65 years old (Hassanzadeh et al., 2018). This was due to retirement, loneliness and biological factors which rendered the elderly vulnerable to mental health disorders (Noorbala et al., 2012). Failure of securing material wealth among older men while they were young and in retirement is among the factors that possibly explain mental health challenges in men (Oliffe et al., 2013).

Also in Sub-Saharan Africa, old age was associated with mental health problems (Hao et al., 2017; Jenkins et al., 2012, 2015; Stein et al., 2008; Tomlinson et al., 2009). In Ghana and Kenya, being of older age was associated with depression (Jenkins et al., 2012; Thapa et al., 2014). For instance, in South Africa men aged 50 years old who perceived themselves as belonging to the lowest rung of the socioeconomic status ladder, had increased reports of symptoms of depression compared to the 15-24 year-olds (Ardington & Case, 2010). This could be because the elderly people have carried the economic burden and have been in poverty for a long time compared to the young adults who are optimistic about their future (Ardington & Case, 2010). Another study in South Africa indicated that the elderly aged 60 years and above have a greater likelihood of reporting symptoms of depression compared to those aged between 15 and25 years old (Tomita et al., 2015).

It is not always the case that old age is associated with mental health problems. In some instances, the elderly have a reduced likelihood of experiencing mental health problems. A study in South Africa highlighted that the prevalence of mental disorders increased among individuals aged between 35-49 years old compared to individuals aged 65 years old (Herman et al., 2009). The study further highlighted that young age increases the likelihood of any mental disorders (Herman et al., 2009). Meanwhile, in South Africa, age is less likely to be associated with mental disorders among younger individuals, but the studies reported a greater likelihood of mood and substance disorders (Williams et al., 2008).

The Role of Income in Mental Health Problems

Income is very important in understanding mental health outcomes. In many Western countries, men are working in low-wage and low-skilled jobs with their wages declining in the past thirty years. Meanwhile, women's earnings are steadily increasing (Affleck et al., 2018). This has seen many men struggling to position themselves in the new economy (David & Melanie, 2013). Inequalities in income lead to poor mental health and increase the risk of mental illness

and substance use disorder (Compton & Shim, 2015). It worsens the situation among people affected by mental illnesses or substance use disorders (Compton & Shim, 2015). In the United States of America, a county-level analysis indicated that income inequality was associated with the prevalence of depression among older adults (Muramatsu, 2003). Income inequalities generally affect the mental well-being of individuals even after poverty and per capita income was controlled for (Okulicz-Kozaryn, 2015).

Income is important to earn a living and if it is low, it becomes difficult to meet basic needs which in turn affects the well-being of the individuals. In Chile, a lower per capita income is associated with common mental disorders (Araya et al., 2003). Similarly, in Sub-Saharan Africa, low income is a predictor of common mental disorders. In Ethiopia, individuals who earned less than the average monthly income were more likely to report mental illness compared to those who earned more than the average monthly income (Hunduma et al., 2017). In South Africa, studies have shown that low income is associated with higher levels of depressive symptoms (Bhagwanjee et al., 1998; Morojele & Brook, 2004; Pillay & Sargent, 1999). The relationship between income and mental disorders is two-way; having a low income is associated with an increased risk of depression while having mental health problems such as depression results in increased risks of losing income experienced through expenditure on health care and loss of a job (Lund et al., 2013). However, in some instances, individuals who receive a low average income were at a reduced risk of experiencing mental disorders than those with a high income (Herman et al., 2009).

In men, income plays a major role in determining mental health outcomes. The hegemonic status associated with the ideologies of masculinity is affected when men experience financial problems (Oliffe et al., 2013). Financial problems emanating from a failed business contribute to experiences of depression in men (Oliffe et al., 2013).

Employment and Occupation's Effect on Mental health

Unemployment and poor quality of employment are associated with mental disorders (Tomlinson et al., 2016; WHO, 2014). Losing a job and being unemployed over a long-term period are closely associated with having symptoms of depression and anxiety (UCL IHE, 2012). Unemployment results in loss of income which is detrimental to the well-being of individuals. Loss of income in the past 12 months was associated with the prevalence of severe mental disorders in adults (Lund et al., 2013). Mental disorders such as depression and anxiety

are also associated with decreased income among employed individuals (Lund et al., 2013). Being regularly employed and having a higher income in the past 30 days was associated with decreased symptoms of depression (Hamad et al., 2008). Consequently, being unemployed is a predictor of mental health problems. However, not much is known in South Africa concerning unemployment and men's mental health outcomes as mentioned that earlier studies are not disaggregated by gender.

Unemployment in men negatively impacts their mental health. Not working or being unemployed diminishes or affects men's ego and their role to support their families. Unemployment is stressful as it has a greater impact on men's mental health compared to women (Affleck et al., 2018). A study in 26 Western countries between 1963 and 2004 indicated that unemployment effects on mental health were greater in men than in women (Paul & Moser, 2009). Similarly, a study in Spain indicated that unemployment effects on self-reported mental health were more severe among men than women (Artazcoz et al., 2004). The severe effects of unemployment on men is because work is traditionally identified with man since it is where they obtain self-identity, self-esteem, and self-worth (Affleck et al., 2018). Working provides men with income and resources to support their families such that losing a job is stressful (Affleck et al., 2018). In the United Kingdom, after the 2008-2010 recession, there were 1001 suicides with 846 among men and 155 among women (Barr et al., 2012). Similarly, in Sub-Saharan Africa, mental health disorders were high among those who were unemployed (Amoran et al., 2005). In South Africa, being unemployed was associated with a high prevalence of depression (Ngcobo & Pillay, 2008; Thapa et al., 2014). However, these studies conducted in South Africa limitedly focus on men's unemployment and how it affects their mental health.

Some of the depressive symptoms in men stem from work-related issues which negatively affect their mental health (Battams et al., 2014; Oliffe et al., 2013; Roche et al., 2016; Stansfeld & Candy, 2006). The nature of the working environment influences mental illness, for instance, working in an isolated environment or solitary work, poor physical working conditions, repetitive tasks and lack of control are factors associated with mental illness (WHO, 2005). In Australia, male-dominated industries had higher rates of depression and mood (Slade et al., 2009). In Chile, working in manual unskilled occupations was associated with common mental disorders (Araya et al., 2003). A lack of recognition and being undervalued at work are among the factors which contributed to depression in men (Oliffe et al., 2013). The study by Oliffe et

al. (2013) focused on retrenched men and highlighted various factors which had led to depression. Depression impeded the ability of men to perform at work affecting their jobs and resulting in early retirement for some (Oliffe et al., 2013).

Marital Status and its Role in Mental Health

The quality of marital life and marital status is important in predicting mental health outcomes (Messner & Sampson, 1991). Continued marital status serves to protect individuals from mental health problems. Studies have shown that married individuals tend to have fewer psychological problems making them healthier and more content compared to individuals who are not married (Bookwala & Fekete, 2009; Dush & Amato, 2005; Zimmermann & Easterlin, 2006). A lower prevalence of mental disorders exists among those who are married (Jacobi et al., 2004; Pirkola et al., 2005). Meanwhile, going through a marital dissolution impacts individuals' mental health. In South Africa, individuals who were formerly married (separated, widowed, and divorced) had an increased likelihood of reporting mood disorders and severe disorders than those who are married (Williams et al., 2008). In Ethiopia, the separation of one from a spouse was associated with common mental illnesses (Hunduma et al., 2017). Consequently, some individuals who are divorced and never married have higher reports of depression than those who are currently married.

Studies have shown that individuals who are single and those who have never been married are more likely to experience mental health disorders. In South Africa, being single was the strongest predictor of any 12-month and any lifetime disorder (Ngcobo & Pillay, 2008; Seedat et al., 2009). This was also highlighted in Ghana where living without a partner was associated with depression among women (Thapa et al., 2014). A study in China indicated that never-married men had an increased likelihood of having lower self-esteem, depression and being aggressive compared to married men (Zhou et al., 2013). The study further indicated that unmarried men were at increased risk of having suicidal thoughts or wishes (Zhou et al., 2013). In traditional societies, it is assumed that being unmarried has detrimental effects since marriage and childbearing are anticipated for one to be accepted in society (Zhang, 1990). In such societies when men fail to marry, they become vulnerable psychological (Conner et al., 2007). However, some studies in Kenya, South Africa, Nigeria and Ethiopia indicated that marital status was not associated with a mental disorder (Gureje et al., 2010; Havenaar et al., 2008; Hunduma et al., 2017; Jenkins et al., 2012). The existing studies are cross-sectional and do not examine the changing nature of the family and how the burden of maintenance payments

may be pertinent in understanding men's mental health. However, few studies identify that going through a divorce does affect the well-being of men (Mnyango & Alpaslan, 2018; Williams et al., 2008), though the studies are qualitative and do not look at other changes in families such as family formation and cohabitation.

Masculinities and mental health

The traditional masculinity ideologies are taking their toll on men as they are expected to stand firm hence the acts of a front stage and a backstage. Backstage is when men are having depression and in the front stage, they portray a picture that they are strong and all is well. There are costs men pay for being men (Synnott, 2016), for instance, the failure of accomplishing the role of being a breadwinner and protecting the family is linked to their experiences of depression (Oliffe et al., 2013). Due to depression, men might feel bored with living meaningless lives and develop suicidal thoughts (Oliffe et al., 2013).

Men are not willing to share their experiences of depression. Men can talk about other things except for mental health issues (Oliffe et al., 2013). They would keep to themselves any depressive issues since it is considered taboo to discuss feelings as men. In society, men are expected to be strong and not cry over any problems (Oliffe et al., 2013). They would put up a picture at work that all is fine as a coping strategy to protect themselves from the stigma at the workplace that comes with disclosing symptoms of depression (Oliffe et al., 2013). The study conducted indicated that a 55-year-old male bus driver kept his depression hidden for 15 years from his workmates and would claim physical injury to obtain sick leave (Oliffe et al., 2013). This shows that it is easier to claim to have any other health condition rather than disclose a depressive condition. It is important to understand how notions of masculinity play out in the context of family changes and child maintenance in understanding depression.

The traditional masculine norms prevent men from help-seeking behaviour as they develop negative attitudes towards seeking treatment (Levant et al., 2011). Men are less likely compared to women to seek help for mental health problems (Addis & Mahalik, 2003; Judd et al., 2008). This has resulted in a call for studies that investigate help-seeking behaviour differences (Galdas et al., 2005). By so doing, this assists in obtaining a rich understanding of men's behavioural patterns, thereby enabling practitioners to improve their understanding in diagnosing and treating men (Galdas et al., 2005). Instead of seeking help, men develop coping strategies which are believed to be linked to masculine forms of coping to overcome their

condition. These include social withdrawal, substance abuse, risky behaviours, increased working hours and aggressive behaviours (Brownhill et al., 2002; Chuick et al., 2009). In some instances, suicidal thoughts were considered a wise masculine attempt to gain control and free themselves from the trap (mental health problems) (Emslie et al., 2006; Jensen et al., 2010).

Studies have shown that men who keep to masculine norms were less likely to seek help (B. P. Cole, 2013; Good & Wood, 1995; Lane & Addis, 2005). Seeking help for distress-related issues was viewed as a feminine character and less masculine (McCusker & Galupo, 2011). Many studies have indicated that depression is twice in women than men (Kessler et al., 1994), however, this has received different attention with studies accounting for the differences (Addis, 2008). Some of the differences are due to men not seeking help for mental health problems with some highlighting that men's depressive symptoms are different from women. This has resulted in notions of a possible masculine-specific type of depression (Cochran & Rabinowitz, 2003). To account for the differences, studies have come up with diagnostic tools for depression that are male-specific such as the Gottman Scale of depression to measure male depression.

Reshaping and reframing masculine ideals to allow for the integration of depression has been suggested. In some studies, the depressed men still kept their masculine ideals of strength or self-reliance which they used to improve their uptake of treatment (Coen et al., 2013; Emslie et al., 2006). These men were able to regain feelings of marginalisation and stigma by continuously reconstructing what it meant to be a man with depression (Johnson et al., 2012; Tang et al., 2014).

Neighbourhood or Contextual Factors and Depression

Globally studies are looking beyond individual level factors to understand health outcomes. Exposure to neighbourhood stressors such as community violence, crime and social disorder contributes to depression (Barnett et al., 2018; Blair et al., 2014; Gepty et al., 2019; Lowe et al., 2014; Tomita et al., 2015). Residing in communities or neighbourhoods characterised by poor socio-economic conditions such as poverty may result in individuals being at an increased risk of experiencing mental disorders (Generaal et al., 2019; Guo et al., 2020; Traoré et al., 2020). South Africa as a country has so many inequalities which can be noticed by the conditions in different neighbourhoods. These contextual factors may be vital for understanding men's mental health outcomes. Studies have shown that contextual factors are

important in the mental health outcomes of individuals (Bolstad et al., 2020; Guo et al., 2020; Tomita et al., 2015; Tomita & Burns, 2013; Traoré et al., 2020). The contextual factors highlight how individuals interact with their socioeconomic environment (Odimegwu et al., 2018). It is in communities where individuals spend most of their time where any negativity or social ills within the community may affect the family's well-being. This makes it vital to investigate the contextual factors associated with men's mental health problems in South Africa.

The neighbourhood instead of the individual as a unit of exposure is gaining prominence in health research. Studies are showing how neighbourhood characteristics are associated with depressive symptoms (Traoré et al., 2020; Guo et al., 2019; Courtney et al., 2020; Bolstad et al., 2020; Generaal et al., 2019). Some neighbourhood characteristics protect individuals against depression for instance, in China shared public spaces for recreation reduce depressive symptoms (Shen, 2014). Meanwhile, residing in neighbourhoods with social support may cushion individuals from being stressed **(**Kubzanskyet al., 2005). A study conducted in the Netherlands' indicated that residing in neighbourhoods characterised by levels of pollution which are higher, less green space and social safety were associated with depression **(**Generaal et al., 2019). However, in Sub-Saharan Africa, with South Africa included, contextual factors have been limitedly understood in relation to depression. A lot has been done in the region on contextual factors on other health outcomes particularly on child and maternal health leaving out men's mental health outcomes.

South Africa has a history of segregation of black people by whites facilitated by apartheid. The neighbourhoods were segregated by race as black people were made to stay in areas that were far away from the city centre and away from their jobs. The blacks lived in poor neighbourhoods characterised by high levels of crime, lack of housing and poor service delivery. These features of black neighbourhoods are still prevalent in post-apartheid South Africa. There are inequalities within the country leading to challenges in different parts of the country. Also, depression is geographically clustered in the country with increased cases concentrated in the Eastern part of the country (Cuadros et al., 2019). This could be due to exposure to different socio-economic and epidemiological factors which influences the spatial structure of depression. This study is very helpful by showing where the cases of depression are concentrated in the country however, from the study the clustering of depression is not disaggregated by gender. This makes it difficult to conclude the study in terms of predictors

which are associated with depression in men. The study just focuses on clustering, and it does not include contextual factors associated with depression in men. This makes it worthwhile to investigate how contextual factors and family changes interact in relation to depression considering the rife inequalities in the country.

Mental health research in South Africa has paid less attention to contextual factors as possible predictors of mental health outcomes. Most studies on neighbourhood characteristics' impact on depression have been done outside Africa in Asia, Europe and the United States of America (Barnett et al., 2018; Blair et al., 2014; Bolstad et al., 2020; Generaal et al., 2019; Gepty et al., 2019; Latkin & Curry, 2003; Lowe et al., 2014; Traoré et al., 2020) creating a gap in African countries. In South Africa, there is a growing trend of studies that seek to address this gap (Dowdall et al., 2017; Tomita et al., 2015; Tomita & Burns, 2013). A study in the country indicated that neighbourhood social disorders such as perceived violence and crime were linked to depression (Tomita et al., 2015). Also, another study in the country on neighbourhood social capital correlation with depression indicated that social trust and the extent to which individuals 'preferred' to reside in a neighbourhood are significantly negatively associated with depression (Tomita & Burns, 2013). In South Africa, living in neighbourhoods that are deprived results in individuals experiencing more depressive symptoms even after controlling for individual-level factors (Dowdall et al., 2017). In the study education at the neighbourhood level was insignificantly associated with depressive symptoms (Dowdall et al., 2017). The study used only the second wave of the NIDS study making it a cross-sectional study. This limit understanding or tracing how contextual factors may impact mental health over time. Therefore, this makes it necessary to use longitudinal data to investigate how contextual factors are pertinent in men's mental health.

Studies on contextual factors in South Africa are focusing on specific characteristics within the neighbourhood without focusing on other factors such as residential instability and poverty. The studies also are not disaggregated by gender. The studies are not using all five waves of NIDS. Understanding contextual factors' relationship with depression using a longitudinal study will form a novel contribution to research in South Africa on the subject which has largely been examined through cross-sectional designs. These studies have limitedly used multilevel modelling which examines the hierarchical or clustered structure of the data. Only one study by Tomita et. 2015 utilised multilevel modelling. However, the study only focused on one wave, both men and women were included restricting understanding of depression, particularly

in men. The study by Tomita et al. (2015) recommends a longitudinal study and, therefore; this makes it worthwhile to conduct this longitudinal study to contribute to the knowledge gap. Using the multilevel modelling will allow examining both the individual-level and the contextual level predictors to account for variances in men's mental health in South Africa. Through multilevel modelling, we can link how individual relationships are moderated by the broader context. One of the studies conducted in South Africa using the NIDS study calls for the use of multi-level modelling to be done in future studies (Dowdall et al., 2017).

Contextual factors are important in developing interventions and policies which improve the well-being of people with serious mental illness (Cabassa et al., 2014). The incorporation of contextual factors is vital in health interventions as it improves healthcare outcomes (Cabassa et al., 2014). Interventions that exclude contextual factors might not be acceptable, sustainable and effective hence the need to focus on the factors (Castro et al., 2004). Individuals' physical health is not only affected by individual-level factors but by macro-level factors which exist within the environment they live in. These macro-level factors refer to contextual elements that move beyond the individual approach and these influence how individuals interact with their environment (Diez Roux, 2012). The macro-level impact can be noted in Durkheim's work where he mentions that society is over and above the individual and the sociological imagination by Mills argues that some of the problems which individuals experience are linked to their environment. This makes conducting such a study in South Africa vital considering the limited studies in this area. Research that focuses on contextual factors that influence mental health disorders may guide the development of public health policies (Carpena et al., 2019).

2.5 Deficiencies in the Existing Literature

Studies on mental health illness in most Sub-Saharan African countries have largely focused on attitudes towards mental illness and found that stigma and discrimination are associated with mental illness (Crabb et al., 2012). Mental disorders are attributed to alcohol and illicit drug abuse, spirit possession and psychological trauma (Crabb et al., 2012), including low family monthly income and advanced age (Hunduma et al., 2017). Other studies have shown that unemployment, living conditions below average, physical health and large family size were associated with increased risk for mental illness, while a family size of less than six was protective (Amoran et al., 2005). Most of the studies have focused on how HIV might influence mental health and found that the effect of HIV on mental distress is both direct and indirect

(Chipimo & Fylkeness, 2009). However, there is a dearth of literature on family change and mental health problems.

Studies in South Africa have looked at correlates of depressive symptoms and found that more household members, lower educational attainment, unemployment, and lower income (Hamad et al., 2007) and low quality of life, higher age and unemployment were associated with depressive symptoms (Thapa et al., 2014). Poverty, overcrowding, high levels of crime, lack of services and sexual abuse were related to depression among women (Ngcobo & Pillay, 2008) and experiences of negative life events contribute to mental disorders (Seedat et al., 2009). Lack of social participation in community activities among the elderly increased the likelihood of experiencing depression (Hao et al., 2017).

Factors associated with self-reported symptoms of depression among older South Africans included disability, lack of quality of life and chronic conditions such as angina, asthma, arthritis, and nocturnal sleep problems were associated with depression in the past 12 months (Peltzer & Phaswana-Mafuya, 2012). None of the studies has particularly focused on men's mental health or linked it to family change. Family studies that have focused on men have increasingly focused on absent fathers as well as fatherhood and child maintenance roles in supporting children (Van den Berg & Makusha, 2018a).

2.6 Theoretical Framework

2.6.1 Social disorganization theory

The social disorganization theory was developed in 1942 by researchers from Chicago University Clifford R. Shaw and Henry D. McKay to understand how crime and delinquency are spatially distributed in urban areas (Kubrin, 2010). Their work was built on Robert E. Park and Ernest W. Burgess, whose concentric zone theory looked at how changes like industrialization, urbanization and immigration impacted social life in communities in Chicago (Kubrin, 2010). Shaw and McKay applied the concentric zone model to investigate juvenile delinquency to examine the relationship between community and delinquency. In their disorganization theory, they question the extent to which variations in delinquency rates could be demonstrating differences in social, economic and cultural characteristics of the communities (Kubrin, 2010). They also sought to understand how the delinquency rates were affected by the changes in the composition of the population. To find answers to these questions

Shaw and McKay used juvenile court cases to examine the distribution of delinquency in Chicago communities for three periods: 1900 to 1906, 1917 to 1923 and 1927 to 1933 (Kubrin, 2010).

The theory sought to understand why crime rates differed in communities using a macro-level approach. It does not focus on why individuals engage in crime but offers a macro-level view of why crime varies in neighbourhoods with some having higher rates of crime and others having lower rates. In other words, crime is not based on rational decisions by individuals, but it is due to a lack of stability, order and cohesion within communities. The theory is mainly concerned with explaining the relationship between community characteristics and crime in neighbourhoods. Social disorganization refers to the inability of communities to realize the common values of their residents and ensure that social control measures exist (Bursik, 2004). When communities are disorganized, they fail to effectively combat crime and lack common values or goals. This explains why in socially organised communities' crime is low and prevented (Kubrin, 2010).

Their key findings highlighted that crime is not randomly distributed but it was clustered in certain areas. Crime more frequently occurs in bad neighbourhoods than in good neighbourhoods (Kubrin, 2009). Also, highly disorganized communities are characterised by more crime while less disorganized ones experience lower rates of crime (Kubrin, 2010). Higher rates of delinquency were concentrated in the inner-city areas and the rates declined by distance from the city centre. From the visual presentation such as the maps they used, the distribution of crime was close to the industrial and commercial areas as well as areas characterised by a population which has high rates of poverty and families living on relief. These findings were in line with those from the concentric zone model. The data they examined was for long periods. The data showed that high delinquency in Chicago communities remained like that over time regardless of the racial or ethnic group that inhabited the areas (Kubrin, 2010). The theory has been used in various studies to understand violence, crime levels, educational behaviour of adolescents, teenage pregnancy and childhood sexual abuse (Bowen, Bowen, & Ware, 2002; McNulty & Bellair, 2003; Odimegwu & Mkwananzi, 2016; Yahaya, Uthman, Soares, & Macassa, 2013).

The current study used the theory since community factors are influential in people's behaviour. It is through social disorganisation factors in communities that families experience

negative changes. This implies that disorganization in communities may influence changes in families which in turn affects men's mental health outcomes. From the theory, crime is prevalent in communities characterised by social, economic and cultural deprivation. Similarly, I argue that the socio-economic factors within the communities play a role in men's mental health outcomes. The theory further states that residents in these communities cannot be described as biological abnormal or disoriented but they will be responding to the disorganized environment (Kubrin, 2010). Also, when men encounter mental health problems they should not be separated from the environments or communities, they live in. Community or contextual factors are influential to the problems that men experience affecting their mental health outcomes.

The theory has been used in other studies which are not crime related but to explain other social problems and health problems that individuals experience. The studies have also shown the importance of context in explaining behaviours such as teenage pregnancy (Odimegwu and Mkwananzi, 2016), and intimate partner violence (Cofie, 2020). This theory assists in answering the main research objective. To answer the objectives, it is vital to situate men's family change, mental health and child maintenance issues back to the characteristics of the communities that the men live in rather than emphasizing individual factors. Understanding the contextual factors involved in the link between family change, child maintenance and men's mental health goes a long way in the formulation of policies and interventions that can assist men and families in South Africa. Some interventions have a better effect when the emphasis is placed at the community level rather than the individual level. The emanating hypothesis from the theoretical framework is that family change together with community-level factors are associated with men's mental health outcomes.

The key concepts that are used include neighbourhood violence, domestic violence, residential instability, crime in the neighbourhood, community unemployment, drug or alcohol abuse and social cohesion. By neighbourhood violence, crime, and domestic violence I refer to how men view the rate at which the three activities occur in the neighbourhood. I also use residential instability to illustrate the rate of internal migration across the provinces and community unemployment to indicate the proportion of men who are unemployed in the neighbourhood. These concepts have been chosen to represent the contextual factors that are key in examining men's mental health outcomes. Most of the variables used in the social disorganization theory were used to examine the impact that family change has on men's mental health outcomes

while controlling for individual, household and community-level factors. The critical variables which were used in this study which were also used in the social disorganization theory include residential instability and poverty. Additional variables which were examined in the study at the community level include domestic violence, violence in the neighbourhood, drug or alcohol abuse, community unemployment, education, poverty, social cohesion and level of urbanisation. The use of the variables enabled the investigation of whether family change and child maintenance contribute to men's mental health outcomes while controlling for community-level factors.

This theory is important in that it emphasizes context that it matters when it comes to explaining criminal behaviour. It shifts focus on individuals and places the environment as responsible for deviant behaviour in neighbourhoods. Using this theory in my study helps in showing how men's mental health outcomes could be linked to the environment or community that men live in rather than solely based on individual attributes. The unstable environment characterised by crime, violence, unemployment, and lack of cohesion can possibly explain the changes occurring to the family in the country which in turn affect men's mental health. Men do not only need to go through a family change to experience mental health problems. The problems within the community can directly affect men's mental health. The use of the theory allows viewing of health problems men experience at a macro level. Following through the theory provides a vivid picture of how social problems embedded in communities can affect individuals differently. This might explain why in some communities the prevalence of mental health problems is high compared to others, and this applies to a family change such as divorce, cohabitation and solitary living which can be predominant in some neighbourhoods compared to others.

The theory helps fill the gap in the literature by moving away from viewing men's mental health outcomes as linked to individual issues. Mental health research in South Africa has largely focused on individual factors as adequate in understanding mental health. Only a few studies have controlled for community-level factors in examining mental health outcomes. Using the social disorganization theory in mental health research takes a different approach. It allows asking questions such as why there are more mental health problems in some areas than others. What community-level characteristics influence mental health problems in each area? What is central to the social disorganization theory is that crime and delinquency co-occur

together with other social problems in communities such as poverty, dilapidated housing and residential instability.

Similarly, I argue that mental health problems co-occur with similar social problems identified by the social disorganization theory such as poverty measured by household wealth and residential instability measured by migration in the study. I also argue that social problems such as domestic violence, violence among community members such as stabbings and murders as well as lack of cohesion in the communities contribute to men's mental health. The use of the theory draws attention to the community factors as largely responsible for explaining men's mental health outcomes. Different communities in South Africa are characterised by various social problems. One will find that unemployment is particularly common or concentrated in townships compared to affluent suburbs. Similarly, poverty, crime, family instability, migration and heterogeneous population groups are high in some communities such as townships compared to the middle-class suburbs in the country.

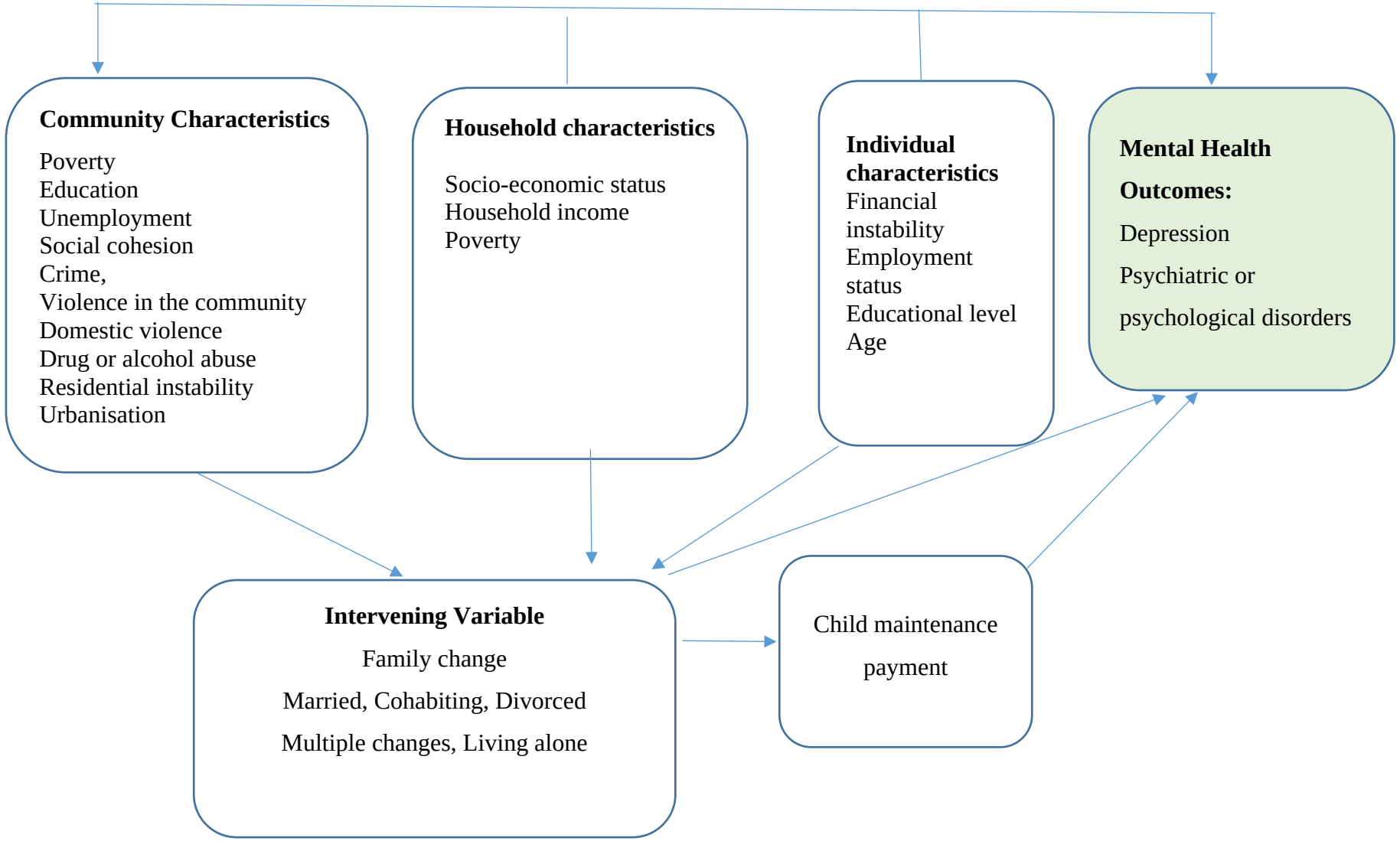
The theory was criticised for not relying on empirical findings that neighbourhood characteristics through social and informal ties lead to crime. The theory was not properly tested. This study is going to overcome that by conducting the actual test where community-level factors are going to be tested using a model that caters for the community-level factors in examining the association between family change and men's mental health controlling for contextual factors.

The theory was criticised for not empirical testing the disorganization model. Although, Shaw and McKay were able to visually show a relationship between the characteristics of the neighbourhoods and delinquency rates in Chicago using maps they did not test the disorganization theory. Thus, without empirical testing the theory that neighbourhood characteristics contribute to crime it was criticised. The testing of the social disorganization theory was only done in 1989. National survey data from Great Britain was used to empirically test the theory (Sampson and Groves, 1984). Community-level measures were constructed such as residential mobility, racial/ethnic heterogeneity, and poverty including the mediating dimensions of social disorganization to see how they influenced crime in neighbourhoods. Interestingly, the findings obtained were supportive of the social disorganization theory, the communities which had strong social ties and informal control had lower levels of crime.

The theory was criticised for its bias about lower class communities and disorganizations. These biases were largely attributed to the theorists themselves being from homogeneous middle-class theorising about lower-class communities. It was questioned whether the physical, economic and population characteristics were objective indicators of social disorganization, or it was rather misjudgement by the theorists about the lifestyle and living conditions of the lower class. Some scholars used the term differential social organization rather than social disorganization because to them it only became disorganization according to one's beliefs and ethical view (Sutherland et al., 2015). What is considered as disorganization of some neighbourhoods could not be that it could simply be because the neighbourhood is organized from different values and concerns. Despite such criticism, researchers are quite aware of the bias and look at nuanced ways of explaining what could be causing social disorganization in the neighbourhoods (Kubrin & Mioduszewski, 2019).

2.6.2 Conceptual Framework: social disorganisation

Figure 2.1: Conceptual framework



Based on the framework, communities with higher levels of poverty have an increased likelihood of mental health problems. Living in poverty may affect family formation, resulting in men not affording to marry, thereby engaging in cohabitation, living alone and non-marital childbearing. Some unions have dissolved due to poverty. Poverty does not have to work through family changes to influence men's mental health outcomes. It has a direct impact on men's mental health. Living in poverty is associated with mental health problems such as depression and anxiety (Lund et al., 2010; Campion et al., 2013).

A community with high residential instability may promote negative behaviours which have an impact on the family and well-being of family members. In communities where there are residential instability people move from one place to another and such acts result in families being broken. Men in South Africa move from one place to another in search of better employment opportunities and this has seen families splitting up and has resulted in new forms of families being created, such as cohabitation. The residential instability has contributed to non-marital childbearing, since, when men move to other communities, they have children outside of marriage. This helps to explain the reason why there is a high prevalence of women in South Africa raising children on their own. Going through such changes in families may have an impact on men's mental health. In some instances, residential instability without working through the family can have a direct impact on men's mental health. A lack of residential stability can result in men not having a sense of belonging in the communities they migrate to, and this affects their social networks and support system resulting in the men experiencing mental health problems. A study in the US revealed that high levels of depressive symptoms were more common among men who frequently moved than men who did not move (Davey-Rothwel et al., 2008).

Communities with drug or alcohol abuse may have a higher prevalence of mental health problems compared to communities with little or no drug and alcohol abuse. A study conducted in South Africa found an increased likelihood of mental disorders among young adults using drugs (Saban et al., 2014). Family instability can be in the form of social, economic, emotional, and physical instability. In this study, the focus is on economic stability. Family instability in the form of being unemployed and living in poverty, has seen most men failing to marry and delaying marriages. This, in turn, has contributed to cohabitation and living alone. Such changes in family have seen most men being liable to pay child maintenance, which in turn may result in some men experiencing mental health problems since they would not be

affording. In some instances, the mere fact of being in an unstable family can directly influence men's mental health.

Communities with lower levels of education have an increased likelihood of experiencing mental health problems. For instance, a lack of education or lower levels of education may promote substance use disorders, which increases the risk of mental health (Powers, 2015, Thapa et al., 2014; Tomlinson et al 2009). Men who are not educated or have lower levels of education might be unemployed or employed in occupations that pay less, and this might leave the men depressed due to insufficient income to meet their needs.

2.7 Research Hypotheses

There is a difference between never married and solitary living. An individual can be married but living alone or can be single living with family. This is common in South Africa where men migrate from different provinces with most men living in families in rural areas migrating to urban areas in search of employment. Some men especially single may also choose to live alone moving away from their families. These changes men encounter in living alone are of interest to this study.

I hypothesize that living alone is associated with mental health problems.

Some men exit marriages through a divorce while others exit marriages without divorcing. They simply move out and live alone or cohabitate. When some cohabitate, they also exit from cohabitation. Some after exiting marriages are found remarrying. In some instances, the man even remarries without divorcing and this can be through paying a bride price to another wife.

Hence, I hypothesize that *divorce increases the likelihood of experiencing mental health problems.* I also hypothesize that *movement into cohabitation increases the likelihood of experiencing mental health problems*.

When men experience a family change, in most instances there will be children involved. When they exit marriages through a divorce, exit from cohabitation and when they choose to live alone, they are expected legally to pay child maintenance. Some men who pay child maintenance, in some instances including those who do not pay, encounter challenges in

accessing their children. This is because those in the custody of the children might be restricting men to see their children.

Under such circumstances, I hypothesize that *payment of child maintenance increases the likelihood of experiencing mental health problems*.

2.8 Summary of the chapter

The literature review has shown that indeed families are changing globally and in South Africa. These family changes have given rise to an increase in the number of children growing up in the absence of their fathers resulting in the need for a child maintenance payment. At the same time, mental health problems in the country are increasing with most studies not being disaggregated by gender. This hinders understanding mental health outcomes such as depression which is specific to men. In South Africa, mental health problems have been attributed to various socio-economic factors such as divorce. However, not much is known about other family change such as cohabitation, remarriage and solitary living as well as child maintenance payment's association with depressive symptoms in men. The studies in the country tend to discuss divorce separately without focusing on how it can together work with maintenance payment to influence men's mental health. and decisions on how the money should be used for the children. Such conditions make it valuable to examine and explore the changing nature of the family with the burdens of maintenance payment as pertinent to understanding depression in men.

CHAPTER 3

Methodology

3.1 Introduction

The chapter provides a discussion on the methods used to meet the objectives of the study. The chapter begins by presenting the study setting, and the mixed-method approach used. It starts by presenting the quantitative approach which was used to examine the objectives of the study and later discusses the qualitative approach which was conducted to explain the quantitative findings. In the quantitative approach section, the data source used in the study is described, the survey design, the population, and the sample. The chapter further describes the depression instrument which was used in the study. The variables used in the study are described and these include the main independent variables, control variables, and dependent variables. Steps in data analysis are discussed based on each objective of the study. The qualitative approach used in the study is discussed, starting with the paradigm that guided the qualitative arm of the study, moving to the sampling methods, sample size, data collection and data analysis. Lastly, the chapter presents the ethical considerations.

3.2 Study setting

The geographical location of South Africa and the economy

The study was conducted in South Africa, a country located in the Southern region of Africa. The country is bordered by Namibia, Zimbabwe, Botswana and Mozambique. The population is 58.78 million as shown by the 2019 mid-year population estimates. The surface area of South Africa is 1 219 602 km^2. It is one of the world's largest producers of gold. It has the strongest economy in Africa. The discovery of gold in the 19^{th} Century led to mining being the foundation for economic development in the country. The economy is controlled by whites with non-whites constituting the bulk of the workforce. South Africa's economy[2] is the most dominant in sub-Saharan Africa (African Development Bank, 2019). This makes the country a preferred destination for most migrants and immigrants from different parts of Africa. The presence of migrants in the country can be traced back to the apartheid era when migrants would enter the country seeking refuge from civil wars in countries such as Mozambique (Thompson, 2001). In 1993, it was estimated that about one million illegal immigrants lived in the country (Thompson, 2001).

[2] As per the World Bank (2017a) GDP Ranking Scale

The country is divided into nine provinces Western Cape, Eastern Cape, Northern Cape, North West, Free State, KwaZulu-Natal, Gauteng, Limpopo, and Mpumalanga. During the apartheid era, the country consisted of four provinces Cape Province, Natal, Orange Free State and Transvaal.

Johannesburg is South Africa's largest city. The qualitative research of the current study was conducted in Johannesburg. The research site was selected considering that Johannesburg is located in Gauteng province, one of the major migrant-receiving provinces (Palamuleni, 2019). It is a diverse city that comprises different ethnic groups making it a suitable site to understand men's mental health. The various research sites in Johannesburg were influenced by where the purposively selected participants were located. Some participants were referrals residing in different parts of Johannesburg. The participants were from the inner city of Johannesburg Berea, Hillbrow, Yeoville and Tsakane in Ekurhuleni. The researcher is familiar with the research sites which allowed for a smooth process in the collection of data.

The other cities of the country include Cape Town known as the legislative capital, Pretoria the administrative capital, and Bloemfontein known as the judicial capital. The levels of unemployment are high estimated at 26% (Howell, 2019) with 17% of the population living below the international poverty line. The majority of the population relies on social grants as their primary income (Howell, 2019). The country's population is diverse and heterogeneous (Howell, 2019). The country has eleven official languages Zulu, Xhosa, Tswana, Swazi, Ndebele, Pedi, Tsonga, Venda, Sotho, English, and Afrikaans. A greater population of South Africa constitutes of black Africans (75%) followed by whites (13%), coloureds (9%), and 3% Asian (mostly Indians). The majority of the population (68%) is Christian with over 28% following the traditional African religion with a few minorities being Muslims, Hindus and Jews.

The country attained its independence on the 27th of April 1994. The country is described as a troubled and fragmented society. The oppression endured during the apartheid era persists post-apartheid (Howell & Shearing, 2017). Despite such circumstances, some individuals and communities are continuously overcoming such adversity (Howell, 2019). The 1996 census indicated that two years after attaining independence, there were still inequalities with the population divided by race between the rich and the poor (Thompson, 2001). Most white South Africans were well off and educated compared to blacks who were poor and less educated

(Thompson, 2001). These inequalities 26 years after attaining independence persist. Under apartheid, race was used to put in place divisions in society and these are still evident in post-apartheid and manifest in economic and social structures. The physical space of urban areas in the country reflects the distinctions based on race demonstrated by the existence of townships for blacks, ghettos for coloureds and suburbs for Indians and whites (Howell, 2019).

South Africa's history of violence, racial discrimination, and exclusion during apartheid and colonialism intensified mental health issues (Lund et al., 2008). Poverty and social deprivation are some of the aspects linked to mental health problems in the country as discussed in chapter two of the study. The enactment of the Mental Health Care Act (2002) in the country by the national Department of Health is influencing service reforms at the provincial and district level (Lund et al., 2008). The mental Health Care Act (2002) is an important achievement in improving the mental health system in South Africa and is also consistent with international human rights standards (Lund et al., 2008). The Mental Health Care Act has led to Mental Health Review Boards being introduced in all provinces with 72-hour assessment facilities available in District general hospitals (Lund et al., 2008). To reduce the burden of mental health conditions that are not treated in the healthcare system, the National Mental Health Policy Framework and Strategic Plan 2013-2020 was established to integrate mental health into general healthcare services. However, this has not been effectively implemented. The case of Life Esidimeni[3] in 2017 is one of the examples which provides evidence (Williams, 2020).

The policy implementation and the Act seem to be inadequate to bring major reforms to the existing mental health system in the country. The service resources for mental health are not proportionally distributed among provinces and these resources include human resources, facilities and budgets. There is a lack of data on mental health service provision, and this makes information on service resources such as budgets, staff and facilities scarce. When made available, the data is not reported or used for planning (Lund et al., 2008). However, the enactment of the Act has not fully met or addressed the existing mental health issues in the country. It seems to be an act that exists in theory but is not being fully practised. The sad story of the Life Esidimeni shows how the country still needs to do a lot to ensure that mental health is a critical issue that requires attention to address the challenges surrounding it. After the

[3] A private sector which provides chronic mental healthcare services to state-funded mental healthcare users in South Africa.

termination of a 40-year contract between the Department of Health and Life Esidimeni, a tragic event unfolded in Gauteng. Occurring between October 2015 and June 2016, this period saw the relocation of mental health patients from mental health care facilities operated by Life Esidimeni to various establishments managed by non-governmental organizations (Durojaye & Agaba, 2018). Within these new facilities, the patients were tortured, abused, and deprived of essential necessities such as food, sanitation, and necessary medications required for their mental health (Durojaye & Agaba, 2018). This led to loss of 144 lives among the mental health care patients and subjected 1418 other patients to trauma, torture, and poor health outcomes (Durojaye & Agaba, 2018).

South Africa, compared to other African countries, has better mental health resources and services such as human resources, facilities, and psychotropic medications. The cost of mental health services depends on two specific conditions: firstly, when a patient is severely ill and requires involuntary admission, the service is provided free of charge. Conversely, when patients willingly provide consent and seek out these services, they are responsible for payment according to the uniform patient fee. Despite being one of the best compared to other African countries, the existing provincial plans and budgets are inadequate to implement national mental health policy and legislation. The inadequacy of treatment protocols and trained mental health staff including the agreed national indicators for mental health information systems are some of the challenges within the mental health care service system in South Africa (Lund et al., 2008). The Mental Health Federation of South Africa indicates that more people in the country deal with depression, substance abuse, anxiety, bipolar disorder, and schizophrenia, and these are the top five mental health illnesses (Tromp et al., 2014).

Mental health is allocated less budget by the government. Despite an increase in mental health problems, the Department of Health annually spends less than 4% or 9.3 billion Rands of its budget to address the crisis (Tromp et al., 2014). A lower budget for mental health problems is due to other health problems which are viewed as more urgent like HIV/AIDS (Tromp et al., 2014). There are shortages of state-specialized hospitals that deal with the mentally ill yet the patients are sometimes rejected by their families (Tromp et al., 2014). In 2019, the healthcare budget for mental health was 3% which was less than the 5% budget which was allocated in 2016/2017 (Williams, 2020).

The government is not doing much to address mental health in a country that is recovering from years of oppression, slavery, trauma, and current issues of gender-based violence, poverty, homophobia, and HIV/AIDS (Williams, 2020). The mental health crisis in the country has been exacerbated by the COVID-19 pandemic which has seen the South African Anxiety and Depression Group (SADAG) receiving an influx of calls at the beginning of the lockdown in March (Williams, 2020). The people reported being stressed by Covid-19, problems in relationships, job security, grief, trauma, and gender-based violence (Williams, 2020). During the pandemic, the government has not done much to support mental health for the frontline workers and it remains a silent issue yet there are reports that people are experiencing mental health challenges due to the effect of the pandemic (Williams, 2020).



Figure 3.1: A map of South Africa
Source: Geoscience news and information

3.3 Study design

A mixed-method approach was used to gain a better understanding of men's mental health outcomes. Using the approach allowed the qualitative research method to explain quantitative findings. The quantitative findings required clarification hence the need for a qualitative

approach in which participants would fully express themselves thereby explaining the quantitative findings. Qualitative and quantitative research methods complement each other making it vital to use both research methods in a single study to find answers to a complex social phenomenon. Exploring men's perceptions of child maintenance and their mental health provided explanations for the unexplained quantitative findings which were obtained from data analysis from the National Income Dynamics Study (NIDS). Mixed methods research combines research methods from different research paradigms. The quantitative research method is informed by the positivist paradigm while the qualitative methods are informed by the constructivist paradigm (Denzin & Lincoln, 2008). Using a mixed method approach was vital in this study to have a deeper understanding of men's mental health in the context of family change and child maintenance. The first phase of the study was to conduct quantitative research and the second was to follow up on quantitative results using qualitative research which is the second phase of the study.

Phase one: Quantitative approach

3.4 Study design and data source

The study uses a longitudinal design based on NIDS which has five waves as mentioned in the previous section. The survey consists of a representative sample of the entire country. The NIDS is the first nationally representative longitudinal survey in South Africa making it an important data source to understand men's mental health over time (Brophy et al., 2018). It consists of questions on emotional health and self-reported health which can be used to assess men's mental health outcomes such as depressive symptoms and psychiatric/psychological disorders. The use of the longitudinal design allows for examining men's mental health outcomes of men experiencing a family change and paying child maintenance in South Africa. This has policy implications on addressing mental health within families considering the changing nature of families in South Africa. The use of the NIDS study provides a novel contribution in that no study in South Africa has examined the family change effect on men's mental health outcomes.

The fact that the same information is collected after two years for the same individuals provides panel data which are essential in examining causal relationships which cannot be examined or inferred using cross-sectional data. The use of a longitudinal design allows the measurement of intra-individual changes compared to a cross-sectional design which measures inter-

individual differences (Caruana et al., 2015). Longitudinal data allows for estimating parameters such as characteristics of the population or distribution scores without bias. The National Income Dynamics Study (NIDS) is an initiative by the Department of Planning, Monitoring, and Evaluation (DPME) of South Africa. It is implemented by the Southern Africa Labour and Development Research Unit (SALDRU) within the University of Cape Town's School of Economics (Brophy et al., 2018). The NIDS datasets are publicly and readily available. The data does not contain personal identifiers. The livelihoods of individuals and households are examined over time (Leibbrandt et al., 2009). This includes collecting data on household compositions, individuals, migration, household income, and expenditure in South Africa. The main aim of the survey is to provide detailed data on important socio-economic issues such as the labour market, education, poverty, inequality, education, and health (Leibbrandt et al., 2009).

NIDS provides information across time from Wave 1 to 5. The first wave was conducted in 2008 with 7 296 households and 28 226 respondents. The second wave was a two-year follow-up of respondents conducted in 2010 and it comprised 6 787 households and 28 551 household residents. The response rate was impressive considering the elapsed time. The third wave was conducted in 2012 and it included 8 040 households with 32 633 respondents successfully interviewed. Wave 3 had a negative attrition rate meaning that more households and individuals were interviewed in wave 3 compared to wave 2 (NIDS, 2013). The fourth wave was conducted in 2014-2015 and it included 37 396 individuals from 9 620 households. The fifth wave was conducted in 2017 and it comprised 10 800 households with 39 400 respondents. The study focuses on all five waves to examine the effect of family change and payment of child maintenance on men's mental health outcomes (Brophy et al., 2018). The same individuals who are repeatedly interviewed after every two years are referred to as Continuing Sample Members (CSMs) (Brophy et al., 2018; Leibbrandt et al., 2009). Children that are born to CSM mothers are added to the sample and are tracked. Meanwhile, new members of the households are interviewed but not tracked in the following waves and these are referred to as Temporary Sample Members (TSMs) (Brophy et al., 2018; Leibbrandt et al., 2009). A top-up sample in wave five (2017) was included to ensure representativeness due to attrition.

3.4.1 Population and sample

The study population is males aged 18 years old and above who answered questions on emotional health. The ages have been selected because males between the ages of 18 years are adults who are capable of having children and starting a family and are appropriate for the study. The males from all the provinces in the country and geographic locations were represented. The NIDS uses a stratified two-stage cluster sample where 400 out of the 3000 primary sampling units (PSUs) with approximately 25 households in each are randomly selected for inclusion (Tomita et al., 2015). Two clusters of the 12 dwelling units from each PSU were drawn (Southern Africa Labour and Development Research Unit, 2012).

This study used data from the household and adult questionnaire and women were filtered out since they are not the subject of this study. The NIDS interviewed men on social, economic, and emotional health across the five waves. As shown in Figure 3.2, a greater number of the men were interviewed in the last wave. In wave one there were 6 288 observations, in wave 2 there were 7 305 observations, in wave 3 there were 7 563 observations, wave four had 9 456 observations, and wave five had 9 781 observations. After the removal of men aged less than 18 years old, the total sample was 36 297. Observations that only appeared once in the panel data were removed leading to a sample size of 30 381. To ensure the national representativeness of the data, weighting was done to correct oversampling and under-sampling.

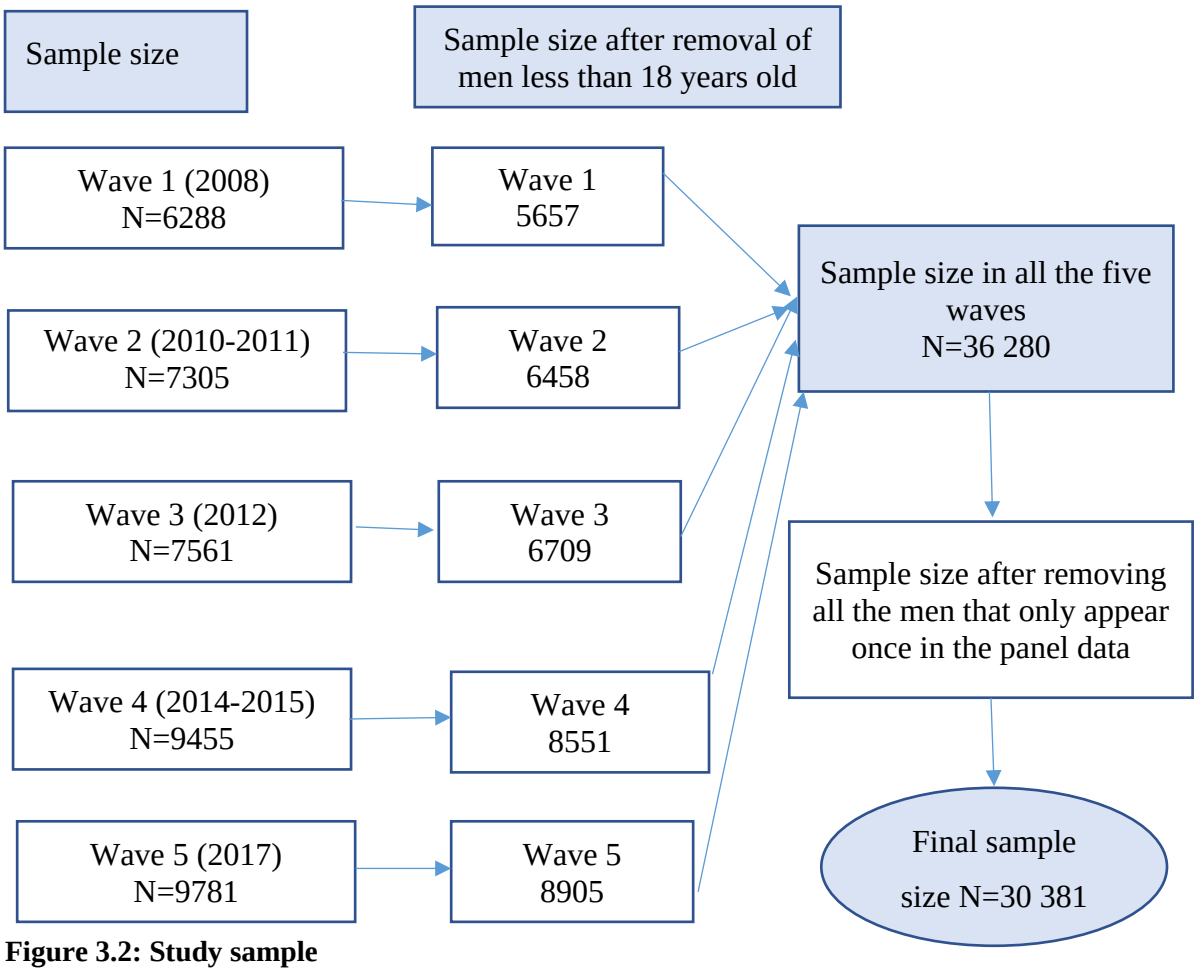


Figure 3.2: Study sample

3.4.2 The instruments

The NIDS from Wave 1-5 collected data using three types of questionnaires: the household, the adult, and the child. The NIDS questionnaires were administered in all of the 11 official languages in South Africa (Tomita et al., 2015). In this study, the household and the adult questionnaire were utilised. The adult questionnaire consisted of questions on men's background information such as marital status, payment of child maintenance, employment status, income, education level, and emotional health among others. The adult questionnaire was administered to a household member aged 15 years old and older who had given consent in all the sampling units (Brophy et al., 2018). The household questionnaire consisted of questions that were used to measure the socioeconomic status of the households (Brophy et al., 2018). The household questionnaires were administered by trained field workers to an older woman in each household or a knowledgeable household member concerning their living arrangements (Brophy et al., 2018; Leibbrandt et al., 2009). In this study, the adult and the household questionnaire were merged.

The adult questionnaire consists of questions on emotional health measured on a Likert scale which asked the men how they felt during the past week. The questions on emotional health were measured using the Centre for Epidemiologic Studies Depression Scale (CES-D). The CES-D tool consists of 20 items used to assess symptoms of depression through self-reported statements on a 4-point Likert scale ranging from 0 to 3. However, the NIDS used a shorter version consisting of 10 items from the CES-D scale (Björgvinsson et al., 2013; Cole et al., 2004). The shorter version of the CES-D scale used by the NIDS is illustrated in Table 3.1:

Table 3.1: A shorter version of the CES-D scale

Center for Epidemiologic Studies Depression Scale (CES-D)
Respondent was unusually bothered in the past week?
Respondent had trouble focusing in the past week?
The respondent felt depressed in the past week?
The respondent felt that everything was an effort in the past week?
I felt hopeful about the future
The respondent felt fearful in the past week?
Respondent's sleep was restless in the past week?
I was happy
The respondent felt lonely in the past week?
Respondent could not get going in the past week?

3.4.3 Variable identification

3.4.3.1 Dependent variable

The dependent variable is mental health outcomes measured by depressive symptoms and psychiatric/psychological disorders. The depressive symptoms were assessed using a 10-item version of the Centre for Epidemiologic Studies Depression Scale (CESD). The National Income Dynamics Study used the CES-D scale, a shorter version that is a valid psychometric tool (Björgvinsson et al., 2013; Cole et al., 2004). The CES-D is a widely used measure with psychometric properties for screening symptoms of depression based on self-report (Björgvinsson et al., 2013; Radloff, 1991). It has been validated as a tool to screen symptoms of depression in many countries (Baron et al., 2017). The short version of the CES-D scale adopted by the NIDS can be used to screen symptoms of depression by fieldworkers without medical training (Radloff, 1977). The shorter version of the CES-D is also consistent compared

with the longer version of the CES-D (Radloff, 1977). The CES-D scale has also been used by other mental health studies in South Africa (Hamad et al., 2008; Myer et al., 2009). The adult questionnaire consists of questions on emotional health which asked the men how they felt during the past week. The respondents were asked for self-reports on symptoms associated with depression during the past week. The responses were measured on a Likert Scale: 0 = rarely or none of the time (less than 1 day) =0; some or little of the time (1-2 days) =1; occasionally or a moderate amount of time (3-4 days) =2; almost or all of the time (5-7 days) =3. The Composite score is based on 10 items with scores ranging from 0 to 30. Similar to other studies conducted in South Africa using the same data a cut-off score of ten or greater was used to denote the presence of depressive symptoms.

The ten questions were converted into a mental health index with scores that were out of 30. Similar to other studies which have used the CES-D scale, the questions were rescaled from 0 to 3 and summed to create a score that was out of 30 (Eyal et al., 2018; Myer et al., 2009; Sklair, 2019). The positively phrased questions; "I felt hopeful about the future", and "I was happy" were reverse scaled so that the questions were consistent with the other questions in which better mental health is associated with a lower response value. A cut-off score of 10 out of 30 indicates the presence of mild to significant symptoms of depression and this is similar to other NIDS studies (Sklair, 2019; Tomita et al., 2015; Tomita & Ramlall, 2018). The use of the CES-D scale has been validated in South Africa as a screening tool for mental health (Burns, 2011; Hamad et al., 2008) and in other countries (Myer et al., 2009).

The second mental health outcome is psychiatric/psychological disorders. This was obtained from a question that asked the men if there had any major illnesses or disabilities which were not mentioned. The list included seven illnesses from which psychological or psychiatric disorder was listed. All those who answered that they have psychological or psychiatric disorders were coded as 1 while those who did not have psychological or psychiatric disorders were coded as 0.

3.4.3.2 Independent variables

Individual-level variables

The variables used in this study were guided by literature, the conceptual framework, and the theory of the study. The variables include educational level, age, race, religion, the importance

of religion, life satisfaction, number of households, perceived health status, and employment status. Family changes in this study have been assessed using the marital status variable.

Family change

The main independent variable is family change measured by marital status and household size. Family change is defined as having occurred between adjacent waves or between non-adjacent waves. Since the NIDS survey starts in 2008, this is taken as the reference year. Family change in the second wave (2010) is therefore established from the marital status of the respondents in wave 2 relative to their status in wave 1. Men who did not experience any change across the five waves were coded as 0. A change was coded as "1" if a man transitioned to being married, coded as "2" when changed to living with a partner, coded as 3, when divorced, coded as 4 when multiple changes occurred meaning the men would have experienced more than one family change across the waves. Using the household size variable men who changed from living with others to living alone were coded as 1 while those who did not change were coded as 0.

Child maintenance

The variable child maintenance refers to child maintenance costs, and it is measured using the total amount of remittances in money given in the past 12 months to those in the custody of the child. It is a continuous variable that indicates the total amount paid to range from 0-R60 000.

Highest level of education

Educational level refers to the respondent's highest level of education completed. The variable consisted of 17 categories which were recoded into three categories; No education coded as (0), Primary education coded as (1), and Secondary education coded as (2).

Employment status

Employment status refers to whether the men were currently being paid a wage or salary to work regularly for an employer whether full-time or part-time. The variable has two categories; YES coded as 1 and referring to the men who were currently employed and NO referring to men who were currently not employed coded as 0.

Religion

It refers to the religious affiliation of the men and is comprised of seven categories which were categorised into three. The first category consisted of those without a religious affiliation coded as 0, the second category consisted of Christians and coded as 1 while the third category consisted of other religious affiliations (Jewish, Muslim, Hindu, African traditional spiritual beliefs) and coded as 2.

Life satisfaction

This refers to the level of life satisfaction of the respondent. The men were asked using a scale of 1 to 10 where 1 means "Very dissatisfied" and 10 means "Very satisfied" referring to how they currently felt about their life. The variable consisted of 10 levels of satisfaction. From the 10 levels, scores that were below six were categorised as "not satisfied" and coded as 0 while scores 6 and above were categorised as "satisfied" and coded as 1. The NIDS study uses the Cantril life satisfaction scale of 0 to 10 (Cantril, 1965), 0 represents the worst possible life and 10 represents the best possible life.

Table 3.2: Individual level variables

Individual level characteristics		
Variable name	**Variable type**	**How variables are coded in this study**
Marital Status	Categorical	Never married (0) Married (1) Cohabiting (2) Widow/widower (3) Divorced or separated (4)
Race	Categorical	African (1) Coloured (2) Indian and whites (combined due to small sample size) (3)
Educational level	Categorical	No education (0) Primary (1) Secondary (2)
Employment status	Dummy	No (0) Yes (1)
Perceived health status	Categorical	Excellent (1) Good (2) Fair (3) Poor (4)
Religion	Categorical	No religion (0) Christianity (1) Other (2)

Age	Categorical	18-23 (0) 24-28 (1) 29-33 (2) 34-38 (3) 39-43 (4) 44-48 (5) 49-53 (6) 54-58 (7) 59-63 (8) 64+ (9)
Satisfaction in life	Categorical	Not satisfied (0) Satisfied (1)
Family change		
Family change	Categorical	No change (0) Became married (1) Living with partner (2) Divorced (3) Multiple changes (4)
Household size	Categorical	Not Living alone (0) Living alone (1)
Child maintenance payment	Continuous	Amount paid in the past 12 months

Household-level variables

The selection of the household characteristics was also informed by literature. The variables are explained in detail below:

Perceived household income

This refers to how the household views itself in terms of income on an income step ladder. The respondents were asked to imagine a six-step ladder with the poorest occupying the bottom which is the first step and the richest the highest step which is the sixth step where they would classify themselves. From the six steps, three categories were created with the richest coded as 3 which involved individuals who had placed themselves on rungs 5 and 6 of the ladder, the middle coded as 2 consisting of rungs 3 and 4 and the lowest coded as 1 comprised of rungs 1 and 2. Such classification of the perceived health income has been used by other studies which have used the NIDS study (Posel & Casale, 2011).

Socio-economic status index

Multiple correspondence analysis

A socio-economic status index was created using multiple correspondence analysis (MCA). Multiple correspondence analysis is used in analysing nominal categorical data. It is an extension of simple correspondence analysis, and it is applied to a large set of categorical variables. Multiple Correspondence Analysis is a statistical measure that computes weights to maximise the correlation in categorical data (Kohn, 2012). In South Africa, few studies have used Multiple Correspondence Analysis to create the socioeconomic status index (Kabudula et al., 2017). Many studies have used principal component analysis (PCA). Similar to the principal component analysis, multiple correspondence analysis reduces the dimensionality of a set of data (Kohn, 2012). Both PCA and MCA present a linear combination of the data to account for a large component of the information. However, the two methods differ in that PCA requires continuous variables which are normally distributed to summarise the variables by their mean and variance (Greenacre & Blasius, 2006), while MCA requires discrete variables with the existing differences between the categories being nonlinear (Kohn, 2012). PCA maximises the variance in the data while MCA maximizes the correlation or covariance in the data.

The variables which were used to construct the socioeconomic index were influenced by literature. In South Africa, the socioeconomic status index has been measured using the following variables: type of dwelling, household's main water source, type of toilet facility available to the household, household's main source of energy/fuel for cooking, refuse/Rubbish removed weekly by local authorities, whether the household has a landline telephone in the dwelling, own at least one radio, own at least one TV, own at least one computer, own a cell phone and at least one fridge/freezer. In the study, seven socioeconomic indicator variables were used as indicators of socioeconomic status shown in figure 3.3. These include type of dwelling, household's main water source, type of toilet facility available to household, household's main source of energy/fuel for cooking, refuse/rubbish is removed weekly by local authorities, ownership of a fridge, radio, computer, telephone, and a mobile phone. The socioeconomic index was computed independently for each sample period.

The construction of the MCA index is similar to the procedure carried out in the construction of a PCA index. They differ in that MCA does not assume that the data is continuous and that a linear relationship exists between the observations (Booysen et al., 2008; Howe et al., 2012; Traissac & Martin-Prevel, 2012). The variables used as indicators of socioeconomic status in this study are discrete or categorical and this makes MCA the most appropriate measure of

asset-based measure of socioeconomic status (Booysen et al., 2008; Howe et al., 2012; Traissac & Martin-Prevel, 2012).

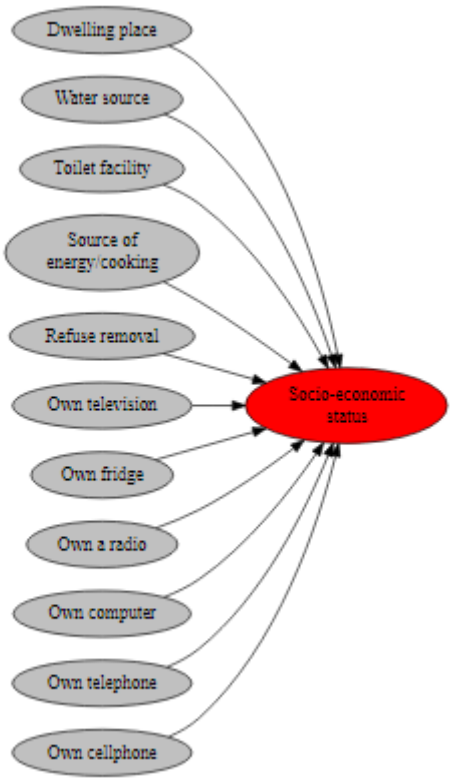


Figure 3.3: Multiple correspondence analysis: conceptual diagram adapted from (Hernández, 2016)

Poverty

To measure poverty, two indicators were used. One asked about the amount of money spent on household expenses in the past 30 days and the other asked about the total food expenditure in the last 30 days. The use of the two indicators to measure poverty is supported by Statistics South Africa which states that per capita household expenditure estimates household income better than the reported income levels (Stoop et al., 2019). A dummy variable was created coded as 0 representing those, not in poverty, and coded as 1 showing those who were in poverty.

Table 3.3: Household level variables

Household level characteristics		
Variable name	**Variable type**	**How variables are coded in this study**
Household income	Categorical	Above-average income (1) Average income (2) Below average income (3)
Socio Economic Status	Dummy	Low (1) High (2)
Poverty	Dummy	No (0) Yes (1)

Community-level variables

The community-level variables were also selected based on the theoretical framework and reviewed literature. The community-level variables in the study include region, place of residence, community domestic violence, community violence, community drug or alcohol abuse, community crime, community unemployment, community education, community poverty, residential instability, urbanisation, and social cohesion. Some community variables were created from individual-level variables while some were created from household-level variables except for region and place of residence using Stata 16 software which aggregated all the selected individual and household-level variables at the level of primary sampling units to generate community-level variables. Community-level variables such as community domestic violence, community violence, community drug or alcohol abuse, and community crime were created from household-level variables. The following community variables were created from individual-level variables; community unemployment, community education, community poverty, community residential instability, urbanisation and social cohesion. How each community-level variables was created is explained in detail below:

Community social cohesion

Studies have shown that a measure of social cohesion should comprise six dimensions such as belonging, trust, perceived equality, social relationships, cooperation, and identity (Burns et al., 2018; Njozela et al., 2017). In this study, only three of the dimensions (trust, equality, and belonging) were used to create a social cohesion index due to the availability in NIDS data.

For equality, the men were asked to imagine on a six-step ladder where they stand if the bottom which is the sixth step is for the poorest and the first step is for the richest people. They were also asked in which step they saw themselves in five years. Also, how they classified their household in terms of income in comparison with other households in the village or suburb. The indicators of belonging included how strongly they preferred to continue living in the area they lived in. The other question asked the men how they felt about their life as a whole. For trust, two variables were used concerning what the men thought when one lost a wallet containing R200; whether someone who lives in the community who picked it up could return the wallet with money in it. The other questions asked the men whether the wallet with R200 was picked up by a stranger could be returned.

Following Burns et al.'s (2018) study on the construction of a social cohesion index for South Africa. In this current study, dummy variables were created for each response that favours social cohesion. Thereafter, the proportion of the sample was calculated. The arithmetic mean was computed in each wave to come up with a mean score for each dimension of cohesion. Thereafter, a geometric mean across the three dimensions was used with equal weights to compute the social cohesion index for each wave. This produced an index that ranged from 0 to 1. 1 represented high cohesive society while 0 shows no cohesion.

Community residential instability

This variable shows the movements of men across the five waves. This is enabled by the NIDS data which has a variable in which the migration status of the men is shown for the four waves. A migrant in this study referred to men who moved between waves 1 and 2 and not in waves 3 and 4 and were defined as migrants because they had moved between waves 1 and 5. Men who did not move across the five waves were referred to as non-migrants. This is like other studies which have used NIDS to examine the migration of the respondents (Govera, 2020; Nyoni & Kollamparambil, 2022). To create community residential instability the proportion of men in a cluster who had moved between the waves.

Community-level crime, violence, drug and alcohol abuse

Community-level crime, violence, and drug and alcohol abuse were generated by computing the proportion of men in a cluster who live in communities where the following was common: crime, violence, and drug and alcohol abuse.

Community education

Community-level education of men was generated by computing the proportion of men in a cluster who have completed secondary education.

Community unemployment

Community-level unemployment of men was generated by computing the proportion of men in a cluster who were unemployed.

Urbanization

Community-level urbanisation was generated by computing the proportion of men in a cluster who resided in urban areas.

Table 3.4: Community level variables

Community level characteristics		
Province	Categorical	Western Cape (0) Eastern Cape (1) Northern Cape (2) Free State (3) KwaZulu Natal (4) North West (5) Gauteng (6) Mpumalanga (7) Limpopo (8) Outside RSA (9)
Place of residence	Dummy	Rural (0) Urban (1)
Community domestic violence	Dummy	Low (0) High (1)
Community violence	Dummy	Low (0) High (1)
Community drug or alcohol abuse	Dummy	Low (0) High (1)
Crime in the neighbourhood	Dummy	Low (0) High (1)
Community unemployment	Dummy	Low (0) High (1)
Community education	Dummy	Low (0) High (1)
Community Poverty	Dummy	Low (0) High (1)
Community residential instability	Dummy	Low (0) High (1)

Level of urbanisation	Dummy	Low (0) High (1)

3.4.4 Data management

3.4.4.1 Merging the waves

The Adult data and household data were merged for each of the five waves. After the merging of the adult and household-level data in each wave, the five waves were merged to come up with one dataset used for the analysis.

3.4.4.2 Handling missing values

NIDS data has missing values across the five waves and it was vital to deal with the missing values. The missing values were missing at random (MAR) in all five waves because within the observations, some values are available while others are not. In such circumstances, multiple imputations were conducted since existing observations could be used to impute the missing values. Table 3.5 below illustrates the variables used in the study which had missing values and were imputed. In this study, five imputed data sets were created in line with other studies in which the smallest number of imputed data sets has been suggested as typically 5 to be adequate.

Uncertainty about the missing data is addressed by multiple imputations through the creation of multiple copies of the data set replacing the missing values with imputed values sampled from a posterior predictive distribution estimated from the partially observed data (Little & Rubin, 2019). Multiple imputation method includes chained equations (Royston, 2005) and multivariate normal imputation which are implemented in various software packages (Royston & White, 2011). Studies in medical and epidemiologic research are showing the importance of multiple imputations (e.g Sterne et al., 2009) in research. However, not much has been done in demographic research, particularly in South Africa. Few studies in the country have sought to address missing values but these are not in demographic research.

Table 3.5: Missing values in variables

Variable	Missing	% Missing
Educational level	433	1.4
Employment status	45	0.1
Age	7	0.0
Race	12	0.0
Marital Status	7501	24.7
Religion	456	1.5
Household income	1266	4.2
Satisfaction in life	802	2.6
Perceived health status	59	0.2

3.4.4.3 Multiple Imputation by Chained Equations (MICE)

Multiple imputations by chained equations were used to deal with missing values in the NIDS study. Multiple imputations by chained equations (MICE) is a method used in dealing with missing data (Azur, 2011). Multivariate imputation by chained equations, also known as a fully conditional specification or sequential regression multiple imputations, is a method used in addressing missing data. The chained equations are flexible as they handle different types of variables such as continuous or binary (Azur, 2011). In each chained equation cycle, each missing value in each variable is imputed based on a predictive distribution derived from a regression on all other variables in the imputation model. At the end of 10 cycles, 1 imputed data set is created (Spratt et al., 2010).

Multiple imputations involve filling in the missing values multiple times and, in the process, creating multiple complete datasets. Imputation of the missing values is based on the observed values for a respondent and the relations observed in the data for other participants, assuming the observed variables are included in the imputation model. Since multiple imputations involve creating multiple predictions for each missing value, the analyses of multiple imputed data take into account the uncertainty in the imputations and yield accurate standard errors. If there exists less information in the observed data (used in the imputation model) regarding the missing values, the imputations will be very variable, leading to high standard errors in the analyses. In contrast, if the observed data are highly predictive of the missing values, the imputations will be more consistent across imputations, resulting in smaller, but still accurate, standard errors (Greenland & Finkle, 1995). In this study, some of the variables had a few missing values of less than 5, such as satisfaction with life.

MICE is based on the assumption that missing data are Missing at Random, implying that the probability that a value is missing depends only on observed values rather than unobserved values (Schafer, 2003). The implementation of MICE on data that are not missing at Random (MAR) might result in biased estimates. MICE has been used in datasets with thousands of observations and hundreds (e.g. 400) of variables (He et al., 2010).

In the MICE procedure, a series of regression models are run whereby each variable with missing data is modelled conditional upon the other variables in the data (Azur et al., 2011). This means that each variable can be modelled according to its distribution, with, for example, binary variables modelled using logistic regression and continuous variables modelled using linear regression (Azur et al., 2011). (Software packages do vary somewhat in their implementation of MICE, with some packages also using a multinomial logit model for categorical variables and a Poisson model for count variables). For instance, in this study a binary variable such as satisfaction with life was modelled using logistic regression, while continuous variables such as child maintenance payment were modelled using linear regression; variables with 3 and more categories such as marital status and household income were modelled using a multinomial logit model.

Let hypothetically complete data Y be a partially observed random sample from the $p-variate$ multivariate distribution $P(Y|\theta)$. It is assumed that the multivariate distribution of Y is completely specified by θ, a vector of unknown parameters. The MICE algorithm obtains the posterior distribution of θ by sampling iteratively from conditional distributions of the form

$$P(Y_1|Y_{-1},\ \theta_1) \qquad [3.1]$$
$$\vdots$$
$$P\left(Y_p\middle|Y_{-p},\ \theta_p\right) \qquad [3.2]$$

The parameters $\theta_1, \ldots\ \theta_p$ are specific to the respective conditional densities. The t^{th} iteration of chained equations is a sampler that successfully draws

$$\theta_1^{*(t)} \sim P\left(\ \theta_1\middle|Y_1^{obs}, Y_2^{(t-1)}, \ldots, Y_p^{(t-1)}\right) \quad [3.3]$$

$$\begin{aligned} Y_1^{*(t)} &\sim P(\ \theta_1|Y_1^{obs}, Y_2^{(t-1)}, \ldots, Y_p^{(t-1)}, \theta_1^{*(t)}) \\ &\vdots \\ \theta_p^{*(t)} &\sim P(\ \theta_1|Y_p^{obs}, Y_p^{(t)}, \ldots, Y_p^{(t-1)}) \end{aligned} \qquad [3.4]$$

$$Y_p^{*(t)} \sim P\left(\theta_1 \middle| Y_p^{obs}, Y_p^{(t)}, \ldots, Y_p^{(t)}, \theta_p^{*(t)}\right) \quad [3.5]$$

Where:

$Y_j^{(t)} = Y_j^{obs}, Y_j^{*t}$ is the j^{th} imputed variable at iteration t

After imputation, all the independent variables which had missing values shown in Table 3.5 were no longer having missing values and the observations for each specific variable had the same sample size 30 381 as other variables which had no missing values.

3.4.4.4 Multicollinearity

All the independent variables were checked for multicollinearity to separate the independent effects of interrelated variables. Multicollinearity involves the inter-correlations among the independent variables that interfere with statistical inferences resulting in biased results. The variance inflation factors (VIF) were used to detect multicollinearity. The VIF quantifies how much the variance is inflated. A VIF of 1 show that there is no correlation. There was no multicollinearity in the variables used in the study. The VIFs are below the cut-off point of 5 for severe multicollinearity.

Table 3.6: Multicollinearity results

Variable	**VIF**	**1/VIF**
Socio-economic status	1.00	0.999917
Household income	1.02	0.981172
Poverty	1.02	0.981121
Mean VIF	1.01	

3.4.4.5 Testing for normality

To make sure that the correct model specifications are chosen to establish the demographic characteristics associated with the payment of child maintenance in South Africa, normality tests are carried out to establish if the data are normal. In this study, the Shapiro Wilk was used to test for the normality of the child maintenance payment variable which had 723 observations. The Shapiro and Wilk (1965) test is a formal test for normality that was originally designed for sample sizes less than 50. This was later modified by Royston (l982a) to increase the restriction of the sample size to 2000. The Shapiro and Wilk test detect departure from normality due to skewness or kurtosis, or both. The test is preferred for its good power properties. The test

statistic (W) for the Shapiro-Wilk test lies between zero and one. The test statistic for the Shapiro-Wilk test has a lower boundary of 0.9 if the data are normally distributed while a test statistic value of 1 denotes perfect normal distribution. For the test, the null hypothesis is that the variable is normally distributed. A *p-value* less than the significance level indicate that the null hypothesis is rejected and signifies that the variable is not normally distributed.

Table 3.7: Results of the normality test

Variable	Observations	Test	Test statistic
Child maintenance	723	Shapiro-Wilk test	0.53786***

Null hypothesis: The variables are normally distributed
Notes: ****p<0.01*

As shown in Table 3.6, the Shapiro-Wilk test statistic is bigger than the lower boundary of 0.9 and statistically significant at the 1% level. This signifies that the null hypothesis of normality for the child maintenance variable can be rejected.

3.4.5 Steps in data analysis

The data were analysed using Stata version 16. The data were analysed in three phases, namely the univariate, bivariate and multivariate phases. Different methods were used to analyse the study objectives.

3.4.5.1 Univariate analysis

The univariate analysis involves describing the background characteristics of the respondents using descriptive statistics such as a series of frequencies and percentages for categorical variables and means, and standard deviations for continuous variables. Percentage distributions were shown for both categorical and continuous variables. The background characteristics presented information of the respondents on the following: marital status, race, education level, employment status, perceived health status, religion, age, satisfaction in life, family change, and household size. Household and community-level characteristics were described, and these are presented in Chapter 4 of the study. The second objective was to identify the prevalence of mental health outcomes among men in South Africa, descriptive statistics to measure the distribution or prevalence of mental health outcomes using such frequencies and percentages were conducted. A bar graph was used to visualize the prevalence of depressive symptoms and psychiatric/psychological disorders among men in South Africa.

3.4.5.2 Bivariate analysis

Chi-square test

A bivariate analysis using a chi-square test was done to examine patterns of family change, and mental health outcomes of men shown in chapter five.

Kruskal-Wallis

Since the data were not normally distributed as shown in section 3.8.5, a Kruskal-Wallis nonparametric test was used to compare differences in groups in men's payment of child maintenance. The different groups refer to the men in the different categories for instance, for the variable race they were three groups, the first were blacks, the second coloureds, and the third comprised of Indian and whites. The Kruskal-Wallis test is an extension of the Wilcoxon-Mann-Whitney two-sample test, it was not used in this study because it only compares differences in only two groups (Ostertagova et al., 2014). Most of the variables in the study had more than two groups. The patterns of child maintenance payment are presented in chapter five of the study.

The Kruskal Wallis test was conducted by ranking all data from all groups together. The test statistic, H, was then calculated as follows:

$$H = (N-1)\frac{\sum_{i=1}^{g} n_i(\bar{r}_i - \bar{r})^2}{\sum_{i=1}^{g}\sum_{j=1}^{n_i}(r_{ij} - \bar{r})^2} \qquad [3.6]$$

Where N is the total number of observations across all groups

g is the number of groups

n_i is the number of observations in group i

r_{ij} is the rank (among all observations) of observation j from group i

$\bar{r}_i = \frac{\sum_{j=1}^{n_i} r_{ij}}{n_i}$ is the average rank of all observations in group i

$\bar{r} = \frac{1}{2}(N+1)$ is the average of all the r_{ij}

3.4.5.3 Multivariable analysis

For multivariate analysis, the GEE, Logistic regression, and Multilevel mixed effects logistic regression models were used. To examine the determinants of family change shown in chapter six, Logistic regression was conducted. The following equation was used:

$$logit[P(y=1)] = \beta_0 + \beta_i X_i \ldots \beta_k X_k \qquad [3.7]$$

Where:

βo is the constant, showing the probability of rejecting the hypothesis being tested

Xi is the set of explanatory variables.

Objective 1: *To examine the demographic and socio-economic characteristics of men paying child maintenance in South Africa*.

This was addressed using the Generalized estimating equations, the results are presented in chapter 5. In longitudinal studies, individuals are followed over time with repeated measures of health outcomes being monitored and this gives rise to correlation in the data (Akter et al., 2018). The repeated measurements of subjects over time contribute to correlation due to the continuity of the measurement over time of the same subject (Rabe-Hesketh & Skrondal, 2008). For instance, in the NIDS men's payment of child maintenance is monitored over time. The use of standard statistical methods and models under independence assumption to analyse such data may provide biased and misleading inferences on the parameters of interest (N. Patel, 2010). Appropriate statistical methods and models such as the Generalised Estimating Equations (GEE) are required for valid inferences. The GEE is commonly used in the analysis of longitudinal data in epidemiological studies. The GEE is an extension of the generalized linear models which is useful for analysing clustered data where observations are no longer independent (Salazar et al., 2016; Ballinger, 2004). The GEE indicates how the average of an outcome variable changes with covariates while allowing for the correlation between repeated measurements on the same subject over time (Cui, 2007).

In this study, data on child maintenance payment was not normally distributed which makes the use of the GEE vital to obtain unbiased regression estimates in the repeated measures (Salazar et al., 2016). Various decisions should be made to correctly specify the GEE model to produce appropriate results (Ballinger, 2004). To specify the GEE model, the following need to be specified:

a) the link function to be used

The identity link function was selected since the outcome variable is continuous. This has been suggested in other studies that continuous outcomes with a Gaussian family distribution use the identity link meanwhile binary outcomes use a binomial family with a logit link (Homish

et al., 2010), and the logarithm for the count and positive continuous data and the gamma is used for positive continuous data.

b) the distribution of the dependent variable

The second step in the model involves specifying the distribution of the outcome variable to calculate the variance as a function of the mean response. The GEE allows the specification of distributions from the exponential family of distributions such as the normal, inverse normal, binomial, Poisson, negative, and gamma distributions (Ballinger, 2004). In this study, the outcome of child maintenance payment is a continuous variable which suggests that a Gaussian family be specified.

c) the correlation structure of the dependent variable

The third step involves selecting the appropriate correlation structure for within-subjects or nested within groups in the sample. The working correlation matrix allows the GEE to estimate models which account for the correlation of the responses. In this study, semi-robust standard errors rather than conventional standard errors have been used to allow for valid estimates in the event of a misspecification of the correlation structure. Parameter estimates are provided as regression coefficients since the outcome payment of child maintenance is continuous. Correlation structure decisions should be guided by theory. To make decisions between two structures a test was proposed by Pan (2001) which extends on Akaike's information criterion to allow comparisons of covariance matrices under GEE models to the covariance matrix generated from a model that assumes no correlation within a cluster (Ballinger, 2004). A correlation structure with the QIC score that is lowest (closest to zero) is the most appropriate (Ballinger, 2004).

GEE

Let $X_i = (x_{i1}, \dots, x_{in_i})'$ denote an $(n_i \times p)$ matrix of covariates where $x_{ij} = (x_{ij1}, \dots, x_{ij_p})'$ is the $(p \times 1)$ covariate vector associated with y_{ij}. Let $y_i = (y_{i1}, \dots, y_{in_i})'$ be an $(n_i \times 1)$ observed response vector and $\mu_{ij} = E(y_{ij}),\ i = 1, \dots, N; j = 1, \dots n_i$. The GEE marginal regression model is given by

$$g(\mu_{ij}) = x'_{ij}\beta \quad [3.8]$$

Where β is a $(p \times 1)$ vector of the regression parameters of interest and $g(.)$ is a link function

Objective 3: To *examine the association between family change and child maintenance effect on men's mental health outcomes.* As well as to *examine the interaction effect in the relationship between family change and child maintenance on men's mental health outcomes.* Multilevel mixed-effects logistic regression models were used because using them allows examining the independent impact of micro (individual) level and macro (community) level variables on men's mental health outcomes.

A multilevel mixed effects logistic regression was used to account for the hierarchical structure of the data in which 30 381 men (level 1) were nested in 396 clusters (level 2). The intra-class correlation coefficient (ICC) and the proportional change in variance (PCV) were used to represent the random effects while fixed effects were expressed as Odds Ratio including the 95% confidence interval. The use of a multilevel mixed effects model allowed simultaneously examining variations in individual and community level characteristics since individuals are nested in communities. Using the multilevel model provided both fixed and random effects which are not possible to attain when using logistic regression which only provides fixed effects. From the multilevel model, the random effects measures of variation such as ICC or VPC and PCV were used to model variances in men's mental health outcomes (Depressive symptoms and psychiatric or psychological disorders) across communities. The ICC measured the extent to which men in a given community were related to others in terms of experiencing the two mental health outcomes. Proportional change in variance (PCV) shows the contribution of cluster effect on men's mental health outcomes that is how much influence the cluster characteristics have on men's mental health outcomes. It is calculated using the empty or null model as a reference model. The equation is as follows:

$$PCV = \frac{V_e - V_{mi}}{V_e} \qquad [3.9]$$

Where:
V_e is the variance in men's mental health outcomes in the empty model
V_{mi} is the variance in men's mental outcomes in the subsequent model.

The multilevel mixed-effects logistic model comprises two parts the fixed and the random effects. The equation is shown below (Goldstein, 2003):

$$log\left[\frac{\pi_{ij}}{1-\pi_{ij}}\right] = \beta_0 + \beta_1 X_{1ij} + \cdots \beta_n X_{nij} + u_{0j} \qquad [3.10]$$

π_{ij} is the proportion of men experiencing any of the mental health outcomes (depressive symptoms or psychiatric/psychological disorders)

$(1-\pi_{ij})$ is the proportion of men not experiencing any of the mental health outcomes

β_0 is the intercept coefficient

$\beta_1 \ldots \beta_n$ are the coefficients of individual and community-level factors

$X_{1ij} \ldots X_{nij}$ are the independent variables of individuals and communities

u_{0j} are random errors at cluster levels

An empty model or null model was the first model which was fitted to estimate the total variance in men's depressive symptoms or psychiatric/psychological disorders between the clusters. The null model was used as the reference for the estimation of the PCV in the rest of the six models in the study. Model 2 included only the family change as the explanatory variable, and model 3 comprised child maintenance. Models 2 and 3 were fitted to examine the effect of family change and child maintenance on men's mental health outcomes before the inclusion of other explanatory variables. In model 4, all other individual-level factors were included. Model 5 comprised household-level factors only while model 6 contained community-level factors. Model 7 included all the individual, household, and community-level factors. Multilevel mixed effects logistic regression was used to fit the models. To explain the quantitative results, qualitative research was conducted as shown below:

Phase two: Qualitative approach

3.5 Qualitative research method

The qualitative objective involved investigating the perceptions of men on child maintenance, by so doing this objective documented men's views on child maintenance. It highlighted the characteristics of men paying child maintenance explaining the quantitative results of the GEE analysis on the demographic and socio-economic characteristics of men paying child maintenance in South Africa. From the qualitative findings, explanations on why men pay or do not pay child maintenance were provided. Through their perceptions of child maintenance, they described how they ended up paying for child maintenance highlighting the various forms of family change they experienced. Exploring complexities surrounding child maintenance and

men's mental health was important as men's family change experiences were documented while they explained how they ended up paying child maintenance and how their mental wellbeing was being affected. Qualitative research was used to obtain explanations and experiences of the men which cannot be examined quantitatively through a multilevel mixed effects logistic regression. To capture the men's narrative and to gain a deeper understanding of the quantitative results, a qualitative approach was used. The qualitative approach enables the researcher to see the environment and social events from the perspective of the subjects being researched. It is asserted that the viewpoint of the individuals being researched must be used to interpret the social reality (Bryman et al., 2004). By using a qualitative approach, the men were able to express how they viewed child maintenance rather than from the researcher's viewpoint. As a result, it provided a deeper understanding of how men perceived child maintenance, what it meant to them, how their role as fathers was undermined in the context of child maintenance, and how all of this affected their mental health.

3.5.1 Social constructivist paradigm

Social constructivism originated from the discipline of sociology as an attempt to understand reality (Andrews, 2012). Social constructivism, also known as interpretivism, has been connected to the post-modern era in qualitative research (Andrews, 2012). According to social constructivists, society's interactions with its members produce knowledge and truth (Andrews, 2012; Galbin, 2014). The social constructivist paradigm is founded on the idea that people interpret their social experiences in their unique ways (Creswell & Poth, 2016). As a result, research increasingly depends on the opinions participants share about their circumstances. In this study, the purpose of the qualitative research was to explain the quantitative findings which could not be explained fully by the GEE and Multilevel modelling. Using this approach saw two qualitative objectives formulated broadly to answer the quantitative findings. Documenting how men perceived child maintenance presented the issue broadly allowing men to share their experiences thereby explaining the quantitative results on characteristics of men paying child maintenance. From their perceptions, child maintenance is perceived as a complex issue dominated by women which affects their health especially when they are denied access and custody to the children.

The social constructivist paradigm is useful for the study since the aim is to document the experiences of men on child maintenance and how they are experiencing it. Allowing men to talk at great lengths about perceptions of child maintenance brought to the fore their attitudes

towards it; whether they saw it as helpful to the children and whether they are interested in continuing to make payments. The interpretations are based on how each man experiences child maintenance and how they relate to it when they interact with others. To comprehend the "historical and cultural settings of participants" and offer interpretations based on the participants' perspectives, the social constructivist concentrates on places where people reside and work (Creswell & Poth, 2016). The social constructivist paradigm emphasizes the importance of participants' social realities based on the context.

The chosen paradigm is appropriate for the study because it enables comprehension of men's child maintenance experiences, how their masculinities are expressed in this environment, and how this affects their mental health. In a social constructivist paradigm, researchers are conscious of and accept how their backgrounds, cultural experiences, and historical perspectives affect how participants interpret events (Creswell & Poth, 2016). A qualitative approach was deemed to be the most suitable for this study to allow participants to express their stories and experiences about family change, child maintenance, and their mental health.

However, the paradigm has been criticized for denying that knowledge is a direct perception of reality. It rejects the idea that there is an objective reality, contending that reality is socially produced and that there are multiple realities created by different people (Andrews, 2012; Galbin, 2014). It is labelled as anti-realist as it believes that knowledge is subjective because of being socially constructed. As a result, what is true or false depends on the context, history, and society. Despite its criticism, the paradigm has been selected in this study because reality is socially constructed but this depends on the context. The reality of child maintenance can best be understood by the experiences men attach to it. The study began by adhering to the positivist paradigm and addressing the critique of this paradigm.

3.5.2 Sampling method and sample size

The sample comprised 30 men to allow in-depth engagement. The sample size was selected without any intention to generalize the findings. The target population was men who had children from a relationship that ended and who were paying child maintenance formally or informally or not paying yet they were supposed to be paying. Purposive sampling and snowballing methods were used to locate men who were willing to participate in the study. Purposive sampling was used because the researcher wanted to obtain rich information on

men's mental health among men who had experienced a family change and facing child maintenance issues. To do so five men who were paying child maintenance or not paying yet were supposed to be paying were approached using the researcher's social networks and a social worker who had assisted some of the men. Using the sampling method allowed the researcher to particularly choose rightful participants who would share information that would help answer the objectives of the study. Specifically focusing on the child maintenance aspect, allowed the researcher to distinguish men who had experienced a family change or not. For instance, some of the purposively selected men had children whom they were paying child maintenance after going through a divorce, and some had not experienced a family change but had children out of wedlock. The researcher simply used her judgment to select participants for the study. This was after assessing that the men had a child or children from a relationship that ended. Having such type of men was crucial for the study since these men would be able to answer the research questions of the study. For instance, perceptions of child maintenance could best be answered by men who have been involved in issues to do with child maintenance. By using both purposive and snowballing sampling methods, it allowed the researcher to obtain the required sampling size. The five men who were purposively selected referred the researcher to other men who were experiencing similar issues leading to 30 men being successfully interviewed. The use of snowballing sampling method was appropriate considering that it was the purposively selected participants who met the requirements of the study who referred the researcher to other participants with similar characteristics to be interviewed. All the participants to which the researcher was referred were assessed to see if they indeed meet the requirements of the study.

3.5.3 Data collection

The data were collected using semi-structured in-depth interviews. The interviews comprised open-ended questions to encourage a full, meaningful answer using the participant's own knowledge and feelings. Semi-structured in-depth interviews allow detailed information on the perceptions of men regarding child maintenance and the role of their masculinities in child maintenance and mental health. The participants were able to narrate how they perceived child maintenance, as opposed to how the researcher sees it.

The data were collected in two phases. The first phase of data collection was to interview men in a venue in the inner city of Johannesburg. This involved interviewing men from Berea, Hillbrow, and Yeoville as well as other men who came from different parts of Johannesburg

such as Soweto, Thembisa and Alexandra. The study sites were chosen because of the diverse groups of people found in the city allowing the researcher to capture responses from men from different ethnic groups concerning child maintenance and men's mental health. A heterogeneous ethnic group of participants was interviewed. The interviewed men were Venda, Tsonga, Xhosa, Sepedi, Zulu, and Ndebele. The second phase involved interviewing men in the Tsakane area located in Ekurhuleni. This was done to obtain men who lives in the township which is a different setup from the inner city of Johannesburg. To gain entry into Tsakane, a social worker who once assisted the researcher in a previous research project referred another social worker who knew the type of participants required for the study.

Before the interviews, appointments were arranged with the participants with the research assistant and the social worker to find out which weekend day the participants were available to be interviewed since the researcher was available to interview the participants during weekends only. The researcher used an interview guide which is shown in Appendix E to ask the participants questions which helped in answering the objectives of the study. The participant's consent was sought to record the interviews for transcribing purposes. The interviews were conducted in IsiZulu and English as all the participants interviewed were fluent in IsiZulu, and in some instances, they were switching conversations to English. The interview sessions lasted approximately 30 minutes to an hour, while some of the interviews exceeded an hour this was especially among the participants who became emotional during the interview. In circumstances, where the participants were emotional the interviewer asked the participant if the interview could be stopped but the participants requested the interview to be continued because speaking out made them feel better.

During the data collection, some participants thought they would be helped with pursuing the cases they open with the social workers concerning not being given access to their children by their ex-partners. Some were hoping that after the interview the researcher would be able to advise them. These hopes were on the basis that some of their *baby mamas* failed to report to social workers' offices when requested to do so. They thought that researcher could come up with ways of helping them in accessing their children. Even if the purpose of the research was explained to the participants, such thoughts were dominant. This could be a result of using social workers offices in Tsakane to interview the participants. Some looked forward to the interview stating that no one is talking to them as men and therefore it is important that if they

get such opportunities, they explain everything they were going through regarding child maintenance.

3.5.4 Data analysis

After data collection, the interviews were transcribed by experienced transcribers. The transcription of the interviews was given to students who had experience in transcribing and research. This made the transcription process quicker. The interview recordings were translated from the local languages to English. After receiving the transcribed interviews, the researcher read them carefully and helped in remembering what was said in the interview. The recordings were in isiZulu a language known by the researcher. This allowed the researcher to listen to the recordings to ensure that the information in the recording corresponded to the one on the transcripts. The data were analysed using thematic analysis from the transcripts. The commonly recurring issues were used to group the issues which were raised by the participants. Major themes and sub-themes were drawn from the data illustrating the dominating and commonly raised information by the participants. The thematic analysis required carefully grouping the themes in a way that put similar issues into specific themes which explain the quantitative findings. The themes were presented in a way that best explains the quantitative findings ensuring that the detailed information shared by participants is ordered in a way that best illustrates their experiences while clarifying the quantitative findings.

3.6 Ethical issues

The study sought ethical approval from the University of Witwatersrand's Ethics Committee see Appendix D (Ethics approval). The study adhered to the research ethics by ensuring that verbal and written consent was sought from the participants before the interviews were conducted. Participants permission to have the interviews audio recorded was sought. They were informed that their identity would be protected through the use of pseudonyms during the interview and presentation of the findings. They were informed that they were free to stop participating in the interview once they felt uncomfortable at any stage of the interview. To show that they were agreeing to participate in the study and have the interview recorded they were asked to sign informed consent forms. The signing of consent forms was done before the interviews began. The purpose of the research was explained to the individuals who were interested in participating in the study. The participants participated voluntarily, and the information obtained was not made available to anyone not linked to the study. The interviews were recorded using a tape recorder and pseudonyms were used to protect the identity of the

participants. Participants were informed about the high confidentiality of the information they offered and were told that they will remain anonymous in the research process. The respondents' rights, interests, and wishes were always considered during the research process.

CHAPTER 4
Background Characteristics of the Respondents

4.1 Introduction

The chapter presents the background characteristics of the respondents in the study from all five waves. A univariate analysis was done to describe the individual, household, and community-level characteristics of the respondents in the study. The prevalence of each mental health outcome among men in South Africa is also presented.

4.2 Individual-level characteristics

Table 4.1 presents the background characteristics of the respondents. A greater percentage of the men (58.83%) were never married, followed by married men who constituted 29.93% of the men. Men living with a partner were 6.53% while the widowed were 3.06% and the divorced were the least, constituting only 1.65% of the sampled men. In terms of race, African black men constituted the majority of the respondents compared to coloureds, whites and Indians across all the waves. There were 80.96% African men, 14.46% coloureds and 4.58% Indians and whites. The distribution of respondents by race accurately reflects the composition of the national population of South Africa by race.

The education level of the respondents was categorised into three: no education, primary education and secondary education. Table 4.1 shows heterogeneity in the levels of education of the respondents as seen by the distribution of the respondents across the whole spectrum of the level of education. A greater percentage of the men (70.59%) had secondary education, followed by those with primary education (20.65%) and men with no education constituted the least with a percentage of 8.76%. Most of the men (62.94%) were not employed and this reflects the high unemployment levels in South Africa. Only 37.06% of the men were employed. The socioeconomic status of the men was divided into two categories: high and low socioeconomic status. Table 4.1 shows that men from a high socioeconomic status (50.51%) constituted the majority. Conversely, the men who were categorised as belonging to the low socioeconomic status group constituted 49.49% of the men.

The perceived health status of the respondents was categorised into four groups namely, excellent, good, fair and poor. The majority of the men (53.67%) reported that their health status was good. The percentage of men whose perceived health status was reported as

excellent was 34.54%, while 8.17% of the men were categorised as having a fair health status. The men who reported poor health status (3.62%) constituted the least percentage.

While the respondents of the study belonged to divergent religious affiliations, for brevity, this study grouped the minor religions and remained with three possible religious affiliations a respondent could belong to; namely, no religion, Christianity and other. A greater percentage of the men were Christians as they constituted 74.67%, men without religious affiliation were 15.00% while the men who belonged to other religious affiliations constituted a lower percentage of 10.33%.

The criteria used to categorise age was to use nine equal categories from 18 years to 52 years using 5-year intervals to separate the groups. The tenth category had no upper boundary and consisted of all the respondents who were more than 63 years old. The results shown in Table 4.1 show that (18.50%) were aged between 18-22, followed by 15.89% of men aged between 23-27 with 11.83% aged 28-32. Men aged between 33-37 were 9.88% and those aged 38-42 were 8.16%. Between the ages of 43 and 62, the percentage of the men was below 8% and for men aged 63 years and older were 10.28%. What is clear from these results is that the youths constituted the majority of the respondents across all the waves. This can be seen as the men aged between 18 years and 37 years consistently constituted more than 50 % of the respondents in each of the waves. This corroborates the demographic structure of South Africa which is predominantly youth. On the general satisfaction with life, a greater percentage of the men reported not being satisfied 56.49%. The percentage of men who were satisfied with life was 43.51%.

In terms of the distribution of the men according to the experience of family change, a greater percentage of the men (79.63%) did not experience any family change, men who became married were 3.80%, those who were living with a partner were 3.87% and those who went through multiple changes were 6.17%. Men who were divorced (0.85%) constituted the least percentage.

In the survey, the respondents were asked about the number of members in the households they belonged to. As shown in Table 4.1, the majority of the men (71.94%) were not living alone while 28.06% reported that they lived alone. The household size reflects the changes in the

family which are transpiring in South Africa. There is generally a shift from large household size to small household size due to socio-economic conditions.

Table 4.1: Background characteristics of men across the five waves

Individual variable	**All Five Waves**	
	%	**N (30381)**
Marital status		
Married	29.93	9031
Cohabiting	6.53	1759
Widow/widower	3.06	923
Divorced or separated	1.65	436
Never married	58.83	18232
Race		
Black	80.96	24 710
Coloured	14.46	4 318
Indian and whites	4.58	1 353
Education level		
No education	8.76	2 667
Primary	20.65	6 012
secondary	70.59	21 702
Employment status		
No	62.94	19 249
Yes	37.06	11 132
Perceived health status		
Excellent	34.54	10 456
Good	53.67	16 482
Fair	8.17	2 446
Poor	3.62	997
Religion		
No religion	15.00	4 551
Christianity	74.67	22 380
Other	10.33	3 450
Age		
18-22	18.50	5 475
23-27	15.89	4 956
28-32	11.83	3 749
33-37	9.88	2 987
38-42	8.16	2 501
43-47	7.77	2 148
48-52	6.72	2 105
53-57	5.99	1 821
58-62	4.98	1 532
63 above	10.28	3 107
Satisfaction in life		
Not satisfied	56.49	17 521
Satisfied	43.51	12 860
Family change		
No change	79.63	25835

Became married	3.80	1225
Living with partner	3.87	1006
Divorced	0.85	218
Multiple changes	6.17	1708
Household size		
Not Living alone	71.94	23920
Living alone	28.06	6461

Notes: *N* **represents frequencies and** *%* **represents percentages**
Source: Author's calculations based on the NIDS data

4.2 Household-level characteristics

Table 4.2 shows the household characteristics of the respondents in the study. A greater percentage of the respondents (46.21%) were from households with below-average income, while 41.94% were from households with an average income and 11.85% were from households with above-average income. The majority of the respondents (50.51%) were from households with high socio-economic status while 49.49% were from low socio-economic status households. A greater percentage of the respondents were living in poverty 69.59% and 30.41% were not in poverty.

Table 4.2: Household characteristics of men across the five waves

Household variables	**All five waves**	
	%	N (30381)
Household income		
Above-average income	11.85	3 632
Average income	41.94	12 841
Below average income	46.21	13 908
Socio Economic Status		
Low	49.49	15 191
High	50.51	15 190
Poverty		
No	30.41	9075
Yes	69.59	21306

Notes: *N* **represents frequencies and** *%* **represents percentages**
Source: Author's calculations based on the NIDS data

4.3 Community-level characteristics

Table 4.3 shows the community characteristics of the respondents. A greater percentage of the men were from KwaZulu Natal province at 23.04%, followed by men from Eastern Cape and Gauteng constituted 12.77% and 12.44% respectively. Men from the Western Cape province were 11.73% while in Limpopo they were 9.22% of the total men. In Mpumalanga and

Northern Cape men constituted 8.22% and 8.18% of the sampled men respectively. Men in the Free State province were 6.30% and those in North West were 7.26% of the men.

Table 4.3 shows that a greater percentage of the men resided in urban areas (55.20%) compared to rural areas (44.80%). The percentage distribution of the study sample by area of residence is not surprising given increased urbanisation in South Africa which has seen the majority of South Africans now living in urban areas compared to rural areas.

A greater percentage of the respondents were from communities that reported low domestic violence (73.92%) while 26.08% were from communities in which domestic violence was high. Community violence was reported as high by 28.42% of the men while respondents who mentioned that community violence was low constituted the majority with 71.58%. Interestingly, a greater percentage of the respondents were from communities with low drug or alcohol abuse (71.17%) while 28.83% were from communities with high drug or alcohol abuse.

The majority of the respondents were from communities with low crime (75.73%) while 24.27% were from communities where crime was high. A greater percentage of the respondents lived in communities classified as having low unemployment (73.95%) while 26.05% lived in communities with high unemployment.

Table 4.3 also shows that more than half of the men (54.20%) lived in communities classified as having low poverty while 45.80% lived in communities with high poverty. A greater percentage of the respondents resided in communities classified as having low residential instability (67.02%) whereas 32.98% lived in communities classified as having high residential instability. Most of the respondents lived in communities classified as having low urbanisation (61.26%) while 38.74% lived in communities classified as having high urbanisation. Men from communities with high and low social cohesion were 45.31% and 54.69% respectively.

Table 4.3: Macro/Community level characteristics

Community variable	All five waves	
	%	N (30381)
Province		
Western Cape	11.73	3 499
Eastern Cape	12.77	3 698
Northern Cape	8.18	2 432
Free State	6.30	1 966
KwaZulu Natal	23.04	7 730
North West	7.26	2 150
Gauteng	12.44	3 737
Mpumalanga	8.22	2 311
Limpopo	9.22	2 693
Outside RSA	0.84	165
Place of residence		
Rural	44.80	13 611
Urban	55.20	16 770
Community domestic violence		
Low	73.92	23078
High	26.08	7303
Community violence		
Low	71.58	23078
High	28.42	7303
Community drug or alcohol abuse		
Low		
High	71.17	22494
	28.83	7887
Crime in the neighbourhood		
Low	75.73	23665
High	24.27	6716
Community unemployment		
Low	73.95	22887
High	26.05	7494
Community education		
Low	53.76	17292
High	46.24	13089
Community Poverty		
Low	54.20	17315
High	45.80	13066
Community residential instability		
Low	67.02	21118
High	32.98	9263
Level of urbanisation		
Low	61.26	20120
High	38.74	10261
Community social cohesion		
Low	54.69	15219
High	45.31	15162

Notes: ***N*** **represents frequencies and** *%* **represents percentages**
Source: Author's calculations based on the NIDS data

4.4 Description of the study population by mental health outcomes

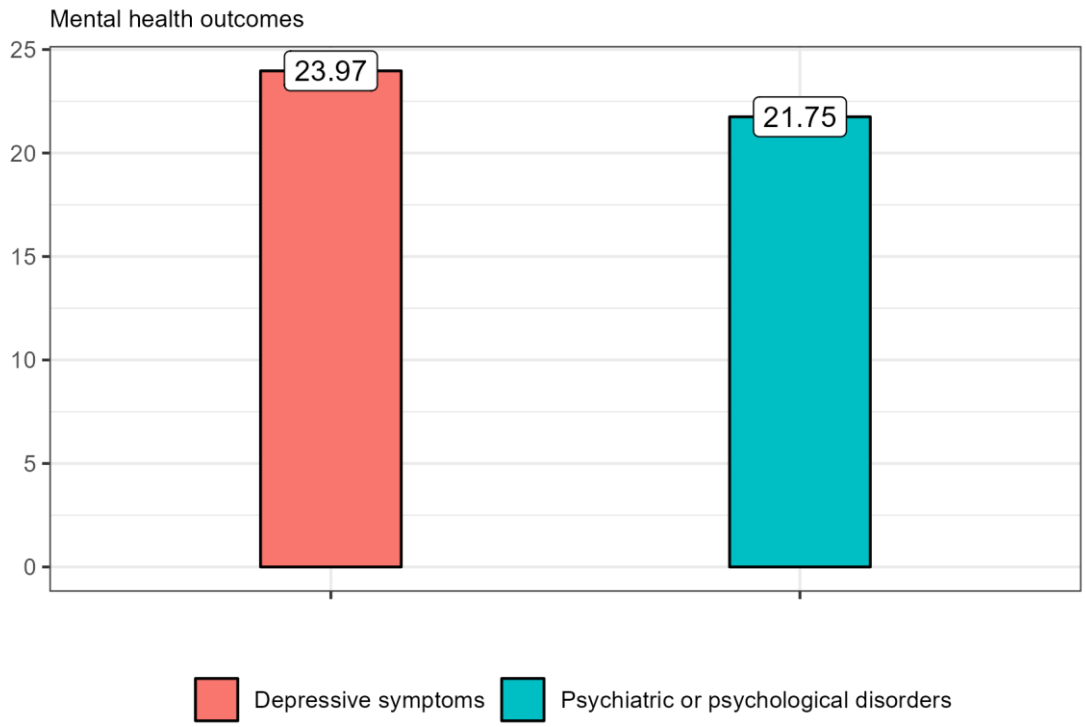


Figure 4.1: Distribution of mental health outcomes in the study population

Figure 4.1 shows that 23.97% of the men had depressive symptoms while 21.75% reported having psychiatric/psychological disorders across all five waves. These percentages were derived after pooling all the mental health outcomes reported in each wave. However, for a disaggregated prevalence see figure 4.2.

4.5 Distribution of the mental health outcomes in each wave

4.5.1 Distribution of depressive symptoms in waves 1-5

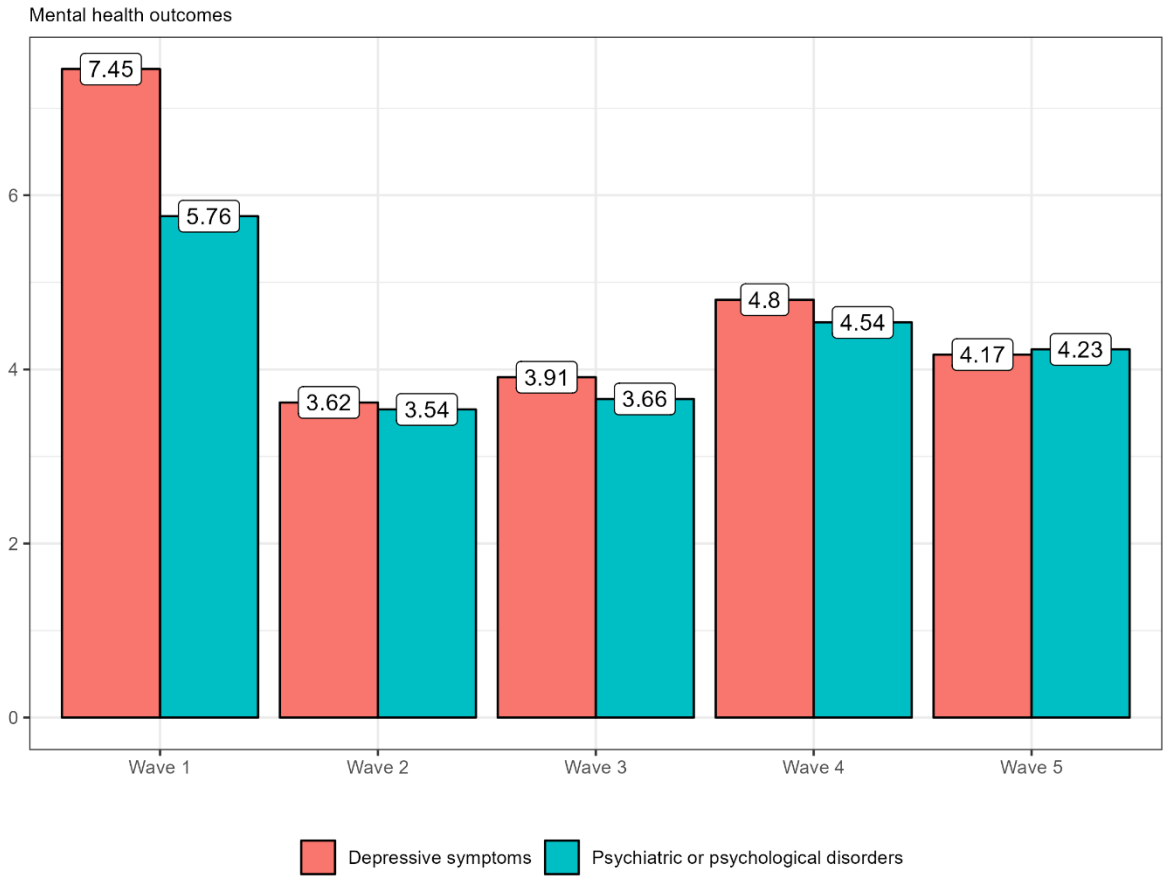


Figure 4.2: Distribution of depressive symptoms in the study population

Fig 4.2 indicates the distribution of depressive symptoms in men in all five waves. A greater percentage of the men who reported depressive symptoms was in wave 1 (7.45%). The percentage of men who reported depressive symptoms was 3.62%, 3.91%, 4.8% 4.17% in waves 2,3,4 and 5 respectively. The majority reports of psychiatric/psychological disorders were reported in wave 1. The percentage of men who reported the disorders decreased was 3.54%, 3.66%, 4.54% and 4.25% in waves 2,3,4 respectively.

4.6 Profile of the sample for the qualitative arm

Table 4.4: Profile of the sample

Name of Participant (Pseudonym)	Age	Marital status	Occupation	Number of children
Simon	37	Married	Builder	three
John	38	Single	Security Guard	one
Paul	46	Cohabiting	Hospital porter	two
Peter	37	Widower	Construction	two
Norman	34	Single	Mechanical technician	two
Mandla	48	Cohabiting	Security Guard	two
Tshepo	42	Cohabiting	Driver	two
Nkosinathi	36	Married	Engineer	one
Jason	38	Cohabiting	Construction	one
Siyabonga	34	Cohabiting	Machine operator	one
Philip	37	Cohabiting	Unemployed	one
Andrew	43	Single	Health practitioner	two
William	41	Cohabiting	Unemployed	one
Ben	39	Divorced	Welder	two
Lloyd	32	Cohabiting	mechanic	one
Themba	38	Cohabiting	Unemployed	two
Vuyani	52	Married	Construction	one
Mxolisi	43	Married	Security Guard	two
Aviwe	40	Single	Diesel Mechanic	three
Luckson	36	Cohabiting	Boiler maker	one
Mpho	38	Cohabiting	Self-employed driver	two
Benjamin	51	Divorced	Self-employed	three
Boitumelo	37	Married	Plumber	one
David	28	Single	Security guard	one
Jabulani	35	Married	Artisan	one
Mncedisi	29	Cohabiting	Unemployed	one
Tebogo	39	Cohabiting	Unemployed	one
Thando	52	Divorced	Construction	two
Bongani	47	Separated	Self-employed	two
Trust	39	Married	Construction	one

The majority of the men did not have custody of their children and only a few had access to the children. Only a few had children residing with their paternal grandmothers. Most of the men were aged between 34 and 52 years. The men were working in different jobs such as building and construction, engineering, security, driving, health sector, cleaners and artisans while others were self-employed. The majority of the men had 1 to 3 children from previous relationships which ended. Most of the participants had no matric, some had tertiary qualifications diplomas and degrees. Most of the men were living alone with some cohabiting, few were married and three were divorced. Men who paid child maintenance informally paid

amounts ranging from R500 to R1500 while those who were paying child maintenance formally paid R500 to R700. Only two participants were not paying child maintenance. Three participants had their wages garnisheed. Most of the men had made private arrangements with their ex-partners for payment of child maintenance. Men who were not paying child maintenance were saying that it was because of unemployment and others were because their ex-partners no longer allow them to do so because initially, they had refused the pregnancy.

Most of the men who are paying child maintenance did not have full custody of the children. The children were staying with their mothers and some with maternal relatives. Only a few had full custody of the children but they were living with their paternal grandmothers. The majority of the fathers who were not providing child maintenance had never raised the child from birth. The men's narratives made clear that they were reluctant to provide child maintenance for children who were not under their legal custody. The children should reside with their paternal rather than maternal family, according to the men. They thought it was beneficial for their children to live with their paternal grandmothers because they also used their resources to support the children.

They emphasized that having the children cared for by their paternal relatives may have been preferable because it would have given them some peace of mind. Some men found it difficult and expensive to pay child maintenance, especially for those who had more than one child with different mothers. It was better when all their children were staying together under one roof. They thought that staying under one roof with all their children would allow them to share anything that they had. The men found it difficult to raise the children they had with different mothers because each mother has different requirements for the child.

4.7 Summary of the chapter

The chapter described the background characteristics of the respondents. The study is largely dominated by African men who constitute more than half of the respondents. The chapter showed that men with depressive symptoms were comparably higher than men with psychiatric or psychological disorders. Both the depressive symptoms and psychiatric or psychological disorders were declining from those that were reported at baseline in wave one. Most of the men were unemployed and the majority were young. In terms of family change, the majority of the men had not experienced any family change or transitions and were not living alone. Most of the men were from households living in poverty and below average income.

CHAPTER 5

Levels and Patterns of Family Change, Child Maintenance and Mental Health

5.1 Introduction

This chapter presents the levels and patterns of family change, child maintenance and mental health outcomes in South Africa. It indicates the characteristics of men who experienced mental health outcomes. The mental health outcomes include depressive symptoms and psychiatric or psychological disorders. A bivariate analysis using a chi-square test was conducted to show the relationship between men's mental health outcomes according to individual, household, and community-level factors. The chapter first discusses the results from the individual-level factors associated with the two mental health outcomes. This is followed by a discussion on the effects of household and community-level factors on men's depressive symptoms and psychiatric or psychological disorders.

5.2 Levels and patterns of family change

Table 5.1 indicates the patterns of family change. Five family change patterns namely, became married, cohabiting or living with a partner, divorced, multiple changes and living alone were presented. In terms of race, black men constituted the majority across all five reported family changes. Black men constituted the highest percentage across all family changes; 81.39% became married, 77.83% changed to living with a partner or cohabitation, 78.90% changed to divorced and 83.67% went through multiple changes. Indian and white men had the least reports of family change. Only 0.89% of Indian and white men were cohabiting, 2.45% became married, 3.16% went through multiple changes and 10.09% became divorced.

For each family change reported, men with secondary education had the greatest reports of having experienced a family change. Among these men, 66.69% changed to being married, 57.32% went through multiple changes, 56.88% became divorced, 51.49% changed to cohabiting and 70.84% lived alone. Men with no education had the lowest reports of family change, with only 9.17% becoming divorced while among men with primary education and secondary education the reports were high at 33.94% and 56.88% respectively. As expected, reports of men who changed to being married were higher among those with secondary education and lower among men with no education.

In terms of employment status, men who were employed had higher reports of family transition; 57.06% became married and 55.77% were cohabiting. Meanwhile, higher reports of changing to divorce (52.75%), going through multiple changes (57.08%) and living alone (62.95%) were reported among the unemployed.

Men who perceived their health status to be good had higher reports of going through the five family changes. More than half had changed to any of the five family transitions. Meanwhile, those who reported their health to be poor had the lowest reports of transitioning to being married (2.86%), cohabiting (4.37%), divorced (3.98%), and living alone (3.39%).

Based on religion, the percentage of Christian men who experienced the transitions was higher, 77.22% became married, 75.70% went through multiple changes, 75.01% lived alone, 71.27% were cohabiting and 70.18% divorced. While men from other religious denominations had lower reports of experiencing change, only 8.96% went through multiple changes, 9.84% were cohabiting, 9.88% became married and 10.57% lived alone. From the age group 28-42, the men had increasing reports of being married, cohabiting, divorced and multiple changes. Meanwhile, for the same age groups, the reports of changing to living alone were decreasing. Men aged 23-27 as well as 58 and older had the lowest reports of family change.

In terms of socio-economic status, more than half of the men from a low socio-economic status experienced family change; 56.88% got divorced, 54.37% were cohabiting, 54.27% went through multiple changes and 52% got married. Among men who were from a high socio-economic category, higher reports of men who changed to living alone were observed (51.22%). Looking at poverty, a greater percentage of men living in poverty experienced different types of family change, 81.11% were cohabiting, 74.47% went through multiple changes, 68.35% got divorced, 63.10% became married and 55.27% lived alone.

KwaZulu Natal had the highest reports of men who went through a family change, 17.80% got married, 26.54% were cohabiting, 19.72% got divorced, 17.80% went through multiple changes and 23.49% lived alone. It was followed by Gauteng which had higher reports of men who became married (17.39%) and living alone (12.15%). It was expected that Gauteng would have higher reports of cohabitation compared to other provinces, but this was not so, it came third (12.62%), and second, was the Northern Cape with 14.02% men cohabiting. Gauteng had second highest reports (15.05%) of men who went through multiple changes. Men residing in

urban areas had the greatest reports of family change compared to men in rural areas, more than half became married, cohabited, divorced, went through multiple changes and were living alone.

In communities were drug or alcohol abuse was high, the men who experienced family change were few; 25.67% lived alone, 30.22% were cohabiting, 35.78% got divorced and 38.99% went through multiple changes. In communities with high unemployment, the men had lower reports of changing to being married 23.84%, cohabiting 22.27%, divorced 30.28%, going through multiple changes 31.15% and living alone 24.77%. In communities with a high percentage of men with secondary education, there were higher reports of cohabitation (58.25%) and going through multiple changes. While in communities with a low percentage of men with secondary education, there were higher reports of men getting married (50.69%), getting divorced (51.83%) and living alone (55.68%). Surprisingly, men from communities with high poverty had increased reports of getting married at 50.94%, cohabiting at 56.96%, divorce at 53.21%, and 65.63% going through multiple changes. Higher reports (57.86%) of men living alone were among men from communities with low poverty. Communities that had high residential instability had low reports of men getting married (40.33%), cohabiting (38.67%), divorced (38.53%), going through multiple changes (48.30%) while 30.57% were living alone. In communities where urbanization was high, men had lower reports of family change; 41.55% got married, 40.26% were cohabiting, 38.53% were divorced, 48.59% went through multiple changes and 35.90% lived alone.

Table 5.1: Patterns of family change among men in South Africa

Characteristics	**Became married % N (1225)**	**Living with partner % N (1006)**	**Divorced % N (218)**	**Multiple changes % N (1708)**	**Living alone % N (6461)**
Race					
Black	81.39	77.83	78.90	83.67	79.66
Coloured	16.16	21.27	11.01	13.17	15.90
Indian and whites	2.45	0.89	10.09	3.16	4.44
(χ^2) P-value	14.26***	66.79***	18.08***	8.76**	18.81***
Education level					
No education	12.90	19.18	9.17	12.53	8.67
Primary	20.41	29.32	33.94	30.15	20.49
secondary	66.69	51.49	56.88	57.32	70.84
(χ^2) P-value	32.47***	244.94***	29.66***	186.74***	3.88
Employment status					
No	42.94	44.23	52.75	57.08	62.95
Yes	57.06	55.77	47.25	42.92	37.05
(χ^2) P-value	228.12***	163.02***	10.53***	30.20***	0.44
Perceived health status					
Excellent	32.73	30.91	22.48	30.33	34.32

Good	55.27	54.27	57.80	53.98	54.30
Fair	9.14	10.44	13.30	11.71	8.00
Poor	2.86	4.37	6.42	3.98	3.39
(χ^2) P-value	4.54	16.60***	24.78***	45.58***	0.82
Religion					
No religion	12.90	18.89	11.47	15.34	14.42
Christianity	77.22	71.27	70.18	75.70	75.01
Other	9.88	9.84	18.35	8.96	10.57
(χ^2) P-value	8.3026**	13.66***	11.58***	10.41***	8.04**
Age					
18-22	0.57	1.59	0.00	2.28	18.55
23-27	6.04	7.95	0.92	7.20	16.51
28-32	14.12	17.59	4.13	11.83	12.26
33-37	16.16	16.90	8.72	14.34	8.98
38-42	15.10	14.21	11.47	11.94	7.98
43-47	11.02	12.92	16.51	12.06	6.62
48-52	10.94	12.13	16.51	10.89	7.26
53-57	9.31	8.35	16.51	8.78	6.49
58-62	5.22	3.28	12.39	7.32	5.50
63 above	11.51	5.07	12.84	13.35	9.85
(χ^2) P-value	51.9.30***	457.57***	214.47***	591.27	22.76***
Household income					
Above-average income	12.82	9.44	18.81	10.71	12.04
Average income	44.73	35.29	36.24	38.99	41.39
Below average income	42.45	55.27	44.95	50.29	46.57
(χ^2) P-value	5.66	38.12***	10.57***	15.11***	2.76
Socio Economic Status					
Low	52.00	54.37	56.88	54.27	48.78
High	48.00	45.63	43.12	45.73	51.22
(χ^2) P-value	2.08	8.03***	4.18**	13.34***	4.72**
Poverty					
Not in poverty	36.90	18.89	31.65	25.53	44.73
Yes in poverty	63.10	81.11	68.35	74.47	55.27
(χ^2) P-value	30.18***	59.88***	0.34	16.26***	855.04***
Province					
Western Cape	12.73	11.53	14.22	11.77	11.93
Eastern Cape	9.71	6.86	17.89	10.01	11.63
Northern Cape	9.47	14.02	4.59	10.54	9.91
Free State	8.49	4.57	8.26	7.55	6.52
KwaZulu Natal	17.80	26.54	19.72	17.80	23.49
North West	7.18	8.35	8.26	9.13	7.34
Gauteng	17.39	12.62	10.09	15.05	12.15
Mpumalanga	9.06	10.44	8.26	9.43	7.32
Limpopo	7.35	3.58	8.72	8.08	9.08
Outside RSA	0.82	1.49	0	0.64	0.63
(χ^2) P-value	85.04***	140.16***	17.43**	98.99***	56.63***
Place of residence					
Rural	43.27	47.51	44.95	49.00	34.62
Urban	56.73	52.49	55.05	51.00	65.38
(χ^2) P-value	1.35	2.92	0.0005	12.45***	344.89***
Community drug or alcohol abuse					
Low	64.00	69.78	64.22	61.01	74.33
High	36.00	30.22	35.78	38.99	25.67
(χ^2) P-value	69.38***	10.61***	11.42***	164.61***	0.08
Community unemployment					
Low	76.16	77.73	69.72	68.85	75.23
High	23.84	22.27	30.28	31.15	24.77

(χ^2) P-value	0.34	2.89	3.91**	42.77***	0.25
Community education					
Low	50.69	41.75	51.83	33.96	55.68
High	49.31	58.25	48.17	66.04	44.32
(χ^2) P-value	20.87***	99.08***	2.41	393.15***	5.99**
Community Poverty					
Low	49.06	43.04	46.79	34.37	57.86
High	50.94	56.96	53.21	65.63	42.14
(χ^2) P-value	33.83***	84.18***	9.56***	382.64***	1.81
Community residential instability					
Low	59.67	61.33	61.47	51.70	69.43
High	40.33	38.67	38.53	48.30	30.57
(χ^2) P-value	59.91***	33.92***	6.92***	275.52***	0.16
Level of Urbanization					
Low	58.45	59.74	61.47	51.41	64.10
High	41.55	40.26	38.53	48.59	35.90
(χ^2) P-value	36.37***	20.81***	2.41	183.04***	19.61***

***p<0.01, **p<0.05

Source: Author's calculations

5.3 Child maintenance levels and patterns

5.2.1 The total amount of child maintenance paid by men from waves 1-5

Since child maintenance is an important variable towards addressing the objectives of this study, it is imperative to know the distribution of the amounts of child maintenance money paid by the men who formed part of the sample of this study. This distribution of child payment amounts is shown in Table 5.2.

Table 5.2: Distribution of child maintenance amount paid

Amount paid	Distribution	
	N	%
R1-R1000	77	10.38
R1001-R2500	103	13.64
R2501-R5000	145	22.25
R5001-R10000	214	32.68
More than R10000	184	21.06
Total	723	100.00

Notes: ***N*** represents frequencies and ***%*** represents weighted percentages, amounts paid are denominated in the South African Rand

Source: Author's calculations based on the NIDS data

Table 5.2 indicates the distribution of the amounts of child maintenance paid across the five waves. A greater percentage of the men (32.68%) paid amounts ranging from R5001 to R10000, followed by those who paid amounts between R2501 and R5000 (22.25%). Amounts ranging between R1001 and R2500 were reported by 13.64% of the men and the least amounts paid for maintenance were between R1-R1000 and men who paid within this range constituted 10.38% of the total men who paid child maintenance across the five waves. The distribution of

the amounts paid for child maintenance by wave shows that the greatest percentage of the money paid for child maintenance was paid in the last wave (43.15%). This distribution of the amounts paid for maintenance by wave is visualised in Figure 5.1.

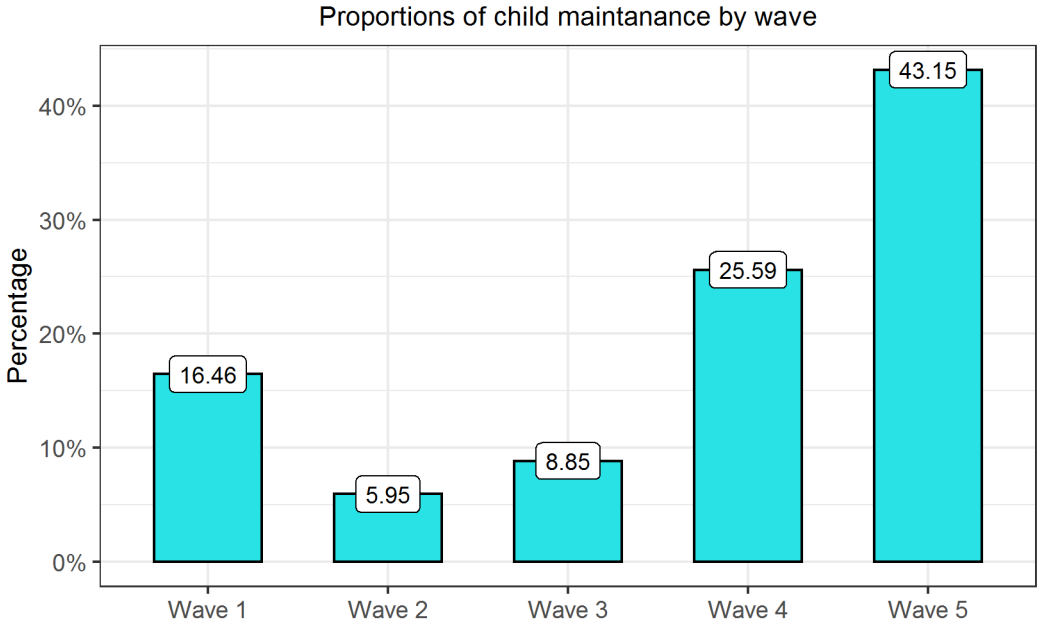


Figure 5.1: Payment of child maintenance from wave 1 (2008) to wave 5 (2017)
Source: Author's calculations from the NIDS survey

As shown in Figure 5.1 the greatest percentage of the total amounts of child maintenance were paid in wave 4 (25.59%) and wave 5 (43.15%) respectively. The least percentage of the money paid for child maintenance was paid in wave 2 (5.95%).

5.2.2 Mean payment of child maintenance by selected individual characteristics

Table 5.3 presents the mean payment of child maintenance by selected demographic and socio-economic characteristics. It also presents the results of the Kruskal-Wallis test conducted to examine the demographic and socioeconomic characteristics associated with men's payment of child maintenance. The Kruskal-Wallis test is a nonparametric test used to assess the significance of the differences in a continuous dependent variable by a dependent categorical independent variable in which the dependent variable is not normally distributed. The test has also been used in other studies in which the outcome is the amount of income (*such as* Tam et al., 2011). Overall, the Kruskal-Wallis test results indicate that there were significant differences in the mean child payment amounts for different categories of race, age, education level, employment status and province. Meanwhile, there were no significant differences in the

mean child maintenance by socio-economic status, perceived health status, marital status, religion, number of household members and place of residence.

The mean child maintenance payment per man was R8736.57 (SD=12275.1) per year. The amount of child maintenance paid corresponds to R728 per month. The average child maintenance payment for black men was R8336.52 (SD=11609.16), for coloureds it was R8862.24 (SD=10029.05) and R19174.87 (SD=25827.7) per year among Indian and whites. The mean payments show that on average, blacks paid child maintenance amounts which were lower than the average for all races (R8736.57) while among the Indians and whites, payment of child maintenance was on average more than twice the average for all races. The difference in payment of child maintenance across the race was statistically significant (χ^2=10.35; $p < 0.05$).

The mean payment of child maintenance was high R15079.15 (SD=15079.15) among men aged between 53-57 compared to other age groups, followed by men aged 48-52 years with a mean payment of R10109.06 (SD=8830.74) and men aged 58-62 with a mean payment of R9858.89 (SD=13503.18) and those aged between 43-47 it was R9436.18 (SD=10538.24), R8608.14 (SD=19567.05) was paid by those aged 23-27, R8047.16 (SD=10882.14) by those aged 38-42 meanwhile those aged 28-32, 33-37, 63 and older paid less than R8000 with the lowest mean payment reported in men aged between 18-22. The differences in the payment of child maintenance across all age groups were statistically significant (χ^2=33.47; $p < 0.01$). Since the variable age has 10 categories, it would be of paramount importance to unravel the details of the specific categories which are statistically different from each other in terms of the child maintenance amounts paid.

Table 5.2 shows that the average child maintenance payment for men with secondary education was high R9236.76 (SD=12928.44) compared to men with primary education which was R6283.33 (SD=8541.40) and those without education with R7058.86 (SD=8630.29). The difference between the child maintenance paid by men with primary education and those with secondary education was statistically significant (χ^2=16.87; $p < 0.01$) The average child maintenance payment for the unemployed men was lower R7370.95 (SD=11521.81) compared to that of employed men R9258.80 (SD=12522.49). The difference in payment of child maintenance when comparing unemployed and employed men was statistically significant (χ^2=17.89; $p < 0.01$).

Based on the current province, the mean payment of child maintenance was high in Western Cape province R12285.89 (SD=108574.59) followed by those in Limpopo with a mean payment of R11770.88 (SD=13454.02. The lowest mean payment of child maintenance was in KwaZulu Natal with R6295.17 (SD=5851.12). As indicated by the Kruskal-Wallis test the differences between the amounts of child maintenance paid by province were statistically significant (χ^2=35.28; p < 0.05). The distribution of the mean payment of child maintenance per province is visualised in Figure 5.2.

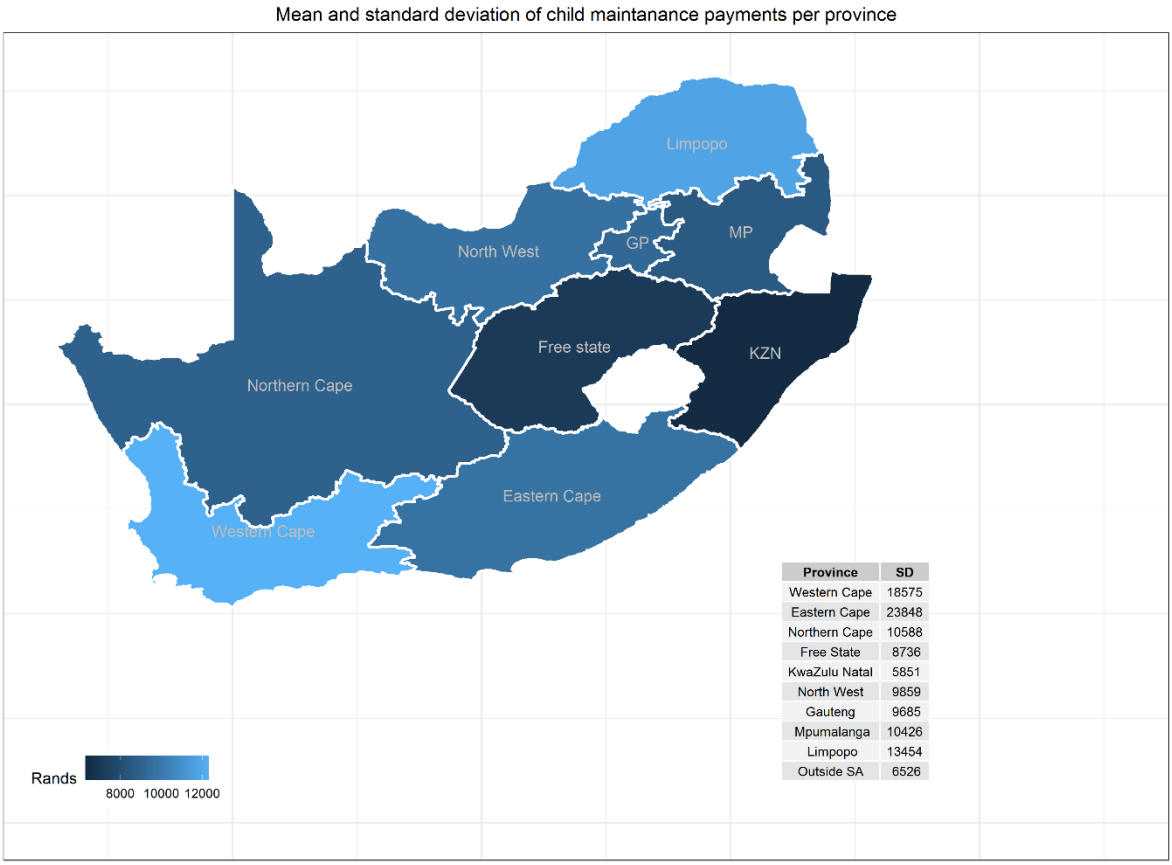


Figure 5.2: Mean and standard deviation of child maintenance payments per province

Source: Author's estimates using the NIDS data

In Figure 5.2, on a continuum, the darker the colour the less the mean payment of child maintenance and as the colour palettes become lighter, the more the mean child maintenance paid. With this interpretation, the least amounts of child maintenance on average were paid in KwaZulu-Natal and the Free State on one end, while the most amounts (more than R10 000 annually), were paid in Western Cape and Limpopo. Though the Kruskal-Wallis test shows differences in the amount paid for child maintenance among the provinces, the test is an omnibus test which only reflects that at least two groups are different without specifying which groups are statistically different from each other.

Regarding socioeconomic status, the mean payment of child maintenance was R8149.38 (SD=9953.66) among men from a low socio-economic status and R9348.65 (SD=14288.61) among those from a high socioeconomic status. Based on the Kruskal-Wallis test, the differences between men's socio-economic status and payment of child maintenance were not statistically significant (χ^2=3.97; p > 0.05). This means that there were no statistically significant differences in maintenance payment when comparing men from low socio-economic status and those from high socio-economic status.

The average child maintenance payment among men who perceived their health status to be fair was high R10218.57 (SD=14763.79), followed by that of men who perceived their health to be good with R8721.28 (SD=12890.01), while those who perceived their health to be excellent paid R8594.68 (SD=10793.63) on child maintenance on average and those who perceived their health to be poor paid R3683.33 (SD=3317.40) in child maintenance on average per year. The differences between the amounts paid for child maintenance per year for the different categories of perceived health status were not statistically insignificant (χ^2=7.58; p > 0.05).

Interestingly, in terms of marital status, the widowed men had the highest average child maintenance payment of R11843.90 (SD=13536.93) compared to the married and living with a partner with a mean child maintenance payment of R10427.22 (SD=13796.79). Among the divorced men mean child maintenance was R9449.05 (SD=13464.61) and for those who never married, it was the lowest with R7213.24 (SD=10696.28) having paid in child maintenance. The differences between amounts paid in child maintenance according to marital status were not statistically significant (χ^2=7.84; p > 0.05).

Regarding religion, the average payment of child maintenance was high among Christian men R9221.10 (SD=13300.94), for those not belonging to any religious denomination it was R6859.30 (SD=8257.71) and for men from other religious affiliations, it was R7147.89 (SD=5881.30). The differences in child maintenance paid according to religion were not statistically significant (χ^2=4.21; p > 0.05). In terms of the number of household members, for men from households which had three members average payment of child maintenance was high R9612.42 (SD=19799.15), followed by that of men who lived alone with an average payment of R9541.31 (SD=10468.76) while for those who lived in households with two people, mean payment was R8910.51 (SD=10151.21) and men in households with four and more members had the least average payment of child maintenance of R8064.47 (SD=10648.64). The mean amount paid for child maintenance by men in the different categories of the size of the households they came from was not statistically different (χ^2=2.79; p > 0.05).

Table 5.3 shows that the average payment of child maintenance among men in urban areas was higher R8944.49 (SD=12610.11) than that of men in rural areas which was R8467.27 (SD=11841.59). The differences in the payment of child maintenance when comparing men who resided in rural areas and those in urban areas were not statistically significant (χ^2=1.89; p > 0.05).

Table 5.3: Mean amount paid for child maintenance

Individual characteristic	Mean	SD	N	χ^2
Men paying maintenance	8736.573	12275.1	723	
Race				10.35**
Black	8336.522	11609.16	624	
Coloured	8862.237	10029.05	76	
Indian and whites	19174.87	25827.7	23	
Age				33.47***
18-22	2400	2348.522	10	
23-27	8608.14	19567.05	86	
28-32	7404.167	8498.628	132	
33-37	6240.787	4882.579	89	
38-42	8047.155	10882.14	116	
43-47	9436.176	10538.24	68	
48-52	10109.06	8830.741	72	
53-57	15079.15	18694.54	71	
58-62	9858.889	13503.18	36	
63 above	6766.047	8033.676	43	
Socio Economic Status				3.97
Low	8149.377	9953.655	369	
High	9348.65	14288.61	354	
Education level				16.87***
No education	7058.864	8630.294	44	
Primary	6283.333	8541.399	90	
secondary	9236.761	12928.44	589	
Employment status				17.89***
No	7370.95	11521.81	200	
Yes	9258.799	12522.49	523	
Perceived health status				7.58
Excellent	8594.677	10793.63	263	
Good	8721.275	12890.01	378	
Fair	10218.57	14763.79	70	
Poor	3683.333	3317.401	12	
Marital status				16.00***
Married	11056.55	14359.71	237	
Cohabiting	5766.25	7097.464	32	
Widow/widower	11843.9	13536.93	41	
Divorced or separated	9449.048	13464.61	21	
Never married	7213.24	10696.28	392	
Province				20.13**
Western Cape	12285.89	108574.59	56	
Eastern Cape	9617.143	23848.43	63	
Northern Cape	8861	10588.1	70	
Free State	7054.151	8735.793	53	
KwaZulu Natal	6295.17	5851.116	176	
North West	9574.69	9858.594	58	
Gauteng	9197.642	9684.608	106	
Mpumalanga	8516.543	10426.23	81	
Limpopo	11770.88	13454.02	57	
Outside RSA	9833.333	6525.591	3	
Religion				4.21
No religion	6859.302	8257.711	86	
Christianity	9221.099	13300.94	566	
Other	7147.887	5881.299	71	
Place of residence				1.89
Rural	8467.27	11841.59	315	
Urban	8944.49	12610.11	408	

Kruskal-Wallis test statistical significance at ******p<0.01, **p<0.05***
Source: Author's calculations

5.4 Levels and Patterns of Mental health outcomes

5.4.1 Depressive symptoms by individual characteristics

Table 5.4 indicates the relationship between individual-level characteristics and depressive symptoms using the chi-square test. Overall, race, educational level, employment status, perceived health status, religion, family changes and satisfaction with life were all significantly associated with depressive symptoms in men.

Interestingly, the men who did not experience any family change had the highest reports of depressive symptoms (79.06%) followed by men who went through multiple family changes with a percentage of 6.41%. Men who experienced depressive symptoms living with a partner and became married were 3.91% and 3.41% respectively. The least percentage of those who reported depressive symptoms was 1.90% among the widows. Black men constituted a greater percentage of men who experienced depressive symptoms (87.78%) compared to coloureds, Indians and whites. Coloured men who experienced depressive symptoms were 9.71% and Indian men and whites together constituted 2.51% of the respondents. A greater percentage (76.64%) of the men who were not living alone reported having experienced depressive symptoms while 23.36% of men living alone experienced depressive symptoms.

Surprisingly, men with secondary education had higher reports of depressive symptoms (64.29%). Unexpectedly, men with no education had lower reports of depressive symptoms (12.15%) compared to those with primary and secondary education. The percentage of men with primary education who reported depressive symptoms was 23.55%. As expected, unemployed men had higher reports of depressive symptoms (69.25%) compared to their counterparts who were employed (30.75%).

Men who were categorised as having experienced depressive symptoms constituted a greater percentage (53.65%) among the men who perceived their health status to be good. The percentage of men who were categorised as having experienced depressive symptoms among the men who perceived their health status to be excellent was 28.22%. Among the men who perceived their health to be fair, 11.65% experienced depressive symptoms. Among the men who perceived their health to be poor, the percentage of the men who experienced depressive symptoms was 6.50% lower compared to those who perceived their health to be excellent, good and fair.

A greater percentage of the men who reported depressive symptoms was reported among Christians, with 69.35% of them experiencing depressive symptoms. Among the men without any religious affiliation, the percentage of men who experienced depressive symptoms was 17.35% while among the men from other religious affiliations, the percentage of men who reported depressive symptoms was lower (13.30%) than the other religious affiliations across the five waves.

The percentage of men who reported to have experienced mental health problems was high among the men aged between 23-27 compared to other age groups. The percentage of the men who experienced mental health problems within the 18-22 age group was 14.84%. Higher age groups constituted decreasing percentage of men reporting depressive symptoms except for the 63 and above age group which constituted a higher percentage of men with depressive symptoms compared to the age groups above 33 and less than 63 years.

Table 5.4 also shows the association between individual-level characteristics and psychiatric or psychological disorders in men. Race, educational level, employment status, religion, age, and family change were significantly associated with psychiatric or psychological disorders in men. Perceived health status, satisfaction in life and number of household members were insignificantly associated with psychiatric or psychological disorders in men. The percentage of men who reported psychiatric or psychological disorders was higher in Black men (79%) followed by coloureds (16.89%) and Indians and whites (4.11%). Men with secondary education (70.13%) had the highest reports of psychiatric or psychological disorders, with men who have primary education (21.16%) while those with no education had the least reports (8.72%). In terms of employment status, men who were not employed had greater reports of psychiatric or psychological disorders while the employed men had 38.20%.

Surprisingly, men who perceived their health status to be good had the greatest reports of psychiatric or psychological disorders followed by men who perceived their health status to be excellent (34.65%), while those who perceived their health status to be fair constituted 7.82% and the poor had the least reports of 2.97%.

In terms of religion, men who are Christians had the greatest reports of experiencing psychiatric or psychological disorders with a percentage of 72.42%, those without religion were 16.42% and men who belonged to other religious denominations were 11.36%. With regards to age, as

age increased the reports of psychiatric or psychological disorders decreased among men. Men aged 18-27 had 16.69% reports, while those aged 28-32 had 13.43%, followed by those aged 33-37 with 10.22%. Men aged 38 years and older had less than 10% reports of psychiatric or psychological disorders. Men who were not satisfied with life had the highest reports of experiencing psychiatric or psychological disorders (58.07%) while those who were satisfied had 41.93%.

Men who did not go through any family change or transitions had the greatest reports (79.94%) of psychiatric or psychological disorders followed by those who went through multiple changes with 6.14%. Men who went through other family changes such as living with a partner and divorced constituted less than 5% of psychiatric or psychological disorders reports. Men living alone constituted 21.70% of psychiatric or psychological disorders compared to men not living alone with 78.30%.

Table 5.4: Percentage distribution of mental health outcomes by individual characteristics

Variable	**Depressive symptoms**			**Psychiatric or Psychological disorders**		
Variable	**Yes %**	**N 7158**	**(χ^2) P-value**	**Yes %**	**N 6494**	**(χ^2) P-value**
Race			260.44***			49.45***
Black	87.78	6 283		79.00	5130	
Coloured	9.71	695		16.89	1097	
Indian and whites	2.51	180		4.11	267	
Education level			255.50***			9.84***
No education	12.15	870		8.72	566	
Primary	23.55	1 686		21.16	1374	
secondary	64.29	4 602		70.13	4554	
Employment status			140.06***			8.69***
No	69.25	4 957		61.80	4013	
Yes	30.75	2 201		38.20	2481	
Perceived health status			550.75***			3.22
Excellent	28.22	2 020		34.65	2250	
Good	53.63	3 839		54.56	3543	
Fair	11.65	834		7.82	508	
Poor	6.50	465		2.97	193	
Religion			90.00***			13.36***
No religion	17.35	1 242		16.42	1066	
Christianity	69.35	4 964		72.42	4703	
Other	13.30	952		11.36	725	
Age			101.86***			38.57***
18-22	14.84	1 062		16.69	1084	
23-27	15.84	1 134		16.69	1084	
28-32	12.07	864		13.43	872	
33-37	9.74	697		10.22	664	
38-42	8.34	597		8.19	532	
43-47	7.38	528		7.67	498	
48-52	7.59	543		7.36	478	
53-57	7.11	509		6.04	392	
58-62	5.66	405		4.71	306	
63 above	11.44	819		8.99	584	
Satisfaction in life			650.20***			0.54
Not satisfied	70.69	2 098		58.07	3771	
Satisfied	29.31	7 158		41.93	2723	
Family change			65.36***			12.81**
No change	83.47	5976		84.07	5468	
Became married	3.41	244		3.80	247	
Living with partner	3.91	280		3.82	248	
Divorced	0.88	63		0.77	50	
Multiple changes	6.41	459		6.14	399	
Number of households			24.47 ***			0.9136
Not living alone	76.64	5486		78.30	5085	
Living alone	23.36	1672		21.70	1409	

Notes*: ***p<0.01, **p<0.05,* **Yes** and **N** denote the percentage and number of men who were categorised as having experienced depressive symptoms

Source: Author's calculations

5.4.3 Depressive symptoms by household-level characteristics

Table 5.5 shows the household characteristics associated with depressive symptoms and psychiatric or psychological disorders in men. Household income, socio-economic status and poverty were significantly associated with depressive symptoms in men. As expected, the percentage of men who experienced depressive symptoms from households in the below-average income bracket was higher (53.79%). On the other hand, the percentage of men from households with an average income who reported to have experienced depressive symptoms was 32.10%. The percentage of men from households with above-average income who experienced depressive symptoms was lower than the other income 14.11%. Men from households with below-average income had the highest reports (47.34%) of psychiatric or psychological disorders, followed by men from households with an average income (41.35%) and those from households with above-average income (11.32%).

Surprisingly, men from a high socioeconomic status constituted the greatest percentage of men who were categorised as having experienced depressive symptoms. The percentage of men who were categorised to have experienced depressive symptoms among men from a high socioeconomic status was 51.44%. Also, men from households which have a high socio-economic status had the highest reports (50.18%) of psychiatric or psychological disorders compared to those from low socio-economic status (49.82%). Less than 50% of the men from a low socioeconomic status were categorised as having experienced depressive symptoms. As expected, men living in households which are in poverty had the highest reports of depressive symptoms (75.22%) compared to households which are not in poverty (24.78%). Also, men from households living in poverty had the highest reports (70.57%) of psychiatric or psychological disorders compared to men not living in poverty (29.43%).

Table 5.5: Percentage distribution of mental health outcomes by household characteristics

Household variable	Depressive symptoms			Psychiatric or Psychological disorders		
	Yes %	N 7158	(χ^2) P-value	Yes %	N 6494	(χ^2) P-value
Household income			396.36***			8.83 **
Above-average income	14.11	1010		11.32	735	
Average income	32.10	2298		41.35	2685	
Below average income	53.79	3850		47.34	3074	
Socio Economic Status			7.77***			0.11
Low	48.56	3 476		49.82	3235	
High	51.44	3 682		50.18	3259	
Poverty			115.69***			0.78
No	24.78	1774		29.43	1911	
Yes	75.22	5384		70.57	4583	

Notes*: ***p<0.01, **p<0.05,* **Yes** and **N** denote the percentage and number of men who were categorised as having experienced depressive symptoms
Source: Author's calculations

5.4.5 Depressive symptoms by community level characteristics

Table 5.6 indicates the distribution of men who experienced depressive symptoms and psychiatric or psychological disorders by community-level characteristics. All the community-level variables were significantly associated with depressive symptoms except for place of residence. Men from KwaZulu Natal contributed the most to the men who reported experiencing depressive symptoms with the percentage contribution at 30.51%. Men from Eastern Cape constituted the second-highest percentage of the men who reported to have experienced depressive symptoms with 14%. The third highest contributor to the men who reported to have experienced depressive symptoms was in Gauteng province, constituting 11.36%. The contribution of the other provinces to the total number of men who experienced depressive symptoms was consistently lower than the above-mentioned provinces.

As expected, the percentage of men who reported having experienced depressive symptoms was higher in urban areas compared to rural areas. Men residing in the urban areas contributed 54.39% of the men reporting depressive symptoms while the men residing in rural areas contributed 45.61%. Men residing in communities where domestic violence is low had higher (73.25%) reports of depressive symptoms compared to men residing in communities with domestic violence (26.75%). Living in communities with low violence was linked to a higher report of depressive symptoms (70.59%) than living in communities with high violence (29.41%). Men from communities with high drug or alcohol abuse had lower reports (27.80%) of depressive symptoms compared to men living in communities with low drug or alcohol

abuse (72.20%). Communities with high crime levels had lower reports (25.83%) of depressive symptoms than communities with low crime levels (74.17%). In communities where unemployment is high, men had lower reports (30.18 %) of experiencing depressive symptoms compared to men in communities with low unemployment (69.82%). In communities where poverty was high, men had high reports of depressive symptoms than men in communities with low poverty. In communities where there was low residential instability, men had higher reports of (67.57%) depressive symptoms than men from communities with high residential instability (32.43%). In communities with low urbanisation, there were higher reports (64.71%) of men experiencing depressive symptoms compared to men in communities with high urbanisation 35.29%. In communities with low social cohesion, men had higher reports (54%) of experiencing depressive symptoms than men in communities with high social cohesion (46%).

Only province and community violence were significantly associated with psychiatric or psychological disorders in men. Men from KwaZulu Natal had the highest reports of Psychiatric or Psychological disorders (24.73%), followed by men from the Western Cape (13.23%) and men from the Eastern Cape 12.58%. Men in Gauteng were fourth with 11.18% while, men from the other provinces had reports below 10%. A greater percentage (55.24%) of men from urban areas reported having experienced psychiatric or psychological disorders than their counterparts in rural areas (44.76%). Communities with low violence had higher reports (72.14%) of psychiatric or psychological disorders than communities with high violence (27.86%).

Table 5.6: Percentage distribution of depressive symptoms by community characteristics

Community variable	Depressive Symptoms			Psychiatric or Psychological disorders		
	Yes %	N 7158	(χ^2) P-value	Yes %	N 6494	(χ^2) P-value
Province			312.07***			47.69***
Western Cape	9.51	681		13.23	859	
Eastern Cape	14.00	1002		12.58	817	
Northern Cape	5.55	397		8.64	561	
Free State	7.15	512		6.54	425	
KwaZulu Natal	30.51	2184		24.73	1606	
North West	8.17	585		7.41	481	
Gauteng	11.36	813		11.18	726	
Mpumalanga	6.15	440		7.19	467	
Limpopo	7.21	516		8.08	525	
Outside RSA	0.39	28		0.42	27	
Place of residence			2.50			0.0045
Rural	45.61	3 265		44.76	2907	
Urban	54.39	3 893		55.24	3587	
Community domestic violence			37.81***			2.27
Low	73.25	5243		75.25	4887	
High	26.75	1915		24.75	1607	
Community violence			44.85***			9.55***
Low	70.59	5053		72.14	4685	
High	29.41	2105		27.86	1809	
Community drug or alcohol abuse			16.51***			2.08
Low	72.20	5168		73.34	4763	
High	27.80	1990		26.66	1731	
Crime in the neighbourhood			75.47***			1.35
Low	74.17	5309		77.36	5024	
High	25.83	1849		22.64	1470	
Community unemployment			152.96***			0.0651
Low	69.82	4998		75.45	4900	
High	30.18	2160		24.55	1594	
Community education			113.44***			0.16
Low	51.47	3684		56.70	3682	
High	48.53	3474		43.30	2812	
Community Poverty			213.06***			0.92
Low	49.53	3545		57.51	3735	
High	50.47	3613		42.49	2759	
Community residential instability			16.56***	70.11	4553	1.40
				29.89	1941	

Low	67.57	4837				
High	32.43	2321				
Level of urbanisation			9.61***			2.08
Low	64.71	4632		65.48	4252	
High	35.29	2526		34.52	2242	
Community social cohesion			57.02***			0.53
Low	54.00	3865		49.69	3227	
High	46.00	3293		50.31	3267	

Notes*: ***p<0.01, **p<0.05,* **Yes** and **N** denote the percentage and number of men who were categorised as having experienced depressive symptoms
Source: Author's calculations

5.5 Summary of the chapter

The chapter presented the levels and patterns of family change, child maintenance and men's mental health outcomes. Five family changes were presented men who became married, cohabiting, divorced, went through multiple changes and living alone. The patterns of family change observed varied, among all racial groups, African men constituted the greatest percentage of men who went through transitions in all five family changes. The patterns of child maintenance indicate significant differences in the mean child payment amounts for different categories of race, age, education level, employment status, and province. Meanwhile, there were no significant differences in the mean child maintenance by socio-economic status, perceived health status, marital status, religion, number of household members and place of residence. The patterns of mental health outcomes also varied for each characteristic.

CHAPTER 6

Determinants of Family Change and Child Maintenance

6.1 Introduction

The chapter presents the results obtained for the determinants of family change and child maintenance among men in South Africa. A logistic regression model was used to examine the determinants of family change while the Generalised Estimating Equations (GEE) model was used to examine the demographic and socioeconomic characteristics associated with men's payment of child maintenance in South Africa. The chapter presents both the unadjusted and adjusted estimates of the determinants of family change and child maintenance.

6.2 Determinants of Family Change

Table 6.1 shows the Logistic regression results for the determinants of family change among men in South Africa. Age was the only significant factor associated with all five types of family change experienced by men. The adjusted odds ratios indicated that race, age, poverty and province were significantly associated with a change to being married. Meanwhile, the adjusted odds ratios showed that race, educational level, religion, age, household income, socio economic status, poverty, province, community unemployment, and community poverty were significantly associated with a change to cohabiting among men. Also, the adjusted odds ratios showed that race, religion, and age were the only three factors significantly associated with a change to divorce. The predictors significantly associated with multiple changes in men include age, province, community drug or alcohol abuse, community education, community poverty, community residential instability and urbanization. Race, age, poverty, province, and place of residence were significantly associated with living alone.

The adjusted odds ratio showed that Indian and white men were significantly less likely to change to being married and living alone compared to blacks (AOR, 0.06; AOR, 0.79). But they were significantly more likely to change to being divorced (AOR, 6.14) than blacks, this was shown in both the unadjusted and adjusted models. Men with a primary and secondary level of education had a significantly lower likelihood of changing to cohabiting compared to men without education (AOR, 0.41; AOR, 0.14).

Men from other religious denominations were significantly less likely to cohabit than men who do not belong to any religious group (UOR, 0.62, AOR, 0.65). The unadjusted and adjusted

odds ratio indicated that men from other religious denominations were significantly more likely to change to being divorced compared to those who did not belong to any religious group (UOR, 3.46, AOR, 4.78).

The odds of experiencing all four family changes increased by age of the men. Men aged 23-42 had a greater likelihood of being married, cohabiting, and going through multiple changes compared to men aged 18-22. Men aged 28-37 had a significantly lower likelihood of divorcing compared to those aged 18-22. Men from households with a below-average income had a significantly greater likelihood of cohabiting compared to those from above-average-income households (UOR, 1.60; AOR, 1.39). Men from a high socio-economic status had a significantly lower likelihood of divorcing compared to those from low socio-economic status (UOR, 0.78; AOR, 0.81). Interestingly, men living in poverty were significantly less likely to change to being married and living alone compared to those not in poverty (AOR, 0.72; AOR, 0.40). The men living in poverty were significantly more likely to cohabit than their counterparts not living in poverty (UOR, 2.16, AOR, 1.78). Men aged 33-47 were significantly less likely to live alone than those aged 18-22. Also, men aged 63 and older were significantly less likely to change to live alone than those aged 18-22 (AOR, 0.84).

Men in the Eastern Cape province were significantly less likely to change to being married or go through multiple changes than those in the Western Cape province (AOR, 0.38; AOR, 0.27). Meanwhile, men in the Northern Cape had a significantly greater likelihood of cohabiting or living alone than their counterparts in the Western Cape province (AOR, 2.59; AOR, 1.27). Men in KwaZulu Natal were significantly less likely to change to being married or go through multiple changes than men in the Western Cape province (AOR, 0.33; AOR, 0.16). Meanwhile, men from the same province were significantly more likely to cohabit than men in the Western Cape province (AOR, 1.96). Men in Gauteng, Mpumalanga and those from outside South Africa had a significantly increased likelihood of cohabiting than those from the Western Cape province (AOR, 1.97; AOR, 2.54; AOR, 6.30). Men in urban areas were significantly more likely to live alone than their counterparts in rural areas (UOR, 1.72; AOR, 1.64).

Men from communities with high drug or alcohol abuse were significantly more likely to go through multiple changes than those from communities with low drug or alcohol abuse (AOR, 1.48; AOR, 1.74). Men from communities with high unemployment were significantly less likely to cohabit than those from communities with low unemployment (AOR, 0.57). Men from

communities with a high percentage of men who completed secondary education were significantly more likely to go through multiple changes than in communities with a low percentage of men who completed secondary education (AOR, 3.64). Men from communities with high poverty had a significantly greater likelihood of cohabiting and going through multiple changes compared to men from low-poverty communities (AOR, 1.94; AOR, 3.02). Men from communities with high residential instability were significantly more likely to go through multiple changes than their counterparts from communities with low residential instability (UOR, 6.60; AOR, 2.54). Men from communities with high levels of urbanisation had a significantly increased likelihood of going through multiple changes than men in communities with low levels of urbanisation (UOR, 5.10, AOR, 2.21).

Table 6.1 Determinants of Family change

Characteristics	Became married		Living with partner		Divorced		Multiple Changes		Living alone	
	UOR	**AOR**	**UOR**	**AOR**	**UOR**	**AOR**	**UOR**	**AOR**	**UOR**	**AOR**
Race										
African	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Coloured	1.36	0.59	2.06***	2.57***	0.99	0.76	0.85	0.43	1.19***	0.96
Indian and whites	0.48***	0.06***	0.12***	0.48	5.39***	6.14**	0.64	0.46	1.04	0.79***
Education level										
No education	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Primary	0.74	1.09	0.41***	0.34***	2.20	3.35	1.05	1.51	1.04	1.01
secondary	0.56***	1.50	0.14***	0.12***	0.72	1.94	0.28***	0.79	0.97	0.89
Employment status	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
No	2.84***	1.08	2.82***	1.91	1.88**	2.22	1.37**	1.02	1.02	0.75
Yes										
Perceived health status										
Excellent	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Good	1.20	0.96	0.98	0.91	1.76**	1.44	1.12	0.93	1.01	1.01
Fair	1.21	0.77	1.12	1.03	2.90***	1.80	1.57	1.02	1.02	1.01
Poor	1.06	0.60	1.34	1.18	4.01***	2.87	1.46	0.85	1.07	1.02
Religion										
No religion	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Christianity	1.10	1.05	0.74**	0.80	1.69	1.96	1.01	0.99	1.07	1.01
Other	0.94	0.93	0.62***	0.65**	3.46**	4.78***	0.80	0.84	0.96	0.97
Age										
18-22	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
23-27	139.68***	102.22***	7.70	5.78***	0.000047***	0.0001***	2.79	3.23	0.98	0.95
28-32	2534.62***	2155.21***	27.94***	18.65***	0.00104***	0.0025***	5.85	7.54	0.96	0.90
33-37	8601.01***	9171.59***	26.10***	17.45***	0.0136***	0.03***	10.32	15.54***	0.86**	0.79***
38-42	21572.87***	27698.75***	23.56***	15.28***	0.29	0.38	13.19	21.01***	0.94	0.86**
43-47	21303.16***	32365.82***	24.96***	13.15***	0.99	0.96	17.39	27.88***	0.90	0.79***
48-52	26008.26***	51488.8***	20.70***	9.15***	1.44	1.56	17.67	29.08***	1.05	0.93
53-57	27300.22***	65535.83***	10.54***	4.22***	1.78	1.84	16.77	29.78***	1.12	0.97
58-62	19839.98***	62333.18***	3.54***	1.42	2.13	2.29	15.24	28.64***	1.12	0.98

63 above	17335.98***	96598.83***	2.91***	1.03		0.00	13.05	24.88***	0.98	0.84**
Household income										
Above-average income	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Average income	0.93	1.04	1.14	1.17	0.65	0.74	1.03	1.10	0.96	0.94
Below average income	0.78	1.13	1.60***	1.39**	0.61	0.72	1.18	1.18	1.01	1.08
Socio Economic Status										
Low	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
High	1.32***	1.10	0.78***	0.81**	1.05	1.01	0.88	0.90	1.06**	1.01
Poverty										
No	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Yes	0.55***	0.72**	2.16***	1.78***	0.69	1.03	1.19	1.16	0.42***	0.40***
Province										
Western Cape	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Eastern Cape	0.50***	0.38**	0.61	0.99	0.81	0.92	0.65	0.27**	0.90	0.98
Northern Cape	1.10	0.91	2.28***	2.59***	0.29	0.24	1.54	0.97	1.26***	1.27***
Free State	1.05	0.86	0.65	1.20	0.70	0.73	1.18	0.51	0.96	1.06
KwaZulu Natal	0.46***	0.33**	1.03	1.96**	0.49	0.68	0.42***	0.16***	0.85***	0.90
North West	0.80	0.39	1.31	1.74	1.00	1.18	1.57	0.63	1.00	1.06
Gauteng	1.19	0.83	0.99	1.97**	0.51	0.44	1.29	0.75	0.93	1.00
Mpumalanga	0.93	0.67	1.35	2.54**	0.60	0.51	1.35	0.82	0.90	0.99
Limpopo	0.53**	0.38	0.35***	0.75	0.66	1.07	0.72	0.30	0.97	1.06
Outside RSA	0.70	0.67	5.17***	6.30***			1.14	0.48	1.14	1.26
Place of residence										
Rural	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Urban	1.25**	1.18	0.84	0.92	0.89	0.84	0.82	0.77	1.72***	1.64***
Community drug or alcohol abuse										
Low					Ref	Ref	Ref	Ref		
High					1.73	1.63	1.48***	1.74**		
Community unemployment										
Low	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
High	1.13	1.10	0.81	0.57**	1.28	1.11	2.68***	0.66	1.02	1.04
Community education										

Low	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
High	1.70***	0.56	2.45***	0.89	1.35	0.52	3.64***	306.99***	1.07**	1.09
Community Poverty										
Low	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
High	2.02***	1.91	2.38***	1.94***	1.60	2.20	2.38***	3.02***	0.96	1.02
Community residential instability										
Low	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
High	2.11***	1.83	1.80***	1.16	1.45	0.97	6.60***	2.54***	1.01	1.01
Level of Urbanization										
Low	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
High	2.29***	1.48	1.59***	1.16	1.30	0.77	5.10***	2.21***	1.14***	1.03

***p<0.01, **p<0.05 UOR: Unadjusted Odds Ratio, AOR: Adjusted Odds Ratio

Source: Author's calculations

6.3 Determinants of payment of child Maintenance

6.3.1 Unadjusted GEE estimates of payment of child maintenance

Table 6.2 presents the unadjusted GEE estimates of payment of child maintenance by selected demographic and socio-economic characteristics. In the three models overall race, age, employment status, perceived health status, marital status, province, and religion were significantly associated with the payment of child maintenance. Meanwhile, socio-economic status, highest education level, number of household members and place of residence were insignificantly associated with the payment of child maintenance. Payment of child maintenance is significantly higher among Indian and whites compared to blacks($\beta = 0.8330; \mathrm{p} < 0.01$). Across all age groups (23-63+) men's payment of child maintenance was higher than that of those aged between 18-22. This was the same across the independent, exchangeable and unstructured GEE models.

In the three models, men who are employed, on average significantly paid child maintenance which was higher than that of unemployed men ($\beta = 0.2573; \mathrm{p} < 0.05$). However, the association was insignificant for the Independent GEE model ($\beta = 0.2280; \mathrm{p} > 0.05$). As expected on average payment for child maintenance is significantly lower among men who perceived their health to be poor ($\beta = -0.8069; \mathrm{p} < 0.01$).

Table 6.2 shows that on average payment of child maintenance was significantly lower among never-married men compared to men who are married or living with a partner ($\beta = -0.3596; \mathrm{p} < 0.01$). Men in Free State and KwaZulu Natal payment of child maintenance is significantly lower than that of men in Western Cape province ($\beta = -0.5396; \mathrm{p} < 0.05$) ($\beta = -0.6585; \mathrm{p} < 0.01$). Men who are Christians on average pay more child maintenance compared to those who do not belong to any religious affiliation ($\beta = 0.3405; \mathrm{p} < 0.05$). Payment of child maintenance was significantly higher in 2012, 2015 and 2017 compared to the reference year of 2008.

Table 6.2: Unadjusted GEE estimates of payment of child maintenance by individual characteristic

Variable	Independent			Exchangeable			Unstructured		
	Coef.	[95% Conf. Interval]		**Coef.**	[95% Conf. Interval]		**Coef.**	[95% Conf. Interval]	
Race									
Coloured	0.6115	-0.2075	0.3299	0.0540			0.0613	-0.2086	0.3313
Indian/whites	0.8330***	0.3026	1.3633	0.2963***			0.8853***	0.3483	1.4224
Age									
18-22 (ref)									
23-27	1.2772***	0.5292	2.0252	1.2717***	0.5234	2.020	1.2731***	0.5238	2.0223
28-32	1.1266***	0.5184	1.7347	1.1261***	0.5172	1.7351	1.1292***	0.5211	1.7373
33-37	0.9556***	0.3576	1.5537	0.9604***	0.3619	1.5590	0.9641***	0.3670	1.5613
38-42	1.2099***	0.5838	1.8359	1.2131***	0.5871	1.8392	1.2125***	0.5869	1.8381
43-47	1.3691***	0.7326	2.0056	1.3455***	0.7068	1.9842	1.3390***	0.7005	1.9775
48-52	1.4380***	0.8280	2.0479	1.4432***	0.8330	2.0533	1.4448***	0.8354	2.0543
53-57	1.8378***	1.1940	2.4817	1.8272***	1.1812	2.4732	1.8398***	1.1977	2.4818
58-62	1.4129***	0.6852	2.1406	1.4081***	0.6775	2.1388	1.4306***	0.7070	2.1542
63+	1.0364***	0.3581	1.7148	1.0349***	0.3563	1.7135	1.0367***	0.3588	1.7147
SES									
Low (ref)									
High	0.1373	-0.0602	0.3347	0.1342	-0.0693	0.3378	0.1368	-0.0709	0.3445
Highest education level									
No education (ref)									
Primary									
secondary	-0.1164	-0.5694	0.3366	-0.1041	-0.5679	0.3597	-0.1134	-0.5778	0.3510
	0.2689	-0.1077	0.6455	0.2763	-0.1095	0.6620	0.2608	-0.1195	0.6412
Employment status									
No (ref)									
Yes	0.2280	-0.0243	0.4803	0.2456**	0.0110	0.4802	0.2573**	0.0345	0.4801
Perceived health status									
Excellent (ref)									
Good									
Fair	0.0146	-0.2013	0.23055	0.0417	-0.1667	0.2501	0.0475	-0.16031	0.2554
Poor	0.1731	-0.1975	0.5436	0.1751	-0.1959	0.5460	0.1979	-0.1660	0.5617
	-0.8473***	-1.3605	-0.3341	-0.8199***	-1.3234	-0.3164	-0.8069***	-1.3050	-0.3088
Marital status									
Married (ref)									

Cohabiting	-0.6510**	-1.1642	-0.1378	-0.6419**	-1.1553	-0.1285	-0.6367***	-1.1502	-0.1231
Widow	0.0688	-0.3921	0.5297	0.0790	-0.3855	0.5435	0.0727	-0.3900	0.5355
Divorced	-0.1571	-0.7776	0.4633	-0.1787	-0.8132	0.4558	-0.1486	-0.7847	0.4874
Never married	-0.4271***	-0.6513	-0.2029	-0.4170***	-0.6438	-0.1902	-0.4194***	-0.6464	-0.1924
Province									
Western Cape (ref)									
Eastern Cape	-0.2449	-0.9635	0.4737	-0.2583	-1.0256	0.5089	-0.2423	-0.9827	0.4980
Northern Cape	-0.3268	-0.8039	0.1503	-0.3204	-0.8171	0.1763	-0.3160	-0.8066	0.1746
Free State	-0.5548**	-1.067	-0.0426	-0.5429**	-1.0672	-0.0186	-0.5396**	-1.0582	-0.0209
KwaZulu Natal	-0.6687***	-1.0851	-0.2523	-0.6591***	-1.0874	-0.2307	-0.6585***	-1.0809	-0.2361
North West	-0.2493	-0.7343	0.2357	-0.2434	-0.7319	0.2452	-0.2545	-0.7374	0.2284
Gauteng	-0.2895	-0.7294	0.1504	-0.2783	-0.7313	0.1747	-0.2744	-0.7221	0.1732
Mpumalanga	-0.3664	-0.8457	0.1129	-0.3674	-0.8505	0.1157	-0.3672	-0.8420	0.1075
Limpopo	-0.0428	-0.5383	0.4526	-0.0380	-0.5404	0.4645	-0.0469	-0.5441	0.4502
Outside RSA	-0.2227	-0.9498	0.5044	-0.2147	-0.9492	0.5198	-0.2103	-0.9420	0.5213
Religion									
No religion (ref)									
Christianity	0.2959**	0.0182	0.5735	0.3095**	0.0292	0.5898	0.3405**	0.0449	0.6361
Other	0.0412	-0.2848	0.3672	0.0549	-0.2774	0.3872	0.0955	-0.2595	0.4504
Number of Households									
One (ref)									
Two									
Three	-0.0684	-0.3468	0.2100	-0.0740	-0.3432	0.1951	-0.0725	-0.3404	0.1953
Four and more	0.0074	-0.4246	0.4394	-0.0274	-0.4669	0.4121	-0.0252	-0.4662	0.4157
	-0.1682	-0.3941	0.0578	-0.1763	-0.4006	0.0481	-0.1867	-0.4136	0.0402
Place of residence									
Rural (ref)									
Urban	0.0548	-0.1550	0.2647	0.0478	-0.1571	0.2526	0.0443	-0.1585	0.2472
Year									
2008 (ref)									
2010	-0.8117	-0.4081	0.2458	-0.0231	-0.3493	0.3031	-0.1144	-0.4241	0.1953
2012	0.4312**	0.0291	0.8333	0.4429**	0.0271	0.8588	0.3688	-0.0333	0.7710
2015	0.4398***	0.1200	0.7596	0.4871***	0.1421	0.8322	0.3261**	0.0311	0.6212
2017	0.6196***	0.3221	0.9170	0.6624***	0.3611	0.9637	0.5788***	0.2967	0.8609

****p<0.01, **p<0.05*

Source: Author's calculations

6.3.2 Adjusted GEE estimates of payment of child maintenance

Table 6.3 presents the adjusted GEE estimates of payment of child maintenance by selected demographic and socio-economic characteristics. Overall race and age remained significantly associated with the payment of child maintenance after controlling for the 14 socio-demographic characteristics. Meanwhile, socio-economic status, highest education level, employment status, perceived health status, marital status, province, number of household members and place of residence were insignificantly associated with the payment of child maintenance. In the adjusted model, payment of child maintenance remained significantly higher among Indian and whites compared to blacks ($\beta = 1.0685; \mathrm{p} < 0.01$). In all the age groups except for the 33-37 age group, the payment of child maintenance was higher than that of men aged between 18-22, which was the reference category. This was the same across the independent, exchangeable and unstructured GEE model.

In the adjusted model, men who are employed on average insignificantly paid child maintenance which was lower than that of unemployed men ($\beta = -0.1802; \mathrm{p} > 0.05$). The average payment of child maintenance became insignificantly lower among men who perceived their health to be poor after controlling for the socio-demographic characteristics ($\beta = -0.1867; \mathrm{p} > 0.05$). Also, in the adjusted model the payment for child maintenance in 2012, 2015 and 2017 was significantly higher compared to that in 2008.

Table 6.3: Adjusted GEE estimates of payment of child maintenance by individual characteristics

Variable	Independent			Exchangeable			Unstructured		
	Coef.	[95% Conf. Interval]		**Coef.**	[95% Conf. Interval]		**Coef.**	[95% Conf. Interval]	
Race									
Coloured	0.2318	-0.2503	0.7138	0.2359	-0.2562	0.7280	0.2365	-0.2498	0.7229
Indian/whites	1.0332***	0.5544	1.5120	1.0367***	0.5640	1.5095	1.0685***	0.6133	1.5238
Age									
18-22 (ref)									
23-27	0.9530***	0.2442	1.6619	0.9469***	0.2381	1.6557	0.9382**	0.2260	1.6504
28-32	0.8024**	0.1691	1.4358	0.7963**	0.1636	1.4290	0.8025**	0.1656	1.4393
33-37	0.5881	-0.0475	1.2237	0.5851	-0.0496	1.2197	0.5831	-0.0552	1.2214
38-42	0.7466**	0.1058	1.3875	0.7453**	0.1049	1.3857	0.7395**	0.0936	1.3854
43-47	0.7733**	0.0821	1.4645	0.7453**	0.0566	1.4340	0.7143**	0.0243	1.4043
48-52	0.9761***	0.3029	1.6493	0.9740***	0.3031	1.6450	0.9514***	0.2764	1.6265
53-57	1.3045***	0.6190	1.9900	1.2945***	0.6078	1.9813	1.2827***	0.5972	1.9682
58-62	0.8187**	0.0971	1.5404	0.7949**	0.0732	1.5166	0.8275**	0.1058	1.5493
63+	0.7880**	0.0550	1.5211	0.7794**	0.0498	1.5090	0.7649**	0.0339	1.4960
SES									
Low (ref)									
High	-0.0136	-0.2027	0.1756	-0.0139	-0.2031	0.1753	-0.0178	-0.2008	0.1652
Highest education level									
No education (ref)									
Primary									
secondary	-0.0785	-0.4307	0.2737	-0.0686	-0.4255	0.2882	-0.0738	-0.4217	0.2742
	0.1204	-0.2057	0.4467	0.1186	-0.2106	0.4478	0.1140	-0.2040	0.4319
Employment status									
No (ref)									
Yes	-0.1938	-0.4306	0.0431	-0.1828	-0.4176	0.0520	-0.1802	-0.4107	0.0502
Perceived health status									
Excellent (ref)									
Good									
Fair	0.0722	-0.1091	0.2536	0.0771	-0.1039	0.2582	0.0755	-0.1023	0.2532
Poor	0.2041	-0.1153	0.5235	0.2058	-0.1120	0.5236	0.2257	-0.0859	0.5374
	-0.1721	-0.7677	0.4235	-0.1628	-0.7603	0.4348	-0.1867	-0.7682	0.3948
Marital status									

Married (ref)									
Cohabiting	-0.1495	-0.5968	0.2977	-0.1517	-0.5989	0.2955	-0.1448	-0.5795	0.2900
Widow	0.3277	-0.0295	0.6849	0.3194	-0.0410	0.6798	0.3135	-0.0412	0.6682
Divorced	-0.4705	-0.9966	0.0556	-0.4732	-0.9874	0.0409	-0.4307	-0.9395	0.0780
Never married	-0.1859	-0.4250	0.0532	-0.1896	-0.4284	0.0492	-0.1968	-0.4317	0.0381
Province									
Western Cape (ref)									
Eastern Cape	0.2177	-0.3268	0.7621	0.2250	-0.3275	0.7775	0.2201	-0.3189	0.7591
Northern Cape	0.1400	-0.2353	0.5153	0.1375	-0.2408	0.5157	0.1493	-0.2185	0.5170
Free State	-0.0708	-0.5501	0.4085	-0.0610	-0.5472	0.4251	-0.0552	-0.5326	0.4222
KwaZulu Natal	0.1184	-0.3485	0.5852	0.1299	-0.3434	0.6033	0.1312	-0.3313	0.5936
North West	0.1695	-0.3138	.6529	0.1818	-0.3035	0.6672	0.1835	-0.2927	0.6596
Gauteng	0.2690	-0.1788	.7169	0.2815	-0.1735	0.7366	0.2838	-0.1599	0.7275
Mpumalanga	0.1061	-0.3523	.5644	0.1160	-0.3481	0.5802	0.1233	-0.3310	0.5777
Limpopo	0.2973	-0.1644	.7589	0.2971	-0.1677	0.7619	0.2848	-0.1616	0.7311
Outside RSA	0.1151	-0.6222	.8524	.1230	-0.6127	0.8588	0.1149	-0.6100	0.8398
Religion									
No religion (ref)									
Christianity	0.2300	-0.0171	0.4772	0.2362	-0.0126	0.4850	0.2335	-0.0127	0.4797
Other	0.0427	-0.2534	0.3388	0.0492	-0.2477	0.3460	0.0427	-0.2492	0.3346
Number of Households									
One (ref)									
Two									
Three	0.0706	-0.1598	0.3011	0.0620	-0.1663	0.2903	0.0579	-0.1613	0.2772
Four and more	0.1373	-0.2231	0.4978	0.1185	-0.2419	0.4790	0.1106	-0.2472	0.4685
	-0.1325	-0.3086	0.0437	-0.1388	-0.3144	0.0368	-0.1475	-0.3187	0.0237
Place of residence									
Rural (ref)									
Urban	0.0643	-0.0932	0.2218	0.0578	-0.0997	0.2152	0.0559	-0.0997	0.2116
Year									
2008 (ref)									
2010	0.1264	-0.1848	0.4377	0.1307	-0.1775	0.4389	0.1241	-0.1825	0.4307
2012	0.5432***	0.2340	0.8524	0.5353***	0.2230	0.8475	0.5508***	0.2457	0.8559
2015	0.5212***	0.2543	0.7882	0.5207***	0.2542	0.7873	0.5053***	0.2416	0.7689
2017	0.7047***	0.4397	0.9696	0.7096***	0.4460	0.9732	0.7229***	0.4667	0.9790
Intercept	6.893644	6.014307	7.772982	6.890781	6.012864	7.768697	6.911927	6.041363	7.782491

****p<0.01, **p<0.05* **Source:** Author's calculations

The results of the GEE specifications are robust to the inclusion of the three working correlation structures specified. These include the independent, exchangeable and unstructured. Incorrect specification of the working correlation structure can result in incorrect standard errors when the default convectional variance estimator is used. In this study, semi-robust standard errors were specified in place of the default convectional variance estimators to cater for any incorrect standard errors that result from the misspecification of the working correlation structure. All three models showed similar results. In all three GEE models, the semi-robust estimates produced slightly higher confidence intervals than those of the default convectional variance.

6.4 Summary of the chapter

The chapter presented the determinants of family change and child maintenance. Two different models the Logistic regression and the Generalized Estimating Equations (GEE) were used. From the Logistic regression model, the predictors of family change differed according to the specific transition that occurred. For instance, race, and age were significant predictors for men who transitioned to being married, cohabiting and divorced. While age and province, were significant predictors for men who transitioned to being married and those who went through multiple changes. Age was the only significant predictor for the four different transitions that men experienced. Community poverty was significantly associated with cohabiting and multiple changes. The different predictors for each family change show how micro and macro-level factors play a role in influencing the family change that men experience. The significant determinants of child maintenance were race and age. The payment of child maintenance in the three waves 2012, 2015 and 2017 were higher compared to that at baseline 2008. From the results it is clear that payment of child maintenance is not static it increased across the five waves.

CHAPTER 7

Determinants of Mental Health Outcomes: Does Family Change Affect Men's Mental Health in South Africa?

7.1 Introduction

The chapter presents results for two objectives of the study. The third objective was to examine the association between family change and child maintenance effects on men's mental health outcomes. In this objective, the interaction effect in the relationship between family change and child maintenance on men's mental health outcomes was examined. To address the objectives multilevel modelling was used because using it allows examining the independent impact of micro (individual) level and macro (community) level variables on men's mental health outcomes. Bearing in mind that context matters in understanding social issues that affect individuals. This makes it vital to use multilevel modelling as it incorporates the context into the individual models. In other words, using multilevel modelling allows the simultaneous analysis of the micro-macro relationships between individuals and their context which is presented in this chapter.

Seven models of the multilevel mixed effects logistic regression models were estimated. The first model was an empty model which estimated the variance in the probability of men experiencing mental health outcomes such as depressive symptoms and psychiatric or psychological disorders. The second model included the family change variables while the third model included the child maintenance variable. The fourth model included the individual level variables, the fifth model comprised of the household level variables while the sixth model included community-level variables. The seventh model is the full model which consisted of all the micro and macro-level variables. Interaction terms were included in the model to see the interaction effects of family change and child maintenance on men's mental health outcomes. The chapter also highlight how the qualitative findings explain the quantitative findings. The qualitative findings provide a detailed account on how family change and child maintenance impact men's mental health.

7.2 Family change and child maintenance' effect on men's depressive symptoms

Table 7.1 shows the multilevel fixed effects logistic regression for men's depressive symptoms in South Africa. The results for the first model which is an empty model showed variations in the odds of men experiencing depressive symptoms across communities. The variations were

statistically significant (τ=0.218). The intra-community correlation coefficient (ICC) was estimated at 6.22%, this shows variations in men's depressive symptoms that could be attributed to the community level. This implied that 6.22% of the variance in depressive symptoms was explained by the community in which men live.

Model 2 consisted of the micro-level variables for family change only. Family change was associated with men's depressive symptoms. Men who were living with a partner were 1.4 times more likely to experience depressive symptoms than men who did not go through any family change. Men who went through multiple transitions or changes had increased odds of experiencing depressive symptoms compared to men who did not go through any transition or change (Odds Ratio, 1.14). Living alone increased the odds of experiencing depressive symptoms among men (Odds Ratio, 1.24). Men who became married had reduced odds of experiencing depressive symptoms than men who did not go through any family change (Odds Ratio, 0.77). The variation in men's depressive symptoms across the communities was statistically significant (τ = 0.216). The Variance Partition Coefficient (VPC) was 6.15% lower than that in model 1. The proportional change in variance (PCV) was 0.92%. This shows that family change explains 0.92% of the variance associated with men's depressive symptoms across the communities.

Model 3 comprised the other micro-level variable of child maintenance. Men paying child maintenance were significantly less likely to experience depressive symptoms compared to men who were not paying child maintenance (Odds Ratio, 0.67). The variation in men's depressive symptoms remained statistically significant (τ = 0.217). The VPC or ICC was 6.19% lower than that in model 1. The PCV was 0.46%, it meant that child maintenance accounted for only 0.46% variance associated with men's depressive symptoms across the communities.

In model four, the remaining individual-level variables were included in the model. Individual level variables which were associated with depressive symptoms in men include race, educational level, perceived health status, age and satisfaction in life. In terms of race, coloured men were less likely to experience depressive symptoms compared to blacks (Odds Ratio, 0.66). Indian and white men were also less likely to experience depressive symptoms compared to blacks (Odds Ratio, 0.56). The odds of experiencing depressive symptoms decreased with the level of education in men. Men with a primary level of education had a lower likelihood of experiencing depressive symptoms compared to men with no education (Odds Ratio, 0.86).

Also, men with a secondary educational level were less likely to experience depressive symptoms compared to men with no education (Odds Ratio, 0.72).

The odds of experiencing depressive symptoms increases with the men's perceived health status. Men who perceived their health to be good were 1.3 times more likely to experience depressive symptoms than men who perceived their health to be excellent. Men who perceived their health to be fair were 2 times more likely to experience depressive symptoms than men who perceived their health to be excellent. Also, men who perceived their health to be poor were 3.6 times more likely to experience depressive symptoms compared to men who perceived their health status to be excellent. With regards to age, only men aged between 33.37 were significantly more likely to experience depressive symptoms compared to men aged 18-22. Men who reported being satisfied with their lives were significantly less likely to experience depressive symptoms than men who were not satisfied. Surprisingly employment status was not associated with depressive symptoms in men. In model 4, the variation in men's depressive symptoms was statistically significant ($\tau = 0.111$). The VPC or ICC was 3.27% lower than that in model 1. Individual-level factors explained 49.08% of the variance associated with men's depressive symptoms across the communities.

In Model 5, household-level variables were included in the model on their own without individual and community-level variables. Household income and poverty were significantly associated with depressive symptoms in men. With regards to household income, men from households with an average income were less likely to experience depressive symptoms than men from households with an above-average income (Odds Ratio, 0.63). Men in households with poverty were more likely to experience depressive symptoms compared to men from households with no poverty (Odds Ratio, 1.26). The variation in men's depressive symptoms remained statistically significant at ($\tau = 0.172$). The VPC or ICC was 4.97% lower than that in model 1. Household-level factors explained 21.10% of the variance associated with men's depressive symptoms across the communities.

In model 6, community-level variables were included in the model. Province, crime in the neighbourhood, community unemployment, community education and community poverty were associated with depressive symptoms in men. Men in the Eastern Cape, KwaZulu Natal and NorthWest provinces were 1.4 times more likely to experience depressive symptoms compared to men in the Western Cape province. Men in Free State Province were 1.3 times

more likely to experience depressive symptoms than men in the Western Cape province. Men who lived in a community with high crime were 1.2 times more likely to experience depressive symptoms than men who lived in communities with low crime. Men residing in communities with high unemployment had increased odds of experiencing depressive symptoms than men in communities with low unemployment (Odds ratio, 1.16). Men in communities with high education had increased odds of experiencing depressive symptoms compared to those in communities with low education (Odds Ratio, 1.18). Living in communities characterised by high levels of poverty increased the odds of experiencing depressive symptoms compared to living in communities with low poverty in men (Odds Ratio, 1.35). The variation in men's depressive symptoms remained statistically significant ($\tau = 0.102$). The VPC or ICC was 3% lower than that in model 1. The PCV was 53.21%. Community-level factors accounted for 53.21% variance associated with men's depressive symptoms across the communities.

Model 7 is a full model which included individual, household and community-level variables. The individual and household level variables associated with depressive symptoms in the full model were similar to that observed in model 4. In model 7, men who became married remained significantly less likely to experience depressive symptoms compared to men who did not go through any family change. The effect of changing to being married on men's depressive symptoms was stronger in the full model compared to model 2. This is indicated by an increase in the odds ratio while controlling for individual, household and community level factors. Men living with a partner remained significantly more likely to experience depressive symptoms compared to men who did not go through a family change (Odds ratio, 1.38; 1.22). The effect of changing to living with a partner on men's depressive symptoms was stronger in model 2 and weaker in the full model. However, men who went through multiple transitions became insignificantly associated with depressive symptoms in the full model. Living alone continued to increase the odds of experiencing depressive symptoms compared to men not living alone. The odds increased from 1.24 to 1.30 showing a stronger effect of living alone on men's depressive symptoms in the full model controlling for individual, household and community level factors. In terms of race, coloured men, Indian and white men were still less likely to experience depressive symptoms compared to black men (Odds Ratio, 0.74; 0.66). The educational level remained significantly associated with depressive symptoms. Men with primary education and those with secondary education were significantly less likely to experience depressive symptoms compared to those with no education (Odds Ratio, 0.88; 0.86). In model 7, perceived health status continued to be associated with depressive symptoms

in men. Interestingly, the same increased odds ratios observed in mode 4 were maintained in model 7 for men who perceived their health status to be good. The men who perceived their health status to be good were 1.3 times more likely to experience depressive symptoms compared to men who perceived their health status to be excellent. Men who perceived their health status to be fair were 1.9 times more likely to experience depressive symptoms compared to those who perceived their health status to be excellent. Men who perceived their health status to be poor were 3.5 times more like to experience depressive symptoms than men who perceived their health status to be excellent.

Men who are aged between 33-37 continued to have increased odds of experiencing depressive symptoms compared to men aged 18-22 years (Odds Ratio, 1.19). Men aged 38-42 became significantly more likely to experience depressive symptoms compared to men aged 18-22 years in the full model (Odds Ratio, 1.20). Men satisfied with life remained less likely to experience depressive symptoms compared to those who were not satisfied with life (Odds ratio, 0.62). Household-level factors which were associated with depressive symptoms in model 5 continued to be statistically significant in the full model. These include household income, domestic violence, and neighbourhood violence however, some household-level variables such as poverty and drug or alcohol abuse became significant in the full model. Men from households with average income remained less likely to experience depressive symptoms compared to men from households with above-average income (Odds Ratio, 0.62). Men from households with below-average income became significantly less likely to experience depressive symptoms than men from households with above-average income in the full model only. Men from households living in poverty became significantly more likely to experience depressive symptoms than those from households which are not in poverty in the full model (Odds Ratio, 1.14). The community-level variables which remained significantly associated with depressive symptoms in the full model were only two. This includes province and crime in the community.

For province, it is interesting to note that the provinces which were insignificantly associated with depressive symptoms in model six became statistically significant in the full model. While some of the statistically significant provinces in model six became statistically insignificant in the full model. For instance, men in the Northern Cape and Mpumalanga became significantly less likely to experience depressive symptoms compared to men in the Western Cape province (Odds Ratio, 0.74; 0.73). Men in urban areas became significantly less likely to experience

depressive symptoms compared to men in rural areas (Odds Ratio, 0.92). Men residing in communities with high crime remained 1.2 times more likely to experience depressive symptoms compared to men in communities with low crime. Men in communities with high social cohesion had a lower likelihood of experiencing depressive symptoms compared to men in communities with low social cohesion (Odds Ratio, 0.87). There was no statistically significant interaction effect of family change and child maintenance on men's depressive symptoms. After the statistical adjustment of family change, child maintenance, and individual, household and community level factors in model 7, there was significant variability across communities in the odds of men experiencing depressive symptoms ($\tau = 0.074$). The VPC was 2.18% lower than that in model 1. The proportional change in variance (PCV) was 67.44%. This shows that family change, child maintenance, individual, household and community level variables explain 66.06% of the variance associated with men's depressive symptoms across the communities.

Table 7.1 Family change, child maintenance and community factors associated with men's depressive symptoms in South Africa

Individual variable	Model 1 (Empty)	Model 2 Family Change	Model 3 Child maintenance	Model 4 Individual level	Model 5 Household-level	Model 6 Community level	Model 7 Full model
Family change							
No change		Ref					Ref
Became married		0.77***					0.78*** [0.65-0.94]
Living with partner		1.38***					1.22** [1.02-1.45]
Divorced		1.29					1.18 [0.82-1.70]
Multiple changes		1.14**					1.10 [0.97-1.25]
Household size							
Not living alone		Ref					Ref
Living alone		1.24**					1.30*** [1.20-1.42]
Child maintenance							
No			Ref				Ref
Yes			0.67***				0.80***[0.62-1.03]
Race							
African				Ref			Ref
Coloured				0.65***			0.74***[0.62-0.89]
Indian and whites				0.58***			0.65***[0.51-0.83]
Education level							
No education				Ref			Ref
Primary				0.86**			0.87**[0.77-0.99]
secondary				0.74***			0.79***[0.69-0.91]
Employment status							
No				Ref			Ref
Yes				0.93			0.94[0.53-1.69]
Perceived health status							
Excellent				Ref			Ref

Good Fair Poor				1.30*** 1.94*** 3.55***			1.30***[1.20-1.41] 1.95***[1.71-2.22] 3.54***[2.98-4.20]
Religion No religion Christianity Other				 Ref 0.93 1.05			 Ref 0.95 [0.87-1.06] 1.06 [0.92-1.21]
Age 18-22 23-27 28-32 33-37 38-42 43-47 48-52 53-57 58-62 63 above				 Ref 1.14 1.08 1.19** 1.16 1.09 1.11 1.10 0.98 0.88			 Ref 1.15 [1.00-1.34] 1.09 [0.94-1.28] 1.20**[1.01-1.41] 1.19 [1.00-1.41] 1.09 [0.91-1.30] 1.13 [0.94-1.35] 1.10 [0.91-1.32] 0.99 [0.81-1.20] 0.92 [0.77-1.10]
Satisfaction in life Not satisfied Satisfied				 Ref 0.60***			 Ref 0.63***[0.58-0.68]
Household variable							
Household income Above-average income Average income Below average income					 Ref 0.63*** 1.10		 Ref 0.62***[0.55-0.69] 0.86***[0.77-0.96]
Socio Economic Status Low High					 Ref 1.07		 Ref 1.04 [0.97-1.12]

Poverty No Yes					 Ref 1.26***		 Ref 1.12**[1.03-1.23]
Community level							
Province Western Cape Eastern Cape Northern Cape Free State KwaZulu Natal North West Gauteng Mpumalanga Limpopo Outside RSA						 Ref 1.40*** 0.89 1.34** 1.44*** 1.36*** 1.08 0.95 1.01 0.87	 Ref 1.13 [0.92-1.38] 0.74***[0.60-0.92] 1.08 [0.84-1.37] 1.13 [0.92-1.38] 1.13 [0.90-1.42] 0.96 [0.79-1.19] 0.73***[0.57-0.93] 0.80 [0.63-1.02] 0.70 [0.43-1.13]
Place of residence Rural Urban						 Ref 0.94	 Ref 0.91**[0.85-0.99]
Community domestic violence Low High						 Ref 1.06	 Ref 1.05 [0.93-1.20]
Community violence Low High						 Ref 1.01	 Ref 1.00 [0.88-1.13]
Community drug or alcohol abuse Low High						 Ref 0.97	 Ref 0.95 [0.85-1.06]

Crime in the neighbourhood Low High						Ref 1.22***	Ref 1.16**[1.03-1.32]
Community unemployment Low High						Ref 1.16**	Ref 1.04 [0.93-1.17]
Community education Low High						Ref 1.18***	Ref 1.00 [0.89-1.13]
Community Poverty Low High						Ref 1.35***	Ref 1.04 [0.90-1.19]
Community residential instability Low High						Ref 0.99	Ref 0.99 [0.90-1.09]
Level of urbanisation Low High						Ref 0.96	Ref 0.97 [0.88-1.07]
Community social cohesion Low High						Ref 0.90	Ref 0.87**[0.77-0.98]

Family change#Child maintenance No change Became married Living with partner Divorced Multiple changes							 Ref 1.03 0.65 0.94 1.13
Intercept	-1.174	0.288(0.0098)***	0.312(0.0096)***	0.453(0.045)***	0.290(0.018)***	0.179(0.017)***	0.400(0.068)***
Random Intercept							
Variance (SE)	0.218(0.029)***	0.216(0.029)***	0.217(0.029)***	0.111(0.027)***	0.172(0.028)***	0.102(0.027)***	0.074(0.028)***
ICC/VPC (%)	6.22	6.15	6.19	3.27	4.97	3.00	2.18
PCV (%)	Ref	0.92	0.46	49.08	21.10	53.21	66.06
Model fit statistics							
AIC	20554.47	20498.62	20545.43	19806.15	20299.97	20409.91	19613.86
BIC	20570.13	20569.1	20568.92	19978.42	20346.95	20582.18	20036.7

SE=Standard Error, ICC= intraclass correlation coefficient, PCV = Proportional change in variance, AIC=Akaike information criterion, BIC = Bayesian information criterion, Results based on 396 neighbourhood clusters

****p<0.01, **p<0.05*

Source: Author's calculation

7.3 Family change and child maintenance' effect on men's psychiatric or psychological disorders

Table 7.2 shows the multilevel fixed effects logistic regression for men's psychiatric or psychological disorders in South Africa. Model 1 which is an empty model, shows that there was a significant variation in the odds of men experiencing psychiatric or psychological disorders across the communities ($\tau = 0.038$). The ICC shows that 1.13% of the variance in the odds of men's psychiatric or psychological disorders could be attributed to community-level factors.

The second model included the individual variable family change which is the main independent variable of the study. Men who changed to living with a partner and those who experienced multiple transitions were 1.2 times more likely to experience psychiatric or psychological disorders compared to men who did not go through any family change. Living alone increased the odds of experiencing psychiatric or psychological disorders compared to not living alone (Odds Ratio, 1.1). The variation of psychiatric or psychological disorders in men remained statistically significant ($\tau = 0.193$) in model 2, with 1.12% of the variance being attributed to family change. The PCV of 2.63%. shows that family change explains 2.63% of the variance associated with men's psychiatric or psychological disorders across the communities.

Model 3 included child maintenance which is also an individual-level variable. Men who were paying child maintenance were less likely to experience psychiatric or psychological disorders than men who were not paying child maintenance. The variation in men's psychiatric or psychological disorders remained statistically significant ($\tau = 0.193$). The VPC or ICC was 1.12% and the PCV was 2.63% similar to that observed in model one. Child maintenance accounted for only 2.63% variance associated with men's psychiatric or psychological disorders across the communities.

In model 4, all the remaining independent variables at the individual level were included. Race, educational level, perceived health status, religion, and age were significantly associated with psychiatric or psychological disorders in men. Coloured men were 1.3 times more likely to experience psychiatric or psychological disorders compared to black men. In terms of educational level, men who had secondary education were less likely to experience psychiatric or psychological disorders compared to men with no education. Men who perceived their health

status to be poor were less likely to experience psychiatric or psychological disorders compared to those who perceived their health to be excellent (Odds Ratio, 0.81). Concerning religion, men who are Christians were less likely to experience psychiatric or psychological disorders than men who did not belong to a religious denomination (Odds Ratio, 0.89). Men aged between 28-32 were 1.2 times more likely to experience psychiatric or psychological disorders than men aged 18-22. The variation in men's psychiatric or psychological disorders was statistically significant ($\tau = 0.166$). The VPC or ICC was 0.83% lower than that in model 1. A PCV of 26.32% indicates that the variance in the odds of men experiencing psychiatric or psychological disorders between communities could be explained by individual-level factors.

Model 5 comprised household-level variables and none of these were significantly associated with experiences of psychiatric or psychological disorders. There was a statistically significant variation in the odds of men experiencing psychiatric or psychological disorders across the communities ($\tau = 0.191$). The VPC or ICC was 1.10 % lower than that in model 1. The PCV shows that 2.63% of the variability in the probability of men experiencing psychiatric or psychological disorders was explained by household-level factors.

In model 6, community-level variables were included. Province and community violence were significantly associated with psychiatric or psychological disorders in men. Men in KwaZulu Natal, Gauteng and Limpopo were less likely to experience psychiatric or psychological disorders compared to Western Cape province (Odds Ratio, 0.81; 0.78; 0.76). In communities where violence is high men are 1.2 times more likely to experience psychiatric or psychological disorders compared to men from communities where violence is low. The variation in men's psychiatric or psychological disorders remained statistically significant ($\tau = 0.141$). The VPC or ICC was 0.60% lower than that in model 1. The ICC value shows that only 0.60% of the variation among the clusters was explained by community-level factors. The proportional change in variance (PCV) was 47.32%. This implies that the community-level factors accounted for 47.37% variance associated with men's psychiatric or psychological disorders across the communities.

Model 7 is the full model, individual, household and community-level variables were included in the model. Individual-level variables which were significantly associated with psychiatric or

psychological disorders included family change, child maintenance, race, educational level, perceived health status, religion, age and life satisfaction. None of the household level variables were significantly associated with psychiatric or psychological disorders. Among the community level variables only neighbourhood violence was significantly associated with psychiatric or psychological disorders in the full model.

Similar to model 2, living alone increased the odds of experiencing psychiatric or psychological disorders in men compared to not living alone (Odds Ratio, 1.10). Men who paid child maintenance remained less likely to experience psychiatric or psychological disorders than men who were not paying child maintenance (Odds Ratio, 0.76). Coloured men remained 1.3 times more likely to experience psychiatric or psychological disorders compared to black men. Just like in model 4, men with secondary education were less likely to experience psychiatric or psychological disorders compared to men with no education (Odds Ratio,0.85). Similar to model 4, men who perceived their health to be poor were less likely to experience psychiatric or psychological disorders compared to men who perceived their health to be excellent (Odds Ratio, 0.78). Men aged between 28-32 remained 1.2 times more likely to experience psychiatric or psychological disorders compared to men aged 18-22. There was no statistically significant interaction effect of family change and child maintenance on men's psychiatric or psychological disorders. The variations in men's psychiatric or psychological disorders across communities remained statistically significant ($\tau = 0.131$), even after adjusting for family change, child maintenance, and individual, household, and community-level factors in the full model. The VPC was 0.52% lower than that in model 1. The PCV was 55.26%. This shows that family change, child maintenance, and individual, household and community level factors explain 55.26% of the variance associated with men's psychiatric or psychological disorders across the communities.

Table 7.2 Family change, child maintenance and community factors associated with men's psychiatric or psychological disorders in South Africa

Individual variable	Model 1 (Empty)	Model 2 Family Change	Model 3 Child maintenance	Model 4 Individual level	Model 5 Household-level	Model 6 Community level	Model 7 Full model
Family change							
No change		Ref					Ref
Became married		0.91					0.90[0.76-1.08]
Living with partner		1.21**					1.11 [0.93-1.33]
Divorced		1.15					1.17 [0.81-1.69]
Multiple changes		1.15**					1.13 [1.00-1.29]
Household size							
Not living alone		Ref					Ref
Living alone		1.10**					1.10*** [0.58-0.95]
Child maintenance							
No			Ref				Ref
Yes			0.71***				0.74**[0.62-1.03]
Race							
African				Ref			Ref
Coloured				1.34***			1.26***[1.08-1.47]
Indian and whites				1.08			1.10[0.90-1.34]
Education level							
No education				Ref			Ref
Primary				0.96			0.95[0.83-1.09]
secondary				0.86**			0.85**[0.74-0.98]
Employment status							
No				Ref			Ref
Yes				1.01			1.03[0.95-1.12]
Perceived health status							
Excellent				Ref			Ref

Good Fair Poor				0.99 0.93 0.81**			0.99[0.92-1.08] 0.92[0.80-1.06] 0.79**[0.64-0.96]
Religion No religion Christianity Other				 Ref 0.89** 0.98			 Ref 0.88** [0.79-0.97] 0.98 [0.85-1.13]
Age 18-22 23-27 28-32 33-37 38-42 43-47 48-52 53-57 58-62 63 above				 Ref 1.13 1.19** 1.10 1.05 1.18 1.15 1.00 0.92 0.84			 Ref 1.13 [0.97-1.31] 1.19** [1.02-1.39] 1.09 [0.93-1.29] 1.04 [0.88-1.25] 1.17 [0.98-1.40] 1.15 [0.96-1.37] 0.99 [0.82-1.20] 0.91 [0.74-1.12] 0.84 [0.70-1.01]
Satisfaction in life Not satisfied Satisfied				 Ref 0.95			 Ref 0.95[0.88-1.03]
Household variable							
Household income Above-average income Average income Below average income					 Ref 1.04 1.10		 Ref 1.03[0.91-1.16] 1.05[0.93-1.18]
Socio Economic Status Low					 Ref		 Ref

High					0.97		0.97 [0.90-1.04]
Poverty No Yes					 Ref 0.99		 Ref 0.98[0.89-1.06]
Community level							
Province Western Cape Eastern Cape Northern Cape Free State KwaZulu Natal North West Gauteng Mpumalanga Limpopo Outside RSA						 Ref 0.95 0.92 0.86 0.81*** 0.90 0.78*** 0.78 0.76*** 0.68	 Ref 1.05 [0.88-1.25] 0.95[0.80-1.13] 0.99 [0.80-1.22] 0.88 [0.74-1.05] 1.01 [0.82-1.23] 0.88 [0.73-1.06] 0.88[0.72-1.09] 0.86 [0.70-1.06] 0.75 [0.47-1.19]
Place of residence Rural Urban						 Ref 1.00	 Ref 1.01[0.94-1.09]
Community domestic violence Low High						 Ref 0.97	 Ref 0.97 [0.88-1.08]
Community violence Low High						 Ref 1.17***	 Ref 1.16*** [1.04-1.28]

Community drug or alcohol abuse Low High						Ref 0.99	Ref 0.98 [0.89-1.08]
Crime in the neighbourhood Low High						Ref 1.01	Ref 1.03[0.93-1.14]
Community unemployment Low High						Ref 1.01	Ref 1.06 [0.96-1.17]
Community education Low High						Ref 1.05	Ref 0.98 [0.88-1.08]
Community Poverty Low High						Ref 0.96	Ref 0.95 [0.85-1.07]
Community residential instability Low High						Ref 0.98	Ref 0.97 [0.90-1.05]
Level of urbanization Low High						Ref 1.07	Ref 1.07 [0.99-1.16]

Community social cohesion Low High						Ref 1.06	Ref 1.06[0.96-1.18]
Family change#Child maintenance No change Became married Living with partner Divorced Multiple changes							Ref 0.80 1.34 3.28 0.59
Intercept Random Intercept	-1.314	0.258(0.007)***	0.271(0.006)***	0.320(0.03)***	0.258(0.016)***	0.282(0.020)***	0.311(0.051)***
Variance (SE) ICC(%) PCV (%) AIC BIC	0.038(0.030)*** 1.13 Ref 19267.4119283.07	0.193(0.030) 1.12 2.63 19264.06 19334.53	0.193(0.030)*** 1.12 2.63 19261.84 19285.33	0.166(0.033) 0.83 26.32 19225.2 19444.45	0.194(0.030)*** 1.13 2.63 19272.96 19327.78	0.141(0.036)** 0.60 47.37 19267.83 19440.1	0.127(0.039)** 0.49 55.26 19241.04 19718.7

SE=Standard Error, ICC= intraclass correlation coefficient, PCV = Proportional change in variance, AIC=Akaike information criterion, BIC = Bayesian information criterion, ****p<0.01, **p<0.05* **Source:** Author's calculations

7.4 Qualitative findings

The quantitative results show that when men changed to being married it reduced their likelihood of experiencing depressive symptoms compared to men who did not go through any change across the five waves. Men who change to living alone were more likely to experience both mental health outcomes compared to those who continued not staying alone. Men who changed to cohabiting were more likely to experience depressive symptoms compared to those who did not change. Paying child maintenance was associated with a lower likelihood of experiencing psychiatric/psychological disorders. The qualitative findings give a detailed explanation of the quantitative findings as men shared their experiences on the different forms of family change, they experienced and how child maintenance affected their emotional wellbeing. From the men's narratives child maintenance is viewed as a complex issue which has put them into various health problems whether they were paying or not the child maintenance.

The narratives of the men show that going through a family change is not as stressful as dealing with child maintenance issues. According to the men family change is an inevitable part of life that one goes through. The divorced men felt that they had no choice but to end the marriage because of various problems they were experiencing. Cohabiting was seen as a means to an end an easier way to start a family considering the economic challenges that the men experienced. This made it difficult for them to raise money to marry therefore living with a partner without paying lobola was a way out. However, some of the men considered marrying their partners when they are financially stable. The narratives of the men show that child maintenance issues affected them as explained how they are denied access to their children and custody. The qualitative findings are an interrogation of the quantitative findings in pursuit to provide explanations to the results.

The qualitative findings show that it is different issues surrounding child maintenance that have affected men's emotional wellbeing. This includes being denied access to the children, not being able to pay child maintenance, not being involved on decisions on how the money is used, the inequalities in treatment by maintenance courts that exists between women and men, mothers having custody rights and not being part of their children's lives. The men stress was linked to knowing that they are only financial fathers and that there is nothing more they could do to be part of their children since their ex-partners were decision makers. The below sub-sections show how men are affected by complexities surrounding child maintenance:

7.4.1 No one knows if children benefit

The uncertainties that the men had on whether their children were benefitting from the child maintenance affected them. The men's narratives made it clear that they were unsure whether the money they paid for their children was helping them, especially for those who were not in their custody. In this study, when men have custody, it indicates that their paternal relatives, not themselves, are raising the children. Nearly all the fathers found it difficult to pay child maintenance for children who were not in their custody. The fathers believed that the payments might not be utilised in a way that would benefit their children. Some men thought that the money may be spent with other men instead of being used for their children's needs especially in cases where their ex-partners enter new relationships. This is pointed out by Andrew when he said:

Even now, I am not feeling alright, even when I am working, I am not able to send money to my child because it will go through the mother which means that this other man will use the money (Participant 12, Andrew).

They stated that neither a breakdown of the money's utilization nor any supporting documentation exists. From their narratives, there is a need to be informed on how the money has been used. However, some men particularly those who had older children knew that their children benefitted from the money because they communicated with the children over the phone through WhatsApp.

Men whose children lived with their paternal family were certain that their children are benefiting from the money they sent. They were certain that the money provided would be used carefully to benefit the child and that their children would be well cared for. Some of the men stated that the money they gave to their mothers was little, but they observed that their children received all the necessities from their grandmothers. The men believed that if their children were being taken care of by their maternal family they would not benefit in the same way as they would by their paternal family because the children will be treated like family and are well taken care of.

Some of the men’s concerns that the money they were sending was not helping the children might have been true. Mncedisi explained how he got suspicious when the mother of the child told him that the money, he sends is for personal expenses to replace the personal money she

would have used to cater for the child's needs. The father once saw the child's lack of decent clothing when the mother brought him to him. He consequently realized that his doubts were founded because of this. However, as children need more than just clothes, this could hardly be used to conclude that the child is not benefiting. This is also illustrated in literature, where some fathers saw that their children lacked adequate clothing and wore old shoes to school and had to buy them even though they were paying child support (Natalier & Hewitt, 2010).

Yes, I have those thoughts, someday she told me the time I was sending money to her the money is hers, not the child because she would have used her money already to cater for the child's needs and also used the child support grant. That's when I realised this money, I am sending her she is taking the money to do her own things which are not good. I used to give her money monthly but then the time she brought the baby to me, the child didn't even have clothes, and that's when I started to buy clothes for my child (Participant 5, Norman).

7.4.2 Fatherhood role being undermined

The fathers who did not pay child maintenance believed they had failed as fathers to their children. The main reasons for not paying child maintenance were unemployment most of the men lost their jobs during the COVID-19 pandemic. Unemployment rendered men weak in the face of their ex-partners and current partners. Losing jobs stripped them off the role of being a father. Not having a job meant that they could not pay for child maintenance. Failure to pay came with restricted access to the child. The men felt less of a man because of not having an income, failing to provide for their current children and those from previous relationships. They were shouted at by their ex-partners for not providing for the children. According to their ex-partners not working was not being serious in job hunting.

Men who denied the pregnancy and later wanted to pay maintenance were not allowed to do so by the *baby mamas*[4] because the children were being taken care of by their current partners. Not paying child maintenance was a constant reminder that they cannot be referred to as responsible fathers. According to the men's narratives, being a parent entails being able to support the children financially and socially. The men were quite aware that some of them can have many children and fail to support them without being affected but for some men, not being able to provide for their children bothered them. They believed that when they fail to provide

[4] A woman who is not a man's wife or present partner, but who is the mother of one or more of his children.

for their children, they lose respect. Mxolisi said: *If your child is raised by another man, it makes you lose dignity, it makes you lose respect.* Some men felt ashamed of not providing for their children as they thought their neglected children would not look after them when they are old. Men who lived alone and once denied the paternity of the child regretted the failure to raise their children and imagined that they would not be living alone if they had taken care of their children. John uttered:

Even when I'm sick or I fall in the house, no one will see me because I stay alone. I always think of how life would be better if I lived with my son (Participant 2, John)

Some men have found that their inability to pay child maintenance is always used against them. They are sometimes reminded of how they can be helpful to others, yet they are neglecting to properly raise their own children. For instance, some men are reminded of how they are unable to support their children when their present partners ask for something and they are unable to help. John explains how a woman he once dated told him this: *"What will you do for me, you are failing to financially support your child?"*

According to the men's narratives, paying child maintenance did not guarantee them receiving access always to their children. In circumstances where their ex-partners were in new relationships, the men avoided directly contacting them. Instead they asked their family members, particularly their mothers to request for permission to see the child. An attempt to contact their ex-partners regarding the child would appear as though they were trying to interfere with or disturb their relationship. They did not want their *baby mamas* to also interfere in their relationship in the same way. Siyabonga, for instance, describes how his mother assists him when he requests to see his son:

Month end when I go home, my mother calls them because I do not want to cause trouble in their marriage… they do not have a problem with the child coming to visit me (Participant 8, Siyabonga)

For some men, the fact that their child was given another man's surname while they were still alive disqualified them from being a father to their children. Children born by *baby mamas* whose pregnancy was denied by their ex-partners later assumed the surnames of the current

partners of their mothers. One of the participants felt that he was being undermined by this act saying:

…where does he take the power to change my child's surname to his? They did not ask me about it. I want his surname to be changed to mine, the name can stay as it is because the child is used to being called by it. (Participant 2, John)

John was adamant that once he was financially secure and, in a position to hire attorneys, he would change his son's last name. He was not bothered that the child could also have gotten used to being referred to by the stepfather's surname. He only saw that if his son's first name changes, his son will be impacted. According to him, only the son's initial name—not his last name—can affect him when changed. This could be a misjudgment because the 15-year-old son has been using his stepfather's surname for a long time. As a teenager, it could take him time to adjust to using a surname of a father whom he never knew in his childhood.

According to the men's narratives, children can only recognize or value things they can physically see. If you are not present where they reside, it means you are absent from their lives and do not care about them. From men's narratives, the children would only remember the things that they would have done for them when they visited them or when the children visited them. This makes it vital for the fathers to keep physical contact with the children so that they remember that their father cared for them. However, physical contact is difficult because some of the children live in different provinces from that of their fathers. Simon described how his daughter will not recognise his efforts in raising her:

I think it is a win or a loss …because she is not being told that I send money. When she is old she will say as my father you did nothing for me but you supported those that you are staying with, they are the ones you were providing for and you did nothing for me (Participant 1, Simon)

According to the men's narratives, they do not have control over their children since they are treated or seen as outsiders in their life. The results show that they are excluded and merely watch their children's lives from a distance without intervening to influence them. Some of the men seem to have accepted being financial fathers where their role is solely that of sending money to the children. This acceptance was because they had no choice. After all, where would

they report such and be attended to? According to the men, this was part of the package of ending a relationship with *baby mama* that they were forced to accept and live with. However, some still voice their concerns about wanting to be involved in the lives of their children. One of the reasons given for not having control over their children is that they do not live with them. It is challenging for them to travel and see their children because of work responsibilities. In the end, the children develop a stronger bond with their mother than with their father. Some of the men provided personal examples to illustrate the effects of growing up without a father. Like Jason, he was raised without a father and was sometimes reminded by his maternal grandfather that his father was not providing for his needs. Such incidents serve as a reminder to him that his daughter is also being told by another person that he does not care about her. William also shared his experiences on how he is not able to monitor his son or know what is happening in his life since the son stays with his mother and stepfather. As a result, he felt left out and does not have control over his son. All he does is ensure that he provides for him financially. He said: "…*the man who is in control is the new father who is staying with him, so I feel left out".*

On how their children should be raised, the men had no say. Even if they wished they could, they stated that it was not possible, claiming that the obligation rests with people who have custody of the child, since it takes only a strong woman to communicate with the biological father about what is happening in his children's life after their relationship has ended. Their ex-partners did not expect them to take on additional responsibilities for the children except for paying child maintenance. The majority of the fathers were not aware of their children's development. They felt helpless because they were not informed about what was going on in their children's life. They felt cut off from their children's life and powerless to decide where the children should attend school or how they should be raised.

Men who had children in their care who were living with their paternal grandparents said that they do have some control over them. However, the control was limited since they do not live with the children. They also said they were free to advise the grandparents on how to handle the child if they misbehaved. But for them, the grandparents knew better how to deal with their children since they had also raised them. The men's narrative makes it evident that fathers who had their children living with paternal families thought they had some sort of influence over them. They seem not to worry about how their children are being raised because they believe that their grandmothers would raise their children better than *baby mamas*.

The fatherhood role was also being undermined by the men's current partners who were not tolerating them playing their fatherhood role. When the men communicated with their children they were accused of cheating. Some men were not allowed to live or stay with their children by their current partners, yet the current partners were staying with their own children from the previous relationship. These children were being taken care of by the stepfather, yet the men were not allowed to stay with their children.

From the above narratives of men on how their fatherhood role was being undermined. It was clear that accepting such was difficult for them but they had to pretend as if they are not aware that they are completely being eliminated from the lives of their children. Going through such encounters made men look back and try to think where they went wrong yet ending relationships with their ex-partners seemed to be the only viable way of addressing the challenges they experienced. However, having their fatherhood role being undermined left the men helpless with most of them struggling to cope with living a separate life away from their children. This was worse for fathers who once lived with their children. The men were distressed and worried that one day they will just have a heart attack or stroke because they have been carrying the burden for a long time. They had to pretend in their current relationships and marriage that all is well but deep down they were hurting. Men who were single and never had other children seemed to be emotionally drained and tried to find ways they can be granted access to their children. This clearly shows that men's mental wellbeing is at risk as they live with the pain of being fathers to children, they cannot perform fatherhood roles.

7.4.3 To be a real father one should live with his children

It is evident from the narratives that men want to be present in their children's lives and involved in their lives. According to the men, they can only be their children's fathers if they live with them. Most of the men said that if they could stay with their children from past relationships, it would make their lives better. The men emphasized that they are unable to stay with children from their past relationships due to uncontrollable circumstances. The narratives emphasized that having custody of the children is a requirement for being a man and a parent. They were distressed to learn that although they were still alive, they could not live with their children. The participants talked about how staying together will allow them to make up for the time they have been absent from their children's lives by spending more time with them. Some said

they would do their best and the children would see how much their father love them just like their mother. John, for instance, said the following:
Yes, because I am not late. If he is 15, I can cover up from the day he was born up until today. I would do whatever it takes for him to forget that I was once absent in his life. I have to win him from his mother and the other man so that when they need him back he might refuse to say he wants to stay with me. (Participant 2, John)

Such feelings reveal how some men felt about the children they did not have custody of. The men thought that to win the children they should always be there for them. The stories tend to paint them as desperate fathers willing to do anything to get their children's attention in order to make up for the missed time. Most of the men understood how important it was to raise their children. The men wanted to make sure their children went to school because they would struggle in life without education. They also expressed fear about what would happen to them if they passed away leaving behind children who were not educated as this will affect them in getting better jobs. The fathers seemed to be concerned about the well-being of their children even after themselves are no longer alive. Andrew demonstrates this:

… if your child did not go to school, where will he work, what if you die and there is no money for him to live by what will they do, what will happen to them? (Participant 12, Andrew)

When a father is present in their children's lives, they emphasized this, the children will succeed in school because they will be encouraging them and warning them that they will suffer if they do not take school seriously. One benefit of living with the children was being able to immediately spot when they were misbehaving and discipline them. Others noted that children are smart and will strive to avoid certain behaviours if they know their father does not like them to win their dad over. This happened when the father and the children had a good relationship. In circumstances where fathers do not treat their children well and always reprimand them, it results in children fearing their fathers. The fathers were aware of the behaviours that can frighten their children.

Most of the interviewed men did not want to be financial fathers only; they also wanted to stay with their children and be part of their lives as they grow up. To the men, financial support was one of the roles they should play alongside others. The *baby mamas*, however, give the impression that the men's only responsibility is to help financially, but men felt they need to be

allowed to do more than this. These results are comparable to research conducted in Guyana, which discovered that fathers who paid child support also wanted to build relationships with and spend time with their kids (Henry, 2015). According to the men one cannot buy a father's love by sending money to the children because money cannot replace the role that they should play in loving their children. Additionally, a study by Khunou (2006) showed that fathers desired to be involved in their children's upbringing, including choosing the schools, subjects, and extracurricular activities the kids took part in. It is evident from the narratives that spending time with their children helped them become real fathers. They admired or appreciated other men when they see them spending time with their children. Such incidences serve as a reminder to them that their children who are not in their custody could benefit from them doing the same. The fathers in this study desired to participate in their children's lives and to be seen taking them on outings and enjoying themselves. This was evident when David said the following:

When I go to a restaurant and find a woman and a man sitting with their child or a man sitting with a child it will always remind me that I could be doing the same with my son. I always picture myself with my son in such places (Participant 24, David)

The men explained why they could not stay with their children. The end of their relationship with the child's mother was the major one. Some thought that if they pay damages they might be allowed to live with their children. However, raising money to pay the damages was challenging because they also had to support their current households and the children from their previous relationships. Some men's current spouses were unwilling to let them live with their children from the previous relationships, particularly when the men were already married, and when the child was conceived outside of marriage. The men's current partners did not prefer to live with their children if they were old especially teenagers. One of the participants said that his wife might act as though she is fine with them living together, but she might not really be. According to Simon, this intolerance could be because of cultural differences because some women in her situation raise children which are not their own but those of their spouse. Such thoughts made some men think that their children were better off living with their maternal relatives and can visit them when time permits.

The notions of being a real father that the men had could not be fulfilled due to their ex-partners not cooperating in making coparenting successful by involving fathers in decisions concerning the child. The fathers envisaged that their children could do well in school and in life if they

are given an opportunity to be part of their lives. It stressed them to know that they cannot live with their children. They did not want to be counted as fathers through only contributing financially. They wanted to have a relationship with their children and watch them grow up. Seeing other fathers with their children was a constant reminder of what they are missing that is being a part of their children's lives. Knowing that being granted custody can never happen put the men in continuous distress as they are forced to live knowing that their children will grow up in their absence which was against their will. Such thoughts evoked feelings of being a failure and powerlessness which go against the expected masculine traits of men. This saw men having health problems such as high blood pressure with some men admitting that at one point, they were advised by health practitioners to stop stressing a lot as it was affecting their health.

7.4.4 Child maintenance complexities Suppress men's dominance

Men naturally seek to control and dominate women. Their accounts, however, demonstrate that they use a different strategy from the domineering behaviour for which they are known. The men claimed that, in most situations, they simply accept what their ex-partners say in order to avoid arguments and being denied access to the children. The men were quite aware that children are used by their ex-partners to fight the unfished issues. Most of the men paid maintenance to avoid being taken to the maintenance court. Benjamin said: "*I send every month because I am afraid of being taken to court for maintenance, so I make sure that I send every month".*

Some of the men expressed discontent with their circumstances because they are not even valued by the family to whom they will be providing money for their children's maintenance. One of the men said that whatever their ex-partners say happens. After all, they need to avoid having drama with *baby mamas*, because they can be stubborn and cause a scene at their workplace. Therefore, to avoid such, they ensure that they tolerate them so that no additional tension happens. For most men, their ex-partners view the payment of child maintenance as a must, even if they do not have money or if they experience death in the family. The men were expected to contribute money for child maintenance even if they became unemployed. Tshepo described that *baby mamas* are not tolerant; all they need is payment. This is demonstrated when he says:

The problem is they do not want to know; they only want money. They are like debit orders …even if there is a sickness or funeral at home, they want a payment done. Even if you lose your job, you should send it anyway (Participant 7, Tshepo).

Some men were not afraid of being taken to maintenance courts because they knew that because they were unemployed the court will also listen to their side of the story. Others felt that if taken to court the amount they are paying will be reduced because they are paying more. One can infer from the narratives that men believe paying regulated child maintenance will be more expensive than what they are already paying on an informal basis for the child. Jason, for instance, said he was worried about going to court since he still provides for his current family by paying for rent, food, and transportation. He expresses this saying, *"I am afraid… In the end I don't have anything left*". Based on the narratives, the fact that women are supported at the maintenance court made men not have power. Boitumelo explains how it is so:

…she knows that once we go to the court, she will win, and they will support her…that is why we do not have power. We might talk but we do not have the power to be shown how the money is being used. (Participant 23, Boitumelo)

Men are thought to be tough, but this study demonstrates how fear of their ex-partners regarding child maintenance concerns makes them weak. By publicly agreeing to support the child, they retain the power to decide what they believe would be sufficient to raise the child without having the maintenance court make that decision for them.

From the men's narratives, it seems being excluded and not given any update about the children made them lose power. The exclusion was a weapon used by their ex-partners and this rendered men weak. Those who were married or in a relationship have power over their current partners and the children they reside with. Some men feared seeking access to their children when they were not paying child maintenance. If they had denied paternity of the child or to marry their ex-partner, it became difficult to seek access to the child. In these circumstances, the fathers decided to seek legal intervention to be permitted access to their children. John stated his reluctance to speak with his child's mother, saying:

The way my family hurt her family, there is a lot, I am even scared. Some accusations which were made were not taken well, it was painful for them, and now that I want to see the child, they will tell me that I am opening old wounds (Participant 2, John)

The suppression of men by their ex-partners made most of them voiceless. This put them at a position were they slowly accepted their fate that they cannot control or argue with their ex-partners over children because at the end the men would suffer. They tried to be careful not to fight or to be controlling when communicating with their ex-partners. It seems their ex-partners had overpowered them and showed them that they are the sole decision makers on anything that involves the children. According to the men the end of their relationship with their ex-partners seem also to be the end of their role in making decisions concerning the children. They tried to retain their power by continuing to pay child maintenance informally outside court arrangements because they felt being taken to court will make them pay more. Having to deal with being reduced and controlled by their ex-partners was something men were forced to tolerate which was affecting them. They knew without doing so they will face restrictions when they want to access their children. Being submissive goes against the masculine nature of men which are characterized with domination, controlling and power. This portrayed them as weak but they had to internal accept it for the sake of peace and their children. Being ridiculed and reduced put men to distress thinking that they once had control over their partners. However, the dominating nature of men is portrayed by some men who did not fear being taken to maintenance courts this was particularly among unemployed men who knew that they will report that they do not have an income. In such circumstances, the men had their ex-partners tolerating them so that they continue to receive payments they were making while they were employed.

7.4.5 The child maintenance system favours women

The child maintenance system in South Africa favours women, according to most of the men who participated in this study. Most of the men who were interviewed were not paying a regulated kind of child support but believed the maintenance system in South Africa puts the needs of women above their own. According to their narratives, in the eyes of the law, men are invariably wrong, and women are always the victims. In general, according to the men, South African law does not support men in the same way that it does women. These inequalities by the law according to the men have created a situation in that women will continue to be abused by men as they feel that to address these inequalities created by the law they should use violence. The men brought up the fact that women have access to a wide variety of organizations whereas men have none. As mentioned in the previous section, these differences were attributed to the continuing abuse of women based on their gender. This was expressed by one of the participants when he asked: *"Would there be men who beat women every day or*

kill them if there were groups that could help men?" The men suggested that to lessen violence against women, the country should establish more organizations that address the issues that men face and support their emotional wellbeing. Particularly organizations that are willing to represent them so that they have custody of their children in circumstances where they are no longer with the mother of their children. They said they would gladly attend organizations that focus on men's issues. This is shown when Philip said: *if there could be organizations that deal with men for example 'real men foundation', 'real man what what' but they're not there.* The men's stories seem to portray a situation in which they are being overlooked yet vulnerable and in need of help. One of the participants said:

South Africa does not have a plan for men…men do not have organizations that help them. If I decide that I want to kill myself right now do you know that I can kill myself right now? If those places were there, I would go there to seek help (Participant 2, John)

Men view the maintenance system as supporting women and this explains why they always threaten to take men to the court if they fail to pay child maintenance or when they want the amount to be increased. The men seemed not to be aware that if they are dissatisfied with the decisions made about the care of the child, they also have the right to contest child maintenance. The extract below illustrates how men are not aware of their rights as fathers:

So, if we have problems with maintenance why don't they allow us to go to the offices and claim that we have a problem here, this woman did this. I have not heard that we can go there and report. It is only women who are permitted to report. (Participant 16, Themba)

Some men were aware that they can also seek help to have custody of the children. Some men went to report to the social workers and their *baby mamas* were phoned being asked to report the local social workers' offices, but they did not report. The men cited that a file of the case was opened but nothing more is being done because the *baby mama* did not report to the social workers. According to the men, if it was them not reporting to the social workers, they would have been arrested. This, therefore, made them feel that the law always supports women. Some men believed that they were oppressed by the maintenance system because women were once marginalized, but now that they are working to empower women, they take advantage of any opportunity to hear their concerns. This is shown below by Ben when he says:

All these years men were on top and now they are uplifting women to be on the same level as men hence we are being oppressed (Participant 14, Ben).

Jabulani responded that men are oppressed by the maintenance system since they are expected to support their families whether they are working or not. As a man, if you do not pay child support, you can be arrested, but if it is a woman who is supposed to and is not paying, that is a different story. The court may be contrite and determine the appropriate approaches to the woman's assistance that are distinct from those for men. Such privileges do not exist for men, according to Jabulani, because they are required to provide by law, which means they must develop a strategy. Some men felt that they were being driven to commit a crime such as robbing people to support their families. It is interesting to note that men are largely aware of the change in how men and women are treated. They are also aware that women were once treated unequal to men and that the focus is on addressing the inequalities.

However, only a few participants felt that the maintenance court treated women and men equally. At the maintenance court the notions that women had about men having to contribute financially to their children were dismissed. The women were also informed that they need to provide for the children. In cases where the women wanted more, they were informed by the court that the men can only contribute what they can afford based on the amount of income they received. It was not the case of the mother just stating what she wants and being granted. The men stated that the court assessed the situation of the men without quickly jumping into deciding how much they should contribute.

Some men, however, held the opinion that the law does not favour women, but they are the ones who are ignorant of their rights. Because they are unaware of their rights, they are sometimes taken advantage of and refused access to their children. When they encounter such difficulties, they are unsure of where to file a complaint. Some men claimed that going to the police station was useless because they will be laughed at. Other fathers accept not having access to their children because they are unaware of how the child maintenance laws operate, for example, not being aware of the laws which they can follow to claim custody of their children. For instance, some men stated that the law makes it clear that in cases where a parent feels that the mother is unfit to raise the child they can report and prove it so that they can be given custody of the children. They also went on to explain that in cases where the mother of the child is deceased, the father as the surviving parent has a right to take full custody of the

children, but these men because of ignorance, in the case of a deceased mother, allow the maternal family taking over the custody of the child. Such views show that some men are aware of the law.

According to the men's narratives, some *baby mamas* are receiving child support grants for children not in their custody. But they do not complain about this, according to the men, the guardian who has custody of the child should be the one to get the child support grant. In some instances, the mothers would buy clothes for their children and send them to the paternal family using the child support grant. The men said they understood the situation of the *baby mamas* that they would be coming from a disadvantaged background and needed the money to buy food for the family. Such matters were not reported but when a man does not work and fails to provide for the child they would be reported.

Some men asserted that having legislation that supports them would be beneficial. This involves merely being permitted to visit their children even when they are unable to provide for them financially due to being unemployed. They said that because they are parents, unemployed women also have the right to see their children. The same holds for men; they too should be given preference when it comes to seeing their children. One of the participants complained that it was unfair that he could only be the child's father when it was convenient for the mother, which is usually when he has paid maintenance. Some men said that they occasionally do not have consistent employment, which has an impact on their ability to pay child support. This implied that, in the view of *baby mamas*, men ceased to be fathers when they were unable to support the child.

7.4.6 Child maintenance issues impact men's mental health

Failure to have access to their children and not being able to contribute to their upkeep makes them feel like they have failed to be responsible fathers. This, therefore, makes them develop suicidal thoughts. Some men believed that getting help was not worthwhile because the issues would always exist. They believed that simply being allowed to see their children would make them less stressed. John, for instance, said:

I can go for counselling, but after counselling, if I see someone with a child it would trigger the same problem…counselling will not help me with anything, it can help me if the case was

that my child has died but if he is alive, I would want to see my child that is all. (Participant 2, John,)

When some of the men stated how it was impacting them to the point where they could not sleep soundly thinking about their life, one could see the emotions and the teary eyes through their narratives. Even worse, some men seemed to suffer from the idea that if they do not care for their children, they will not succeed in life. Based on the narratives of some men, being unable to pay child support was thought to be associated with bad luck. One of the men claimed that he once sought the advice of prophets and *sangomas* (traditional healers) when he was seeking for a job and was informed that he needed to change his son's last name to his. His son was using the surname of the ex-partner's husband. He was told he would never be at peace, and that he would battle throughout his life. The men also believed that the pain of their children could affect their own life and cause them to suffer. This is shown when John said:

...you cannot even live life well because once that child complains that he is suffering while his father is alive…things will not go well for me (Participant 2, John)

Despite these difficulties, several men were reluctant to seek assistance. They refused to seek counselling because they believed that as men, they should keep their problems to themselves. After all, talking about them would not be helpful. Some fathers, particularly those who had been denied access to their children, believed that counselling was unnecessary and that all they wanted was to see their children. They will not feel stressed once they get access to their children. The men's narratives make it evident that they also love their children and want to be there for them. Not being present for their children has an impact on the fathers as much as the children. Men were emotionally impacted by the fact that they could not live with their children it reminded them of their childhood of how they struggled growing up without a father. Knowing that their children were going through the same phase due to events beyond their control had an emotional impact on them. They did not want their children to live the same life as theirs. But when the relationship ended with their ex-partners there is nothing more they could do. When in some months they failed to send money to their children, it stressed them out because to their ex-partners, it looked like they are not willing to take care of their children, yet it was unemployment which made them not able to send their financial contributions. They worried about how their ex-partners would shout at them for failure to pay the monthly child maintenance. The men's ex-partners believed that not having money to send was a sign of

irresponsibility, rudeness and lack of affection for the children. The men's current families suffer since they are unable to support them while they are not working. Philip, for instance, said the following:

I think they complain every time we get to month-end as they want money, when its month end I get stressed about my son ….it affects me emotionally and mentally that am not able to send money….. I am not contributing to my son's upbringing (Participant 11, Philip)

Men who denied taking care of their children and later failed to have other children were the most stressed. The men were emotionally affected and expressed that they were not coping thinking that it could be the only child they were given by God. The failure to contribute to raising the child stressed them out because they felt like they failed to be a father to their only child. This is shown when John said: "*…it is painful and maybe that's the only child that God gave me because all this time I do not have another child…".*

Some of the men said that when they are anxious about child support difficulties, they do not talk about it with their present partners; instead, they turn to prayer and hope for the best. Men claim that because they already have children with their present partners and do not want to bother them with their problems, they cannot discuss child-related issues from previous relationships with them. According to the men, prayer strengthened them so they can handle their life and wait to see what happens next. Others, however, turned to alcohol to help them deal with their issues; it made them intoxicated and made them feel better, but when they were sober, they had to face reality.

Some men confided in their existing spouses about the issues they were having. They would inform them of the challenges they are facing in getting custody of their children and the fact that they are not making maintenance payments. However, their past was used against them when they had issues with their current spouse. They will be reminded that they are unable to pay child maintenance and that it is not surprising if they are unable to assist them in any way because it is in their character to be irresponsible. For instance, Mpho spoke about his regrets as a man for sharing his life's difficulties with a cohabiting spouse. He underlined how crucial it was for men not to discuss personal life issues with women. He stated:

If you are with a woman you need to be secretive, do not tell a woman about your family's behaviour …. It is wrong, you should keep it as a man because in future when you have a problem, she will use everything you once said against you (Participant 21, Mpho)

At work, some men discussed child maintenance difficulties with their friends. Men in similar situations would typically have these conversations. They talked about how their ex-partners do not give them any feedback on how the money was being utilized. Some of the men, though, preferred to act as though everything was fine rather than discussing the issues. Some men emphasized that they do not have anyone with whom to discuss personal matters:

This is painful because sometimes I need someone to talk to... Sometimes I do not get anyone, and it affects me a lot because I do not have anyone to talk to or one who understands how I feel. (Participant 1, Simon).

When asked if they had somebody with whom they shared their challenges, some individuals gave conflicting answers. Unexpectedly, Simon once thought that talking about his issues with others was not necessary, even though he had previously said that he does so with his coworkers. Later, he acknowledged that there were occasions when it was preferable to keep things private since, even after your issue has been resolved, those individuals would still have a preconceived notion of you, even though you are no longer in that troubling circumstance. Some men needed places or organizations where they could go for help with child maintenance difficulties. Some of the men made it clear that they would rather remain silent and not seek assistance because it is not necessary for men to do so. Some men, however, acknowledged the value of getting help and pointed out that men differ. When questioned why they choose to seek assistance when others were unwilling, they cited their education, claiming that having more knowledge alters how one sees the world. Men believed that there were not enough places for them to go and get help, which produced issues for them and their families because unresolved issues lead to men committing heinous crimes. This was discussed in the excerpt that follows:

…when we are a family and fighting it is easy for me to decide to kill my family and myself. We do not have a place where we can go and get help… (Participant 2, John).

The notion that says men do not cry should not be accepted. Men do cry; in this study, men cried, narrating their accounts of how they knew their children could live a better life when residing with them because they could provide for them. However, not being given a chance to have full custody of their children affected them. These conversations made men cry, mentioning how they knew that they cannot change the situation because the law made it impossible. Some cried when explaining how their male children were being raised in ways that will make them weak when they grow up. They worried of how their sons were being raised in a feminine manner and when they grow up, they will not be able to cope with life challenges. Most of the participants cited that only a father can raise boys to be proper man when they grow up because under their guidance and supervision the boys will be taught on how to be able to survive as a man. They said that not being there in the lives of their boy children means that they will not be able to be independent. When one of the participants explained how his son was being raised his eyes were teary trying to conceal tears rolling down explaining how he does not like how his son was being raised. According to most men the male children raised by *baby mamas* without the help of the fathers they end up being *nyaope*[5] boys taking drugs. To think of such things affected men emotionally some saying that they cannot properly sleep as they stay awake just thinking of what will become of their children. Some said that *baby mamas* would start sending the children to the father when they realize that they are drug addicts they are failing them, yet the children were supposed to be seeing their father at a tender age. An age where the father would help in instilling discipline.

However, in some instances the *baby mamas* requested an increase in the payment of child maintenance if they discover that the father is progressing has bought a car or has a new job. Men who did not provide child upkeep did not enjoy themselves. They were deeply sorry for everything they had done in neglecting their children. At the time of the interview, one of the men had not contributed anything to the child, who was now 15 years old. His emotional health was impacted since he reported having trouble sleeping because of his thoughts about how his child is surviving. Given that the mother of his child had accepted that the father had denied paternity which made her the individual parent of the child. He consoled himself by saying the

[5] It is a drug made from a mixture of low-grade heroin, cannabis products, antiretroviral drugs and other materials (Mthembi et al., 2019). It is predominant in black townships where the users are found in public spaces such as parks, taxi ranks and streets.

mother of the child had a right to deny her access since the person who knows the pain of having a child is the one who carries the child for nine months. But later in the interview, the same man emphasized that he also had a right to see the child, prompting him to think about hiring attorneys if he succeeds in his claim of unfair dismissal at work. The man was looking forward to winning his unfair dismissal at his work so that he could go back to work and raise money to appoint an attorney to represent him in having access to his son.

7.4.5 Women have more places to seek help

The majority of the men's stories revealed that they were unaware of the organizations they could turn to for assistance with problems pertaining to child maintenance or any other matters affecting them specifically as men. Some men stated that they require places where they may vent issues, they have with having access to their children and other difficulties in life. They pointed out that as men they are different. Some men need support and are willing to seek help if platforms are made available to them. On the other hand, some men are reluctant to ask for assistance. Such viewpoints emphasize the need to make crucial decisions without categorically assuming that all men are unwilling to ask for assistance. One of the men, Simon, said that he needed assistance:

I need assistance and direction because this is impacting me. I am looking for someone to counsel me regarding this child, possibly a social worker, so that I can feel at ease. (Participant 1, Simon).

Yes, I can. At the end of the day, venting helps you get rid of everything that is making you anxious, as opposed to keeping it all inside and eventually hanging yourself. I do not want that to happen, so it is better to vent and let everything out. (Participant 3, Siyabonga).

Some men turn to social media sites like WhatsApp to make a status updates expressing their emotions. Because they cannot find anyone to talk to, some men may post status updates on WhatsApp about the things they are going through. In this technologically advanced day, people frequently turn to social media to post about their personal situations. The job that counsellors should play in supporting men is currently being taken over by media platforms like WhatsApp according to the men's narratives. In a sense, posting on WhatsApp was an attempt to convey that the men are not feeling well. This is evident from what Simon said:

This thing affects you because sometimes you even post questionable statuses. Some people will see, and some will not. They would wonder why you like posting such things, yet it will be the things that are affecting you and you cannot tell them. (Participant 1, Simon).

Most of the men were unaware of the organizations that could support them when they have challenges with child maintenance issues. According to their accounts, women had easier access to the organizations than men did. The majority of the men linked the issues that women currently face in the country such as murder and gender-based violence to the government's failure to assist men. In terms of child maintenance, the men believed that the law favored women. Men are always seen as perpetrators rather than victims, and therefore the difficulties they face in relation to child maintenance are not addressed seriously. To address the societal difficulties that men face, including child maintenance as one of them, the government must also pay attention to men. They believed that the government should implement programs that address men's issues in a manner comparable to how they do so for women. The men's silence does not imply that they are not in pain. They emphasized that because men and women are equal, they can do the same things and therefore deserve attention in the same manner as women do. Men and women should be treated equally because, as Lucky noted, both a man and a woman are capable of murder. Women will suffer at the hands of men if this is not done. However, some participants felt that the government support women more because of the historical past which made women unequal to men and therefore, to address the gender inequalities, they are now promoting women than men.

They should run campaigns, particularly in townships, to make people aware of organizations that assist men with child maintenance issues or other social issues. I think it will help (Participant 19, Aviwe).

Some participants felt that the government need to amend the Child Act because it excluded them from being custodians and fathers to their children. The fact that the Child Act states that children below the age of 18 should stay with their mothers is affecting men who want to live with their children after the separation from *baby mamas*. Some men pointed out that the government should see to it that community-wide awareness efforts urging fathers to care for their children are carried out. The campaign to inform fathers of the value of being responsible fathers should include both men who are responsible fathers and those who have not assisted in childrearing. Men should take the initiative by not disputing paternity and acting responsibly

when they have any doubts. They also noted that men could realize the importance of raising their children if such efforts are carried out. Ben, for example, said:

Yes, the government should host talk shows where men may discuss why they do not pay child support and ask questions, as well as have a speaker who encourages men to take care of their children (Participant 14, Ben).

The men cited that the government should focus more on amending the Child Act and ways to include fathers into the lives of their children especially when the relationship with their mothers has ended. The men stated that this notion of absent fathers is created by *baby mamas.* According to the men they are not absent they are available but excluded from their children's lives. They stated that the government and the law in South Africa have given more power to the mothers when it comes to children's custody. As men, they felt that the government should give them a chance to stay with their children because they are able to take care of their children just like mothers do.

Some men appeared to be unaware of what it means to be a responsible and real father. They emphasized that participating in programs that can help men learn how to be responsible fathers would be very beneficial to them since they would learn how to care for their children. Failure to support their children, according to some men, was because of a lack of knowledge of responsible fatherhood. Perhaps this explains why absent fathers are so prevalent in the country. If men could learn, perhaps they would change how they treat their children as fathers. They emphasized that just having children does not automatically imply that a person understands what it is to be a father and having more children would not change that. One of the participants emphasized the importance of teaching men how to be responsible fathers:

I believe these issues of not providing for our children would have not existed once one is taught about being a good father, and how one should live as a man. I would have realized that my child must be supported, clothed, and fed (Participant 17, Vuyani)

However, other men felt that it was their duty as men to make sure that they constantly reminded one another that they needed to support their families, even when they were drinking beer. This could be accomplished by them exchanging ideas on the best ways to raise their children. They suggested having chats about how they should contribute financially to raise

their children while drinking. The same men who brought this up also said that men who refuse to pay child maintenance should be subjected to the full force of the law because it is difficult for women to raise children alone. Men need the government to help them make sure they obtain feedback on how the money they send to their children is being spent. They claimed that it would be better even if they could be given the invoices proving that the money, they contributed was used to buy the children's necessities. Lloyd said:

If the child is attending school, I believe that men should be able to get feedback on how the money was spent, and receipts may even prove that the mother actually bought clothes for the child (Participant 15, Lloyd).

7.5 Summary of the chapter

The chapter presented results on the association between family change and child maintenance effects on men's mental health outcomes. Including the interaction effect in the relationship between family change and child maintenance on men's mental health outcomes. Qualitative findings are also presented. Quantitative results were presented first and the qualitative last. Cohabiting men had a greater likelihood of experiencing depressive symptoms compared to men who did not go through any family change. Men living alone had an increased likelihood of experiencing depressive symptoms and psychiatric or psychological disorders compared to men not living alone. Meanwhile, men who were married had a reduced likelihood of experiencing depressive symptoms than men who did not go through any family change. Men paying child maintenance had a lower likelihood of experiencing psychiatric or psychological disorders. The chapter also indicated that the variations in men's mental health outcomes across the communities were significantly attributed to individual, household and community-level factors. Qualitative findings showed that even men who routinely paid child maintenance had their fatherly responsibilities undermined. This was accomplished by excluding them from decisions about how the funds they sent for the child were spent, keeping them in the dark about the child's progress, and making them strangers in their children's lives. This exclusion affected men as they complained of being distressed. The payment of child maintenance was not stressful what affected them was being denied access and custody issues. Not being able to have a relationship with their children or be involved in their lives and get to know them was emotionally draining affecting their mental well-being.

CHAPTER 8

Discussion, Conclusion and Recommendations

8.1 Introduction

The findings of the study are discussed in this chapter in relation to the existing literature on what is known about the subject under investigation. The results of each objective are reported as well as whether they concur with the body of existing literature. New insights are discussed based on the findings of the study as well as what the findings mean. The study aimed to answer the following research objectives: to identify the prevalence of mental health outcomes among men in South Africa, and to examine the effect of family change and child maintenance on men's mental health outcomes. Quantitative and qualitative findings are discussed simultaneously. The chapter concludes with a discussion of recommendations and frontiers for further research.

8.2 Family changes, child maintenance and mental health outcomes

The main objective of the study was to examine family change and child maintenance effects on men's mental health outcomes in South Africa. The two mental health outcomes which were examined include depressive symptoms and psychiatric or psychological disorders. The quantitative findings indicated that men were more likely to experience both mental health outcomes (depressive symptoms and psychiatric or psychological disorders) when they lived alone. Men who were cohabiting had an increased likelihood of experiencing depressive symptoms compared to men who did not go through any family change. Marriage protected the men from experiencing depressive symptoms. Men who became married were less likely to experience depressive symptoms than men who did not go through any family change. Existing literature has also shown that compared to other marital statuses such as divorce and cohabiting, marriage reduces the likelihood of experiencing depressive symptoms (Grundström et al., 2021; Soulsby & Bennett, 2015). The results also revealed that payment of child maintenance was associated with a reduced likelihood of experiencing psychiatric or psychological disorders in men. The interactions between family change and child maintenance were insignificant, implying that child maintenance does not affect the way family change impacts men's depressive symptoms or psychiatric or psychological disorders. Qualitative findings complement some of the quantitative findings and show a different perspective on some of the quantitative findings. The differing views could be due to the explanatory nature of the qualitative findings in which the narratives of the men demonstrate in detail their experiences on family change and child maintenance on men's mental health.

Men who lived alone experienced depressive symptoms and psychiatric or psychological disorders more than men who were not living alone. This is in line with a study that used the same data as the current study but only focused on adults. The adults who lived alone had higher depression scores compared to those who lived with others (Posel, 2021). A study conducted in the Western Cape province indicated that during the COVID-19 epidemic, loneliness was linked to hopelessness, which increased levels of depression and reduced life satisfaction (Padmanabhanunni & Pretorius, 2021). Despite the study not focusing on living arrangements and being conducted in an unusual context, amid a pandemic, the act of loneliness was associated with depression. The findings are consistent with studies conducted outside the country that link living alone with increased risks for physical and mental health, depression, psychiatric problems, higher levels of stress, and low self-esteem (Lee et al., 2010; Ramos & Wilmoth, 2003). However, those who are socially connected and live alone are less likely to experience depression (Honjo et al., 2018).

The qualitative findings showed that men who were living alone complained of failing to cope and being stressed out due to being denied access to their children from prior relationships. The inability to determine when they get to see their children was a source of stress for the men. According to these men, their ex-partners decided when it was convenient for them to see their children or sometimes block access completely. Consistent with the literature, women control the father's access to the children (Eddy et al., 2013; Khunou, 2006). Access to children after the end of a relationship seems to be a problem that fathers face in different countries (Khunou, 2006; Henry, 2015; Ngubane, 2021; Turner & Waller, 2017; Kruk, 2015; Eddy et al., 2013). Most of the men wanted to live with their children but their ex-partners did not allow it. For some men, living with their children could only be done after they had paid damages. The payment of damages is a common practice in South Africa for men who have impregnated a woman outside marriage (Ngubane, 2021; Padi et al., 2014). Some of the men thought that their life could be better if they were allowed to stay with their children. They were emotionally affected such that they gave an example of how men end up committing suicide or murdering their families because their problems are not being addressed. Such thoughts were common among men who were living alone and never had other children after the one they had from a previous relationship. Such findings have not been documented in empirical research in South Africa. Such information is reported in newspapers and social media platforms in the country where men take their own lives after murdering their children and ex-partners. Literature has shown that most men keep problems to themselves and do not seek mental health assistance

(Chatmon, 2020). This also explains why mental health has been termed a silent killer in men with depression and suicide being the leading cause of death in men (Chatmon, 2020). Quantitative findings indicate that men who underwent the transition to living with a partner (cohabitation) had an increased likelihood of experiencing depressive symptoms, than men who did not go through any change. This is consistent with literature which show that cohabitation is linked to depressive symptoms (Brown, 2000; Brown et al., 2005; LaPierre, 2009; Schmeer & Kroeger, 2011). However, the above studies compare cohabiting men with their married counterparts. This differs from this study which focused on changes men went through; if men transitioned to cohabitation, they were more likely to experience depressive symptoms than men who did not go through any change. Cohabitation is less institutionalized and, the in most instances couples lack commitment compared to married couples and there is high relationship insecurity (Amato, 2014). Some cohabitation arrangements are less stable than marriages (Amato, 2014; Musick & Michelmore, 2015).

However, some studies indicate that cohabitation and intimate relationships can yield similar benefits as those in marriage contributing to better mental well-being (Musick & Bumpass, 2012; Rapp & Stauder, 2020). Given that cohabitation in certain instances serves as a pathway to marriage. In South Africa, cohabitation has gained prominence in urban areas due to economic conditions, with individuals choosing to live with partners as a means of survival. The qualitative findings highlighted mixed opinions. Some cohabiting men had supportive partners who accepted their children from previous relationships. Their source of stress was tied to matters concerning access to and involvement in their children's lives. This is in line with existing literature, which shows higher distress levels among noncustodial fathers in comparison to custodial fathers (Bokker et al., 2006; Stone, 2002). The men noted that they could not be granted custody of the children if their mother was still alive. In South Africa, in circumstances where the mother is alive, the father must prove that the mother is not fit to take care of the child in order to be granted full custody. This can lead to hopelessness among fathers, especially considering that they must prove that the mother is not fit to take care of the child. However, their circumstances differ, men who had support from their current partners and have children with current partners seemed to be less stressed.

Men who became married experienced lower depressive symptoms compared to men who did not experience any change across the five waves. Marriage is linked to better mental well-being compared to other relationship statuses (Sasson & Umberson, 2014; Wadsworth, 2016), such

as being divorced/separated and widowed (Jennings et al., 2022). This is due to the social and financial support structure that couples offer each other (Soulsby & Bennett, 2015). Marriage involves adhering to social norms that guide union formation. Through marriage, spouses are clear of their rights over each other and reduces ambiguity in a relationship (Amato, 2014). This could explain the reduced likelihood among men of experiencing depressive symptoms since being married provides them with an upper hand in decision-making within the family as they are referred to as the head of the family. According to a study conducted in South Africa, men who did not undergo any marital transition and remained divorced/separated, widowed, or never married between the two waves reported, had increased depressive symptoms than men who were consistently married (Jennings et al., 2022).

From the quantitative findings, marriage was associated with a reduced likelihood of men experiencing depressive symptoms However, the qualitative findings showed a contrasting narrative, shedding light on the struggles faced by the majority of married men within the study concerning their emotional wellbeing. The psychological well-being of some non-custodial fathers is lower than that of married men and custodial fathers (Hughes 1989). In this study, the emotional distress experienced by the married men stemmed from their lack of custody over their children from previous relationships or marriages. These findings show the impact of custody absence on the emotional health of fathers, regardless of whether they are married, cohabiting, single or divorced. The study's findings show that lack of custody affected fathers' emotional well-being, surpassing the impact of exclusion from decision-making processes related to parenting. Some men revealed that their current partners withheld support for their children from previous relationships. These men found themselves accused of infidelity or attempting to rekindle ties with their ex-partners whenever communication with their children took place. For some men, communication with the children could only be done through their ex-partners, especially, in cases where children were young and could not own a phone. Some of the married men who used to live with their children were finding it difficult to adapt to seeing their children for a short time. This is consistent with literature which highlights that transitioning from being a fulltime residential father to a part time non-custodial father is difficult (Bokker et al., 2006).

Being divorced was insignificantly associated with depressive symptoms and psychiatric or psychological disorders in men. This is in line with some studies which have shown that being divorced does not contribute to mental health problems. This is true particularly when the

divorce has been initiated willingly by both parties. This could be a result of leaving a toxic marriage. However, some studies have shown that the transition from being married to divorced is associated with men's mental health problems because men obtain the purpose and value of life in families (Affleck et al., 2018) and when they experience divorce, it impacts their psychological well-being as well as social, economic and domestic life (Leopold, 2018; Mnyango & Alpaslan, 2018; Steiner et al., 2015), and in the process affecting their mental health (Rotermann, 2007). For men, the dissolution of a marriage can entails the loss of the social support and children which in turn affects their mental health (Affleck et al., 2018).

Qualitative findings show that men who were divorced were facing exclusion regarding decisions on how their children should be raised, thereby undermining their fatherhood role. These men were only required to make financial contributions. The undermining of this social role affected their mental health. Divorced noncustodial fathers took longer to adjust compared to their divorced custodial counterparts (Bokker et al., 2006). This highlight how important it is for fathers to have custody of their children. The men were clear on how it is not only the father-child relationship that suffers; they also suffered as they struggled to cope with the exclusion from their children's lives. This experience is in line with the existing literature on child maintenance, where non-custodial fathers face challenges in maintaining to access their children (Ngubane, 2021; Khunou, 2006). Despite the common portrayal of men as resilient, the present study revealed a contrasting reality—these men were not coping; their desire was to be granted full custody of their children (Ngubane, 2021; Khunou, 2006). This could stem from societal expectations that men display strength, as emotional vulnerability can be seen as undermining their ego or going against their perceived masculine nature (Chatmon, 2020).

However, findings in this study show that some men could not sleep due to persistent thoughts about their children. This was particularly common for men who had not fathered children after the end of their previous relationship. Their aspirations were to be granted an opportunity to reside with their children. Such aspirations are common among non-resident fathers who are separated from the mothers of their children (Henry, 2015; Natalier & Hewitt, 2010; Ngubane, 2021). As described in Khunou's (2006) study, these fathers yearned to be active in their children's lives, creating memories and assisting them with their homework. In this study, lack of custody made these men aware of how their male children were being raised in a feminine manner rather than being independent. However, those fathers with grown-up children pursuing higher education were coping since their children would visit them and communicate

always. This is consistent with literature which indicates increased communication between divorced fathers and their older children. The only issue they faced was establishing new commitments, resulting in them living alone and engaging in dating but without a solid plan for remarriage.

Men who paid child maintenance were less likely to experience psychiatric or psychological disorders than men who were not paying child maintenance. This could be attributed to the sense of self-fulfilment that arises from their capability to provide for their children's well-being. Also, adhering to child maintenance payments facilitate men's access to their children from their previous relationships. This aspect is closely linked with notions of masculinity, where men derive a sense of contribution to their children's upbringing by fulfilling financial responsibilities. These findings are in support of literature which shows that child support or maintenance is linked to men's mental health problems particularly when the men fail to fulfil their child support obligations (Anderson et al., 2005). The failure to pay child maintenance jeopardizes fathers' involvement with their children, leading to denied access and interaction (Turner & Waller, 2017). Being denied access makes it difficult for the fathers to maintain close relationships with their children thereby negatively affecting their emotional well-being (Anderson et al., 2005). This puts the fathers at an increased risk of mental health problems, particularly depression (DeKlyen et al., 2006).

However, the qualitative findings were different as the narratives of men showed that the inability to pay child maintenance impacted their mental health as they described themselves as depressed and distressed. When the men failed to pay maintenance, the fatherhood role ceased to exist, and they could not do anything about it. It seems being a father is not a fixed role as it changes subject to the dissolution of the relationship and failure to pay child maintenance. This is also in support of literature which shows that a father's parental status and authority are terminated when he is unable to support his children financially (Chauke & Khunou, 2014; Ngubane, 2021). The notions of masculinity argue that being strong and dominant is one of the features of being a man. The findings of the study reveal that men are emotional and do have their weakest points. The men were emotional when they failed to send money for their children.

The qualitative findings showed that the inability to pay child maintenance impacted men's mental health as they described themselves as depressed and distressed. When the men failed

to pay maintenance, the fatherhood role ceased to exist, and they could not do anything about it. The concept of fatherhood appeared to be a fluid construct dependent on the survival of the relationship and the ability to fulfil payment of child maintenance. This is also in support of literature which shows that a father's parental status and authority are compromised when he is unable to financially support his children (Chauke & Khunou, 2014; Ngubane, 2021). The notions of masculinity state that strength and dominance are intrinsic attributes of being a man. However, the study's findings reveal that men are equally susceptible to emotional vulnerabilities and have their weakest points. This was particularly pronounced when the men found themselves unable to provide monetary support for their children.

The quantitative findings show that payment of child maintenance was not associated with depressive symptoms in men. However, the qualitative findings provide a detailed view of how men's mental health was affected. Child maintenance is perceived as an unequal system that undermines men and their fatherhood role, as the maintenance system appears to prioritize their financial contribution. Their ex-partners were only concerned with the monthly payment for child maintenance. This is also supported by literature, which shows that when relationships end with the mother of their children, it also led to the undermining of their fatherhood role (Kruk, 2015; Natalier & Hewitt, 2010). The role of fathers as economic contributors is shown when their presence within their children's lives yields positive outcomes, including improved access to resources, protection and increased household expenditure (Richter & Morrell, 2006).

However, in this study, fathers desired a more encompassing role in their children's lives; a role that involved shaping behaviours, providing guidance, discipline, and nurturing to foster success in school. This fatherhood role is also shown in Ngubane's (2021) study, where non-residential fathers expressed the desire to do non-financial roles such as providing guidance and discipline to their children at a tender age, thereby instilling values of respect. These fathers wanted involvement that extended beyond the financial provision (Sikweyiya et al., 2017). There is evidence that the involvement of fathers in their children's lives benefits the children. The proximity of biological fathers during their children's formative years is associated with improved school performance and a reduction in behavioural issues (King, 2006; Lamb, 2010; Manning & Lamb, 2003). When men were not able to play their fatherhood role, they were devasted citing that they have lost hope that they will be able to be involved in co-parenting. It was painful for the men to know that they could do better as fathers but were denied the chance to do so. Such notions left men distressed and wishing their children would understand the

difficulties they went through when they are older. The qualitative findings provide an understanding of how men's emotional well-being is tied to their perceived role in their children's lives, shedding light on the emotional experiences when this role is compromised.

The findings show that the men desired to live with their children. Such aspirations are common among non-resident fathers who are separated from the mothers of their children (Henry, 2015; Natalier & Hewitt, 2010; Ngubane, 2021). As described in Khunou's (2006) study, fathers wanted to reside with their children, to partake in memory building moments, and to actively engage in their children's education by assisting with homework. In this study, failure to have custody exposes how some men perceive their male children as being raised on feminine values, causing them to question their children's development into independent men. In Ngubane's (2021) study, the non-resident fathers believed that sharing a living space with their children could strengthen their relationships and facilitate fatherly responsibilities. However, this social role receives less attention, since the nurturing responsibilities are predominantly left to mothers rather than fathers (Roberts et al., 2014). Children benefit from having their fathers supporting them both financially and socially which in turn contributes to their cognitive development and emotional well-being (Richter, 2006). When their social role is undermined, some men ended up being depressed and susceptible to other chronic illnesses such as high blood pressure. This is in support of literature which shows that fathers who participate in their children's lives tend to experience better health outcomes, including reduced depression levels and increased life satisfaction compared to those who are not (Chan et al., 2017).

The findings from the current study show that men are also emotional beings whose wellbeing is affected by the challenges they face in dealing with child maintenance complexities. What affected them more is the thought that they cannot do anything to change the situation as they are not treated equally by the law. This is in support of the literature, which asserts that existing laws and policies disadvantage fathers, leading to situations where full custody of the child is given to the mother (Khunou, 2008). The Act still does not grant unmarried fathers the same rights as the mothers, instead prioritise the father's role in providing financial support. This discrepancy explains why there has been a suggestion advocating for social workers to educate communities about these disparities in parenting and work with them to advocate for family-friendly legislation. This initiative would address the persistently pressing issue of absent fathers as a paramount concern within the country (Seepamore, 2016).

Contrary to the expected findings, the quantitative findings showed that the interaction effects between family change and child maintenance on men's mental health outcomes were statistically insignificant. Going through a family change while simultaneously fulfilling child maintenance payment was not associated with mental health outcomes. However, the qualitative findings showed that men who became divorced, married, living alone and paying child maintenance were stressed. Some were even suffering from high blood pressure due to complexities surrounding child maintenance. Within this context, the desire of men to attain custody of their children post-marriage dissolution emerged as a complex struggle. Mothers in most instances are the preferred custodians, shown when it is said "ngwana ke wa Mme" meaning that the child belongs to the mother. There seems to be a universal practice that mothers are the best custodians compared to fathers (Ngubane, 2021; Natalier & Hewitt, 2010; Khunou, 2006). The men's circumstances also made it impossible to live with their children, due to non-acceptance from their current partners. This differs from existing studies, which only show that the men could not live with their children from previous relationships due to the men's poor relations with their ex-partners (Ngubane, 2021; Khunou, 2006).

In this study, for the well-being of the child, some men acknowledged that it might be preferable for the children to stay with their mothers (ex-partners) or their maternal grandparents, as their present partners were not willing to reside with the children. Literature has shown instances where new partners accept children from their partner's previous relationships (Cartwright & Gibson, 2013), but in this study, the situation was different leaving men with no choice of dealing with such issues. From the men's narratives, it seems both current and ex-partners were contributing to their poor emotional well-being. They referred to both their current partner and ex-partners. Throughout the interviews, some married men were visibly moved, shedding tears as they recounted their struggles. During the interviews, some married men, were shedding tears as they explained their struggles. Their attempts to address their ex-partners' non-adherence to the parental plans were futile. This, therefore, shows that being married yet you have children from a previous relationship and paying child maintenance is not always a protective factor of mental health. The qualitative findings show the importance of investigating further quantitative results to provide a vivid picture or explanation of complex social issues.

The qualitative findings provide a detailed view of the link between child maintenance and parenting dynamics among parents no longer together. The parenting dynamics for men paying

child maintenance are filled with inequalities which men struggle to bear with. A lack of awareness about their children's lives or being excluded from decision-making made them feel powerless. This is consistent with previous studies which have shown that the fathers' powerlessness was linked to the changes in their traditional provider role (Natalier & Hewitt, 2010). Most of the men felt compelled to accept this kind of parenting to avoid further complicating the relationship with their ex-partners. This acceptance seemed a strategy employed to protect their dignity, allowing them to evade being scolded at and belittlement by their ex-partners. But most men explained how this was stressful and reduced their ability to be a father. However, many men voiced how this acquiescence took a toll on their emotional well-being, inducing stress and diminishing their ability to fulfill their fatherly roles. These findings are not novel as they have been found in several studies where non-custodial fathers must live with the pain of being excluded from the lives of their children (Ngubane, 2021; Khunou, 2006).

The findings reveal that men's emotional wellbeing was being affected by the complexities of child maintenance. Most of the men were not seeking help for the emotional strain they were going through. This is in support of literature which shows that when men attempt to share their emotional experience stemming from losing access to their children they are mocked (Kruk, 2015). This explains why some men in the current study were not willing to talk about their experiences with others. Some men stated that when they sought help from the police, they were met with laughter and dismissive attitudes. The police suggested that these men were unable to assert authority over women. This illustrates how societal norms of masculinity expect men to show strength and resist domination or control from women.

Quantitative findings revealed that employment status was insignificantly associated with mental health outcomes. However, the qualitative findings show that unemployed men lost the ability to provide for their children. Being unemployed affected the payment of child maintenance. It also affected their emotional well-being as they were unable to fulfil the role of being a breadwinner which made them feel powerless. The men felt that because of being unemployed, they had lost the power and respect of their ex-partners. For some, the effects of job loss due to the COVID-19 pandemic were still being felt. Unemployment in men renders them weak because work has been associated with a man's self-identity, self-worth and self-esteem (Affleck et al., 2018). Therefore, not working or being unemployed diminishes or affects men's ego and their role to support their families. To be a breadwinner and financially

provide for the family is a deeply embedded masculine identity in most African societies which affects men's involvement with their families when they fail to fulfil the role (Bhana & Nkani, 2014; Hunter, 2006; Morrell, 2006).

The poverty and unemployment experienced by some black South African men have rendered them weak due to their inability to provide financial support for their children (Makusha et al., 2013). These failures damage their sense of identity, masculinity, self-esteem and their ability to fulfil their roles as fathers (Makusha et al., 2013), thereby affecting their mental health. This is consistent with the study's findings as men felt powerless and less of a man due to being unemployed which led to their fatherhood role being undermined. However, this sense of powerlessness was not exclusive to unemployed men. Even those who were employed reported feeling powerless and weak when they communicated with their ex-partners. This was due to how their ex-partners excluded them from parental decision-making and the lives of their children.

The stereotype of the "deadbeat[6] dad," is associated with men who fail to pay child maintenance affected their health. The findings show that as the end of the month approached, these men worried a lot. What stressed them out is the thought that as a father they are failing to provide for their children. The men experienced depressive symptoms such as sleeplessness and tiredness that hindered their ability to engage in daily activities. Cutting ties with the children seemed to stress men who previously lived with their children before separating from their ex-partners. These experiences are consistent with Kruk's (1993) study, which shows that non-custodial fathers are a high-risk group, susceptible to increased level of stress due to the loss of the father-child relationship and parental role, separation from their children's lives, and the constraints of having to adjust to the limited access or visiting relationship. This contributes to non-custodial fathers suffering from mental health problems, grief, helplessness (Kruk, 2015; Frieman, 2003), depression (Amato, 2000; Kruk, 1993) and feelings of incompetence (Coley & Hernandez, 2006). Separation from their partners exposes them to challenges, which includes parental alienation, allegations of abuse, and conflicts with their ex-partners (Cartwright & Gibson, 2013; Roberts et al., 2014). This leads to disengagement from children.

[6] A term used to refer to fathers who are not willing to contribute to the financial upkeep, yet they can afford to do so.

The men end up facing barriers in trying to maintain the relationship they had with their children.

Men who had primary and secondary education had significantly lower depressive symptoms compared to those with no education. However, this is different from existing studies in the country which have shown that below high school education is associated with increased reports of symptoms of depression compared to those with beyond high school education (Tomita et al., 2015; Williams et al., 2008). Also, an Agincourt study in South Africa indicated that no education, primary education and visible poverty were associated with an increased risk of mental disorders (Havenaar et al., 2008). The findings of this study concur with the Agincourt study as no education is associated with mental health outcomes such as depressive symptoms. However, the Agincourt study does not show the specific mental disorder which is associated with a lack of education. Also, the findings reveal that having secondary education is linked to lower reports of psychiatric or psychological disorders. These findings are inconsistent with literature in South Africa (Tomita et al., 2015; Williams et al., 2008; Thapa et al., 2014; Tomita et al., 2015; Tomlinson et al., 2009). It is important to note that these existing studies are not disaggregated by gender which makes it difficult to distinguish between men and women regarding their depressive symptoms. In this study, men with primary and secondary education might be in a better position to secure employment by their level of education compared to those who completely do not have an education. However, a study in Iran showed that lower levels of education in men are associated with increased reports of poor mental health status (Hassanzadeh et al., 2018). This could be attributed to social and economic limitations linked to lower levels of education which inhibit the ability of men to apply coping strategies when experiencing stressful life events (Noorbala et al., 2012).

The findings of the study show that depressive symptoms are concentrated in young men. Men aged between 28-32 had an increased likelihood of experiencing depressive symptoms than men aged 18-22. This is contrary to existing literature which has shown more depressive symptoms concentrated in older men (Hassanzadeh et al., 2018; McCrone et al., 2008; WHO, 2014). The findings also show that men aged 33-37 and 38-42 years were more likely to experience depressive symptoms than those aged 18-22. This is in support of a study conducted in South Africa in which the prevalence of mental disorders was high among individuals aged between 35-49 years old compared to individuals aged 65 years old (Herman et al., 2009). This could be linked to high unemployment and the high cost of living in the country. At the ages

of 33-42, men are expected to be financially independent, married and have a family which they should be able to provide for. But due to the economic situation in the country, some men reach the age group without having been employed, with those employed failing to accumulate material wealth due to the high cost of living.

Men satisfied with life remained less likely to experience depressive symptoms compared to those who were not satisfied with life. Literature shows that when men have low levels of life satisfaction, they experience depression and anxiety (Beutel et al., 2010). Studies which looked at both men and women reveal that being dissatisfied with life is related to poor mental health outcomes (Gigantesco et al., 2019; Koivumaa-Honkanen et al., 2004). There is a reciprocal association between life satisfaction and mental health problems. A reduction in life satisfaction scores influenced mental health problems while the presence of mental health impacted life satisfaction. In this study, such results could be attributed to men being employed and able to provide for their families since men find satisfaction in being providers of their families.

Surprisingly, the study findings showed that men from households with average income and below-average income were less likely to experience depressive symptoms compared to men from households with above-average income. Such findings are linked to a study conducted in South Africa, however, the study looked at individual income rather than household income. It indicated that individuals who receive a below average income are at a reduced risk of experiencing mental disorders than those with a high income (Herman et al., 2009). However, the study was not disaggregated by gender to show whether it applied to men or women. The findings are also contrary to the literature which has shown that low levels of household income are associated with an increased likelihood of mental disorders (Sareen et al., 2011). Some studies reveal that the relationship between income and mental disorders is two-way; having a low income is associated with an increased risk of depression while having mental health problems such as depression results in increased risks of losing income through expenditure on health care and loss of a job (Lund et al., 2013). However, this study did not examine the impact that mental health outcomes might have on income.

However, men who reside in communities where violence is common are significantly more likely to experience psychiatric or psychological disorders. This could be a result of the fear of being a victim or having been a victim of violence since living in communities with violence

is positively associated with mental health disorders (Miliauskas et al., 2022), such as depressive symptoms (Yan et al., 2022). The neighbourhood conditions can be chronic stressors producing psychological distress in individuals (Matheson et al., 2006).

Depression is geographically clustered in South Africa, with increased cases concentrated in the Eastern region of the country (Cuadros et al., 2019). This could be due to the inequalities within the country, which exposes individuals in various provinces to distinct challenges. For instance, the Eastern Cape province is known for being poor compared to other provinces, and this might explain why there are high cases of depression, as poverty has been linked to mental health disorders (Burns, 2011; Lund et al., 2010). Also, living in neighbourhoods that are deprived results in individuals experiencing more depressive symptoms, even after controlling for individual-level factors (Dowdall et al., 2017). However, in this study men who resided in the Eastern Cape province were insignificantly more likely to experience depressive symptoms and psychiatric or psychological disorders when compared to their counterparts in the Western Cape province. In contrast, men from the Northern Cape and Mpumalanga provinces were significantly less likely to experience depressive symptoms compared to men in the Western Cape province. This was quite surprising considering that the Western Cape province is not known for poverty. However, the province has well-known gang-related criminal activities and unemployment problems which could explain the increased likelihood of depressive symptoms.

Men residing in communities with high crime were significantly more likely to experience depressive symptoms compared to their counterparts in low crime communities. This could be attributed to the fear among men of becoming victims of criminal activities within their communities. These findings are similar to a study conducted in South Africa, which showed that perceived neighbourhood disorders such as crime were linked to depressive symptoms (Tomita et al., 2015). This is consistent with existing literature, which has shown that residing in neighbourhoods characterised by crime is associated with depressive symptoms (Curry et al., 2008). Two pathways underpin the connection between neighbourhood crime and the onset of depressive symptoms: the perceptions of neighbourhood disorder and the firsthand experience of violence within the neighbourhood (Curry et al., 2008). When individuals perceive their neighbourhood to be having physical, social and criminal problems, they are more likely to experience higher levels of stress and depression (Gary et al., 2007). However, men residing in neighbourhoods where crime is very common are less likely to experience

psychiatric or psychological disorders compared to men in neighbourhoods where it is not common or never happens. These findings are contrary to literature, which has shown that living in neighbourhoods with high levels of crime is associated with increased reports of mental disorders.

8.3 Determinants of child maintenance payment

The most contentious component of parenting after a parent's separation is child maintenance, which is crucial for the well-being of children. Child maintenance studies focus on formal payment (Henry, 2015; Khunou, 2006) and do not include the informal payment of child maintenance. This is against the backdrop of men and women making arrangements without including the court in the support of the children (Nepomnyaschy & Garfinkel, 2010; Natalier & Hewitt, 2010). In this study, both formal and informal payment for child maintenance is examined. The quantitative results indicated the characteristics of men who paid child maintenance while the qualitative findings provided an explanation of how men perceived child maintenance. This allowed explaining the quantitative findings.

This study revealed that overall; race, and age, were significantly associated with payment of child maintenance after controlling for the socio-demographic characteristics. In both the unadjusted and adjusted models, the payment of child maintenance remained significantly higher among Indians and whites compared to blacks. These findings are in support of studies in South Africa that have shown that due to poverty and unemployment, black fathers are unable to financially support their children (Van den Berg & Makusha, 2018). Some studies conducted outside South Africa have also shown that black and Hispanic fathers are associated with a lower likelihood of paying child support compared to white non-resident fathers (Huang et al., 2005; Stykes et al., 2013). The failure to support their children has seen most of these poor black South African fathers distancing themselves from their children or completely abandoning them (Hunter, 2006; Ramphele & Richter, 2006). Others are denied access to their children by their ex-partners for failing to financially support the children. However, in some studies, even rich black fathers have been taken to court for failure to pay child maintenance (Khunou, 2006).

Across all the age groups except for the 33-37 age group, the payment of child maintenance was higher than that of men aged between 18-22 years old. These findings were the same across the independent, exchangeable, and unstructured GEE model. The study’s findings are in

support of literature that has shown that older parents pay more for child maintenance (Nepomnyaschy & Garfinkel, 2010). A study conducted in Finland showed that older parents paid higher amounts of child maintenance compared to younger parents even if differences in income were adjusted for (Rissanen & Aaltonen, 2019). This association was expected because older men tend to be responsible compared to younger ones. Also, with time, old men would have accumulated resources that make them financially stable, giving them the capacity to pay child maintenance compared to young men.

Meanwhile, socio-economic status, highest education level, employment status, perceived health status, marital status, province, number of household members and place of residence were insignificantly associated with the payment of child maintenance. The employment status of fathers plays a role in the payment of child maintenance (Sorensen & Zibman, 2001). However, some confounding factors determine whether men will pay or not. This includes the mother's marital or relationship status. If she has moved on with another man, this might reduce the father's ability to pay or not pay at all.

Qualitative findings showed that fathers wanted to be informed on how the money they paid was used to benefit the children since their ex-partners did not inform them. The exclusion of men in decision-making about the monthly payments of child maintenance by their ex-partners is a common occurrence in various parts of the world as shown by literature (Natalier & Hewitt, 2010). Not being aware of how the money they sent was used raised questions on whether the children were benefitting. Previous studies indicated that men wanted feedback or a breakdown as well as proof of what their ex-partners (mothers to their children) would have used the money for (Natalier & Hewitt, 2010). Some men preferred paying bills related to their children as a way of ensuring that money is not being misused by ensuring it directly benefit their children (Natalier & Hewitt, 2010). In this study, not involving the men in decisions led them perceive the payment of child maintenance as money that personally benefits their ex-partners. This is consistent with literature which has shown that men felt that their partners were misusing their money (Natalier & Hewitt, 2010). Such assumptions affect the payment of child maintenance especially when the fathers think that mothers are benefitting instead of the children (Weiss & Willis, 1985). But in this study men continued paying the child maintenance even if they had doubts that the money was being misused because they did not want to be taken to the maintenance court and denied access to the children.

The man might also be employed but if he has children in his current relationship, this might inhibit payment of child maintenance to his previous children. In this study, unexpectedly, men who are employed on average insignificantly pay child maintenance which is lower than that of unemployed men. This is quite surprising considering the legal framework which lacks enforcement measures for the fathers to pay maintenance if they are unemployed (Khunou, 2012). The findings of this study contradict literature that has shown that employed men are more likely to pay child maintenance compared to those who are not. In the context of South Africa, the men who are employed might be paying less than those unemployed due to perceptions that the mothers might use the money in ways not benefitting the children. Unemployed men could be informally getting more income than employed men. Also, there is an association between fathers seeing their children and financially supporting them (Eddy et al., 2013). If the fathers are denied access to their children, this might result in non-payment of child maintenance even if the fathers are employed.

Marital status plays a role in influencing the payment of child maintenance. The previous marital status of the former partners determines whether the non-custodial father will pay maintenance or not (Shackelford et al., 2005). When the mother of the child was formerly married to the child's father, there is an increased likelihood of the father paying a greater amount of child maintenance compared to mothers who were not married to the father of the child (Laakso, 2002). This is because previously married mothers are in a better position to seek support and be awarded (Laakso, 2002). However, in this study, we were restricted by the data to see if the father was formally married or not when the children were born.

Studies have shown that fathering a child outside marriage results in some men being less certain of the paternity and this, therefore, makes them less willing to pay child maintenance (Apicella & Marlowe, 2004; Platek et al., 2004). In this study, quantitative findings indicated that men who were never married or cohabiting were less likely to pay child maintenance compared to married men. However, it was not possible to identify their previous marital status at the time they had the children. Based on the qualitative findings, men who were married, cohabiting, living alone or divorced prioritised payment of child maintenance and only defaulted when they were unemployed. Even after a relationship has ended, the men felt that it is their responsibility to continue supporting their children. But for other men, taking responsibility only comes into play if they have access to the children. Fathers are discouraged from making child maintenance payments, particularly when they are denied access to their

children (Edin & Nelson, 2013). Contact is linked to an increase in the parents paying child support (Nepomnyaschy & Garfinkel, 2010; Huang, 2006). In this study, despite the men being denied access to the children, some men continued paying child maintenance because they did not want to cause further tension with their ex-partners. However, some men were not paying child maintenance because they were being denied access to the children. According to the men, being denied access could be a sign that they are not the fathers of the children.

Education is key to understanding the payment of child maintenance. Studies have shown that men who are educated are more likely to pay child maintenance than those who are not (Meyer et al., 2015; Shackelford et al., 2005; Stykes et al., 2013). Educated men are believed to be more compliant with orders of child maintenance. Non-resident fathers who are educated had an increased likelihood of providing formal child support (Stykes et al., 2013). This could be due to the educated men's ability to recognise the importance of child maintenance payment to their children's wellbeing (Shackelford et al., 2005). Fathers with lower levels of education provided less formal child support compared to better-educated (at least a high school diploma/GED) fathers (Huang et al., 2005; Sorensen & Zibman, 2001). But some studies contradict this as they show that some confounding factors mediate the association between education and payment of child maintenance. In this study, education was insignificantly associated with the payment of child maintenance. This is not surprising as men with secondary education in the country might be working low-paying jobs which might explain why they do not pay child maintenance. The men might also be unemployed and grew up without a father figure resulting in them not knowing the importance of taking care of their children.

8.4 Hypotheses testing

All the below-mentioned hypotheses were tested using a multilevel mixed-effects logistic regression model.

Ho: A change to living alone is not related to experiences of men's mental health outcomes in South Africa.

H_A: A change to living alone is related to experiences of men's mental health outcomes in South Africa.

The hypothesis examined the relationship between living alone and men's mental health outcomes. Results showed that living alone was significantly associated with both mental

health outcomes. Men who changed to living alone had an increased likelihood of experiencing depressive symptoms and psychiatric or psychological disorders compared to those who remained not living alone. Therefore, the null hypothesis that states that living alone is not related to mental health outcomes is rejected.

Ho: A change to being divorced does not increase men's likelihood of experiencing mental health outcomes in South Africa.
H_A: A change to being divorced increases men's likelihood of experiencing mental health outcomes in South Africa.

The hypothesis examined the relationship between being divorced and men's mental health outcomes in South Africa. Men who had changed to being divorced were insignificantly more likely to experience both mental health outcomes. The null hypothesis was not rejected which states that divorce does not increase men's likelihood of experiencing mental health outcomes. The results were unexpected, this could be due to the divorce being initiated willingly by both parties to leave a toxic marriage.

Ho: A change to cohabitation does not increase men's likelihood of experiencing mental health problems.
H_A: A change to cohabitation increases men's likelihood of experiencing mental health problems.

Men who had changed to cohabit were significantly more likely to experience depressive symptoms than those who did not go through any family change. The null hypothesis was rejected which states that a change to cohabitation does not increase men's likelihood of experiencing mental health problems.

Ho: Payment of child maintenance does not increase men's likelihood of experiencing mental health problems.
H_A: Payment of child maintenance increases men's likelihood of experiencing mental health problems.

The results showed that men who paid child maintenance were less likely to experience psychiatric or psychological disorders. This could be attributed to the men having self-

fulfillment that they can financially provide for their children. Also, payment of child maintenance allows men to get access to the child from their ex-partners.

8.5 Strengths and limitations of the study

The measure of family change is from the current marital status of the men during the time the survey was conducted. This could underestimate the occurrence of family change that might have occurred within the two years before the survey since the most recent marital status is used. The study did not look at other alternatives to the family which are on the rise such as "living apart together". Other family change such as delayed family formation, single parent families, homosexual and bisexual which are increasing in South Africa were not examined. The family change measure did not differentiate between first marriage and remarriages. The study did not show the different types of multiple changes encountered by the men. Also, the study does not indicate among those who did not experience a family change the status of their relationship. The alternatives to family change mentioned above could not be modelled because of the lack of variables in the survey used by the study.

The use of the CES-D scale to measure symptoms of depression rather than a clinical diagnosis is subject to bias. The depressive symptoms and psychiatric or psychological disorders are self-reported and might be subject to recall bias or social desirability. The National Income Dynamics Survey (NIDS) collects data that presents the contributions (Child support or maintenance) being made by fathers. What needs to be noted is that the NIDS data does not show whether child maintenance/support is regulated or non-regulated. However, using such data makes an interesting starting point in identifying the fathers are paying child maintenance in the absence of regulated data on child maintenance. This type of data is nationally representative, allowing generalizations of the findings to the country.

The men who were interviewed for the qualitative part of the research were not men from the quantitative sample. It would have been interesting to interview the same men who participated in the NIDS study on their perceptions of child maintenance and mental health. However, the interviewing of the men in the study provided essential information on child maintenance. Being a woman interviewing men on their perceptions of child maintenance could have led to the men sharing information they thought could be relevant for a woman to hear. Interviewing of participants at the social workers office in Tsakane is subject to bias participants might have

responded in a way that they felt they could receive assistance from the social workers concerning the challenges they faced regarding assess to their children.

8.6 Summary of the study

The study aimed to examine family change and child maintenance effects on men's mental health outcomes in South Africa. The first chapter was an introduction to the study where the problem of men's mental health outcomes was discussed in relation to existing knowledge. It is in the first chapter that the problem is outlined, and the objectives of the study are mentioned. The chapter provides an outline of why the study was conducted in South Africa. It emphasizes the research gap of the study showing why it was vital for men's mental health outcomes to be investigated.

The second chapter is a literature review of existing studies on mental health including a review of family change and child maintenance conducted at a global, regional and national level. The chapter discusses a global overview of family change focusing on the various forms of families which have emerged. One of the consequences of family change which is child maintenance is discussed with a focus on identifying the determinants of child maintenance payment and how child maintenance impacts men's mental health. The last part of the chapter draws attention to mental health outcomes where a global overview of mental health and its determinants are discussed. It also presents the deficiencies in the existing literature. Thereafter, the chapter discusses the social disorganization theory which guided the study. A conceptual framework showing the variables utilised in the study is provided. The chapter ends by outlining the research hypotheses of the study.

In chapter three, an outline of the methods used to answer the research objectives of the study is provided. The chapter describes how a mixed-method approach was used focusing on quantitative and qualitative research. The study setting is described in detail. It begins by describing the quantitative research method regarding the study design, the sample size, the variables, the data source, data management and data analysis. Thereafter, the qualitative approach is described starting by describing the social constructivist paradigm, sampling method and sample size, data collection, data analysis and ethical issues. The chapter ends by providing an outline of the dissemination plan showing the specific manuscripts from the study.

Chapter four presented the background characteristics of the respondents. This was done for individual, household and community-level characteristics. It started by showing the distribution of mental health outcomes in the study population. The two mental health outcomes which were presented were depressive symptoms and psychiatric/psychological disorders showing that a greater percentage of men had depressive symptoms compared to psychiatric or psychological disorders. The distribution of each mental health outcome across the five waves of NIDS is also indicated. The chapter also presents the results on the relationship between individual, household and community level characteristics with the two mental health outcomes using the chi-square test.

Chapter five presented the levels and patterns of family change, child maintenance and mental health outcomes. Five family changes were presented these include men who changed to being married, cohabiting, divorced, living alone and those who went through multiple changes. The patterns of family change varied by individual, household and community level factors among men in South Africa. The patterns of child maintenance indicated significant differences in the mean child payment amounts for different categories of race, age, education level, employment status, and province. Meanwhile, there were no significant differences in the mean child maintenance by socio-economic status, perceived health status, marital status, religion, number of household members and place of residence. The patterns of men's mental health outcomes also varied by individual, household and community level factors.

Chapter six examined the determinants of family change and child maintenance. The Logistic regression model showed that race, age, poverty and province were significant predictors of men changing to being married across the five waves. For men who changed to cohabiting, the following predictors were significant race, educational level, religion, age, household income, socio-economic status, poverty, province, community unemployment and community poverty. Only three predictors were significantly associated with men's change to being divorced: race, religion and age. Meanwhile, for men who went through multiple changes the following predictors were significant: age, province, community drug or alcohol abuse, community education, community poverty, community residential instability and urbanisation. It also presented the results from the Generalised Estimating Equation (GEE) for the demographic and socioeconomic characteristics associated with men's payment of child maintenance in South Africa. The results indicated that race and age were significantly associated with the

payment of child maintenance. The payment of child maintenance in the three waves 2012, 2015, and 2017 were higher compared to that at baseline 2008.

Chapter seven presented the results for the general objective of the study. The objective was to examine the association between family change and child maintenance effects on men's mental health outcomes. This also involved examining the interaction effect in the relationship between family change and child maintenance on men's mental health outcomes. To address the objective multilevel mixed-effects modelling was used where seven models were estimated. In the full model, men who became married remained significantly less likely to experience depressive symptoms compared to men who did not go through any family change. Men living with a partner were more likely to experience depressive symptoms compared to men who did not go through a family change. Living alone continued to increase the odds of experiencing depressive symptoms compared to men not living alone. Men living alone were significantly more likely to experience psychiatric or psychological disorders compared to men not living alone. Men who paid child maintenance were less likely to experience psychiatric or psychological disorders than men who were not paying child maintenance.

Chapter eight is a discussion of the research findings in the context of existing literature on what is known about the subject under investigation. All the chapters' results were discussed in conjunction with the literature showing where the findings were consistent and not consistent with existing literature. Explanations of the obtained results were discussed including the viewpoints of the researcher. The strengths and limitations of the study, policy implication and recommendations are also discussed in the chapter.

8.7 Contributions to mental health research

The major contribution of the study was to conduct a mixed method approach to understand men's mental health outcomes in South Africa in the context of family change and child maintenance. None of the existing mental health studies in the country have examined this. The use of longitudinal data in creating family change of men across the five waves and using the multilevel modelling approach to examine how transitions in men's families can impact their mental health outcomes is a major contribution in mental health research. This is a departure from existing studies in the country that have mostly used cross-sectional data in understanding mental health research. The study was able to show that men who changed to living with a partner were more likely to experience depressive symptoms than those who did not go through

any family change. Men living alone had a greater likelihood of experiencing depressive symptoms and psychiatric or psychological disorders compared to men not living alone. While men who became married had a lower likelihood of experiencing depressive symptoms compared to those who never went through any change. Using a mixed method approach allowed the explanation of quantitative findings to obtain a detailed understanding of men's mental health outcomes as indicated in chapter seven and eight. Through the findings of the study, the changing nature of the family together with child maintenance complexities are key in understanding men's mental health outcomes. These demographic changes and social issues in the society are neglected in mental health research yet there is evidence that the family is changing in South Africa with child maintenance issues on the rise creating an absent father image in the country.

The second contribution of the study was showing how one of the consequences of family change which is child maintenance complexities affected men's mental well-being. Child maintenance issues are discussed in fatherhood studies in South Africa showing how men paying child maintenance and not paying child maintenance struggle to have access to their children. However, the existing studies do not further investigate how child maintenance complexities affect men's mental health. To the best of my knowledge this is the first study in the country that both examines and explores men's mental health outcomes in the context of child maintenance complexities. The quantitative findings showed that men who paid child maintenance were less likely to experience psychiatric or psychological disorders than men who were not paying child maintenance However, from the explanations obtained from the qualitative arm of the study men who were paying child maintenance were not coping and their mental well-being was being affected by the complexities surrounding child maintenance. Their role of fatherhood was being undermined, denied access and custody of the children. It was not payment of child maintenance that affected them, the payment of child maintenance became stressful if they were unemployed.

The third contribution is the use of the social disorganization theory to understand men's mental health outcomes. As shown in chapter two, the theory was used to understand why crime rates differed in communities using a macro-level approach. The theory has also been used in other studies which are not crime-related to explain social and health problems in society. The current study used the theory in efforts to understand how macro-level factors impact men's mental health. Considering that problems individuals experience are rooted in

communities. According to my understanding this is the first study to use the social disorganization theory to understand men's mental health outcomes in the country. The study showed that men who resided in communities with high crime, high unemployment, and high poverty had an increased likelihood of experiencing depressive symptoms while those residing in communities with high violence had an increased likelihood of experiencing psychiatric or psychological disorders compared to men residing in communities with low crime, unemployment, poverty and violence.

8.8 Policy implication

The findings imply that the changing nature of the family in South Africa characterised by increasing cohabitation and living alone affects men's mental health outcomes. Social support is required for men experiencing family change. Interventions to assist men experiencing challenges to have access to their children should be carried out simultaneously with counseling as the findings highlight that men live with the pain of being denied access and custody of their children. There is a need for co-parenting interventions targeting fathers who are denied access to their children this as this will reduce mental health problems in men being denied access to their children. Enforcement measures should be put in place to ensure that *baby mamas* adhere an agreed parental plan. Non-governmental organizations which assist men should focus on helping fathers on how they can be a parent to children not in their custody offering guidance on how they can live and cope with being a father to a child who is not in their custody. This is vital considering that when fathers are no longer with their *baby mamas* they lose full custody rights.

8.9 Conclusion to the study

This study sheds light on the effect of family change and child maintenance on men's mental health outcomes in South Africa. The mental health outcomes which were examined include depressive symptoms and psychological or psychiatric disorders. The study indicates that transitioning to living alone is a risk factor for both mental health outcomes while cohabiting was a risk factor for depressive symptoms in men. Meanwhile, men who became married had a reduced likelihood of experiencing depressive symptoms. From the findings, family change is vital in understanding men's mental health outcomes. Without conducting a mixed method study, to explain why men who changed to living alone were at an increased likelihood of experiencing both mental health outcomes. Possible explanations drawn from literature would have attributed this to a lack of social and financial support, poverty, employment status,

migration, and old age. However, the qualitative findings highlighted that the complexities surrounding child maintenance contributed to mental health problems in men. The complexities involved being denied access to the children, lack of child custody, exclusion in decision making and undermining of the fatherhood role. The men were quite emotional while explaining how life could have been better if they were allowed to have custody of their children. In such circumstances, they struggled to sleep and expressed how they were not coping and were depressed.

In the absence of a qualitative inquiry to explain the quantitative findings, explanations as to why cohabiting men had an increased likelihood of experiencing depressive symptoms would have been attributed to the unstable nature of the relationship characterised by less commitment. However, the findings highlighted that the men's current partners were unsupportive towards the children from previous relationships, and this contributed to the stress and emotional wellbeing problems that men experienced. For some men, it was the failure to have paid damages or inhlawulo that resulted in them being denied access to their children. The men mentioned being powerless as their ex-partners determined when they got to see the children.

The quantitative findings indicated that payment of child maintenance was insignificantly associated with experiences of depressive symptoms. Meanwhile, payment of child maintenance was associated with a lower likelihood of experiencing psychological disorders. However, from the qualitative findings, men who paid child maintenance and those who were not paying mentioned facing challenges concerning access to the children. The men desired to do fatherhood roles in their children's lives that involved shaping behaviours, providing guidance, discipline, and nurturing to foster success in school. The consequences of family change, particularly in relation to child maintenance, have implications for men's mental health. The study shows the importance of considering child maintenance complexities, which extend beyond financial obligations as key determinants of men's mental health. Overall, the qualitative inquiry was important to provide explanations for the quantitative findings. The consequences of family change, particularly in relation to child maintenance, have implications for men's mental health. These complexities include limited access to and custody of their children, as well as their exclusion from important decisions in their children's lives.

These findings have policy implications considering that families in South Africa are changing marked by increasing cohabitation and solitary living arrangements. The provision of social support targeting men who are going through family transitions is vital under such circumstances. Interventions can be developed aimed at facilitating men's access to their children. This should be simultaneously done with counselling considering the emotional problems they experience due to being denied access to the children. Furthermore, co-parenting interventions targeting fathers who face obstacles in having access to their children can contribute to a reduction in mental health problems emanating from these challenges.

8.10 Recommendations and Frontiers for further research

This study only focused on men; future studies can be done to establish if the changing nature of the family affects women's mental health in comparison to men. Also, mothers who are receiving child maintenance should be studied to see their mental well-being. Qualitative studies can be done to explore how being a recipient of child maintenance and dealing with their children's fathers impacted mothers' mental health. This will bring to the fore both views of men and women concerning how they feel towards child maintenance.

Mental health among men is not taken seriously due to the traditional norms of masculinity which expect men to be stronger. Yet in this study, the findings showed that men were weak and powerless when it came to accessing and custody of their children from previous relationships. It is recommended that studies should be conducted which explore how hegemonic masculinities are affected in such instances. Further exploring how this affects the well-being of men. This can be done by investigating how men feel when they experience challenges as fathers, and documenting their experiences regarding the various health problems, they have developed while dealing with child maintenance issues. Such information will be vital in improving policies that encourage or promote men's mental health in South Africa. Improving men's mental health outcomes improves the economic circumstances of men and their families.

The study findings show that depressive symptoms are concentrated more among young men than the elderly. Further research can be done to examine the factors contributing to the differences. Some men stated having started medication for hypertension due to the problems they experienced concerning child maintenance. Research can be done to understand further the circumstances which have influenced such health conditions in men.

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APPENDICES:

Appendix A: Literature Review Matrix

Literature Review Matrix

Author's Journal Date	Aim/Focus/RQ	Location/ Method/ Population	Research Gap	4. Mental health	Comments
1. Affleck, W., Carmichael, V., & Whitley, R. *The Canadian Journal of Psychiatry* *2018*	To provide an overview of core issues in the field of men's mental health, including a discussion of key social determinants and implications for mental health services.	Canada, No method, Men	Family changes such as cohabitation, solitary living and non-marital childbearing as well child maintenance effect on men's mental health was not addressed.	Prevalence of mental health among men is noted when they act out engaging in alcohol and drug abuse.	Paper offers a good description of why men's mental health prevalence is lower than that of women which is due to men not reporting.
2. Ajaero, C. K., Nzeadibe, C. T., & Igboeli, E. E. *S Afr J Child Health* *2018*	To present an analysis of rural–urban differences in the prevalence of depression and to assess the sociodemographic predictors of depression among adolescents in SA.	South Africa, Cross-sectional, adolescents	The study only focused on adolescents in SA.	The significant predictors of depression were race, age, income and province of residence among adolescents in South Africa.	Other predictors of depression which were not included are childhood adversity, family function, family changes, family structure, trauma and family member's death
3. Anderson, E. A., Kohler, J. K., & Letiecq, B. L. *Journal of Family Issues*, 2005	To investigate the life conditions that contribute to low-income fathers' depression and jeopardizing relationships with their children.	US, Cross-sectional, fathers	The study should have also controlled for child support arrears, access to children, financial debt	Unemployment, inability to pay full child support, lack of access to transportation, housing including alcohol problems and criminal record were significant predictors of depression in fathers.	Failure to pay child support increased the risk of depression in fathers.
4. Bantjes et al., 2018	To explore poverty-related variables account	South Africa (Western	What is missing is examining how changes in	As a result of depression men engage in	It shows the consequences of mental health

BMC Public Health *2018*	for non-fatal suicidal behaviour among young men living in low-resource communities.	Cape Province), cross-sectional, Black African Men	family can impact on men's mental health. also be predictors of non-fatal suicide.	non-fatal suicide in South Africa	problems such as depression in men.
5. Barbaglia, M. G., ten Have, M., Dorsselaer, S., Alonso, J., & de Graaf, R. *J Epidemiol Community Health, 69*(1) , 55-62. 2015	Association of negative socioeconomic changes, job loss and household income reductions with incidence of mental disorders.	Netherlands, Longitudinal, Men and women	The baseline sample should have also included people who were currently unemployed.	Among men, job loss increased the risk of any mental disorder meanwhile a reduction in household income increased the risk of mental disorders among women.	The paper indicated that a reduction in household income increased the risk of any mental disorders.
6. Bhana, A., Mntambo, N., Gigaba, S. G., Luvuno, Z. P. B., Grant, M., Ackerman, D., ... & Petersen, I. *South African Medical Journal* *2019*	To establish the criterion-based validity of a mental health screening tool for assessing positive symptoms of CMDs (depression, anxiety and substance abuse) among patients attending PHC facilities.	South Africa, Cross-sectional, Men and women	From the screening too it is not clear what differentiates depression from anxiety.	The paper is an interesting paper as it highlights the efforts done to come up with a screening tool to measure depression among people patients attending primary healthcare facilities.	However, I strongly believe that the suggested tool to measure depression is too brief. The measures used for depression and anxiety are similar.
7. Bronte-Tinkew, J., Moore, K. A., Matthews, G., & Carrano, J. *Journal of family Issues, 28*(1), 61-99 2007	To examine the sociodemographic correlates of symptoms of depression and how depression is associated with father involvement	US, Cross-sectional resident fathers	The study did not look at non-residential fathers.	The paper highlights that being a depressed father is associated with less supportiveness in the co-parental relationship. Among residential fathers,	It would have been interesting to look at both the residential and non-residential to do comparisons.

				depression was positively associated with aggravation/stress in the parenting role.	
8. Brown, A., Scales, U., Beever, W., Rickards, B., Rowley, K., & O'Dea, K. *BMC psychiatry* 2012	To explore the expression, experience, manifestations and consequences of emotional distress and depression in Aboriginal men	Australia, Qualitative, Men	The study could have included how divorce, remarriage effect on men's mental health.	Interesting to note that depression among the Aboriginal men was a sign of weakness and injury of the spirit.	In such a population it would have been interesting to examine religion as a predictor of men's mental health.
9. Call, J. B., & Shafer, K. *American Journal of Men's Health* 2018	To explore how depression symptomology affects help-seeking behaviours in men.	United States, Cross-sectional, men	However, the study did not address how family functions and depression symptoms interact in influencing help seeking behaviours in men.		Provides a clear explanation on how the male typical depression symptoms such as stress, irritability, aggression, risky behaviors, hyperactivity, and substance abuse play a role in influencing help seeking behaviours.
10. Cancian, M., Heinrich, C. J., & Chung, Y. *Journal of Policy Analysis and Management*, 2013	To investigate the relationship between child support debt and the formal employment and child support payments of disadvantaged fathers	US, Longitudinal, fathers	The paper should have also looked at other types of debt the fathers had besides child support.		Having a higher debt had a negative effect on both formal earnings and payment of child support.
11. Cavanagh, A., Wilson, C. J., Kavanagh, D. J., & Caputi, P. (2017).	The aim is to review the evidence of gender differences in symptoms associated with depression	Systematic review	The impact of family changes as a possible predictor of depression is not shown.	Alcohol/drug misuse and risk taking/poor impulse control was reported by depressed men. Depressed women	Men and women show different symptoms of depression.

				reported symptoms which were in the diagnostic criteria for depression such as depressed mood, appetite, weight and sleep disturbances	
12. Chuick, C. D., Greenfeld, J. M., Greenberg, S. T., Shepard, S. J., Cochran, S. V., & Haley, J. T. *Psychology of Men & Masculinity* 2009	To investigate men's' descriptions of their experiences of depression.	United States of America, Qualitative Men	The study should have expanded on the loss of relationships as in what kind of relationships were lost.	Depression in men was as result of life transitions, losses and disruptions at the workplace. The life changes and transitions triggered the symptoms of depression.	The examples of transitions in life should have also been stated
13. Culph, J. S., Wilson, N. J., Cordier, R., & Stancliffe, R. J. *Australian Occupational Therapy Journal* 2015	This cross-sectional study explored the experience of depression and participation at three community Men's Sheds in regional Australia.	Australia, Cross-national, Men	The study should have measured the men's mental health status prior participation in Men's Sheds and after being part of the group.		Participation in men's Sheds decreased the likelihood of experiencing depression symptoms.
14. Davis, R. N., Davis, M. M., Freed, G. L., & Clark, S. J. *Pediatrics* 2011	To examine the association between depression in fathers of 1-year-old children and parenting behaviors.	US, Cross-sectional, fathers	The paper should have also controlled for social support, fathers' adversity in childhood, family size	The paper indicated that depressed fathers were more likely to report spanking their 1-year-old children in the previous	The depressed fathers were less likely to read to their children 3 days in a typical week.

				month compared to non-depressed fathers.	
15. Davis, R. N., Caldwell, C. H., Clark, S. J., & Davis, M. M. *Pediatrics*, 2009	To determine whether paternal depressive symptoms were associated with less father involvement among African American non-resident fathers.	US, Cross-sectional, Non-resident African American fathers	The study excluded fathers' involvement with their daughters it only focused on sons.	The paper shows how depressive symptoms in non-resident African American fathers was associated with less contact with their children and less engagement with their children.	Involvement of fathers with their children is important to the father's mental health
16. DeKlyen, M., Brooks-Gunn, J., McLanahan, S., & Knab, J. *American journal of public health*, 2006	To examine the association between mental health problems and relationship status (married, cohabiting, not cohabiting but romantically involved, and not romantically involved).	US, Cross-sectional, Mothers and Fathers	The study should have also controlled for other predictors of mental health such as income, debt and family support.	The paper indicates that that mental health is strongly associated with marital status for both mothers and fathers.	Being marrieds was linked to better health and fewer behavioral problems compared to unmarried parents.
17. Egbe, C. O., Brooke-Sumner, C., Kathree, T., Selohilwe, O., Thornicroft, G., & Petersen, I. *BMC Psychiatry* 2014	To explore the experiences of psychiatric stigma by service users in South Africa.	South Africa, Qualitative, Healthcare service providers and service users	After seeing what the stakeholders say concerning treatment of people suffering with Mental illness. There were measures suggested by the stakeholders to deal with stigmatization.	From this paper one can see how stigmatisation of mental illness is rife in the country.	The paper is interesting as it highlights the views of the stakeholders concerning how people with mental illness are treated by family, community members, healthcare workers. It would be interesting to look at whether the suggested interventions are being practiced.
18. Fitzgerald, M. E., Roy,	To determine the level of depressive	US, Cross-sectional, fathers	It would have been interesting to examine if the	Having medium and high levels of	The men with both medium and high levels of depressive

K., Anderson, E. E., & Letiecq, B. L. *Fathering*, 2012	symptoms among men who participated in two different responsible fathering programs.		men who were paying child support were also less satisfied with the time they spent with their children.	depressive symptoms was associated with fathers being less satisfied with the amount of time they spent with their children.	symptoms were likely to have been unemployed for the past year.
19. Fletcher, R. J., & StGeorge, J. M. *Advances in Mental Health* 2010	The aim of this study was to explore how men manage their mental and physical wellbeing during the difficulty and stress of family dissolution.	Australia, Qualitative, Men	The study did not use any screening tool to detect depression symptoms in men. The study did not address how child support or maintenance impacted on men's mental health.	The men had to go to court to seek a court order. Such a process is described as stressing for the men. make it difficult for them.	The study indicated that men encounter challenges in accessing their children. .
20. Fryers, T., Melzer, D., Jenkins, R., & Brugha, T. *Clinical Practice and Epidemiology in Mental Health* 2005	To systematically review studies on the associations between the prevalence of the common mental disorders in adults of working age and socio-economic characteristics.	European countries, Systematic review	The review should have also examined other predictors of common mental disorders such as family function, social capital, social support.	The paper indicated that poor education, material disadvantage and unemployment was associated with common mental disorders.	Family variables have not been included in examining mental disorders.
21. Hao, G., Bishwajit, G., Tang, S., Nie, C., Ji, L., & Huang, R. *Clinical interventions in ageing* 2017	To investigate whether or not difficulty in social participation has any relationship with depression among older individuals in South Africa.	South Africa, Cross-sectional, Elderly	Neighbourhood safety, duration living in the neighbourhood, unemployment, retirement and family changes could have been controlled for.	It indicated how lack of social participation in community activities is associated with depression among the elderly.	The study moves away from existing study which have dwelled more on the prevalence and correlates of depression. It indicates how social support; social cohesion is important among adults to reduce the risk of depression.

22. Hamad, R., Fernald, L. C. H., Karlan, D. S., & Zinman, J. *J Epidemiol Community Health* 2008	Correlates of depressive symptoms and perceived stress among a heterogeneous South African population.	South Africa, Cross-sectional, Creditworthy applicants	The study should have also looked at financial stability, childhood experience, family transition, family function, HIV and GBV in relation to depressive symptoms.	Having more household members, non-white race, lower educational attainment, non-employment income, lower income in the past 30 days, lower subjective social status on the community and creditworthy ladders and making decisions without a partner were associated with depressive symptoms.	The paper shows the predictors of depressive among adults in South Africa.
23.Hassanzadeh, J., Asadi-Lari, M., Ghaem, H., Kassani, A., Niazi, M., & Menati, R. *American Journal of Men's Health* 2018	To explore the association between demographic factors, smoking status, social capital, and poor mental health status in the male population of Tehran, Iran.	Iran, Cross-sectional, Men	The study could have also controlled for income, family function, occupation, poverty since they are important predictors of men's mental health.	Age, house ownership, smoking status, and marital, education level, and job status were significantly associated with mental health.	The way the relationship between social capital and mental health in the results section it's not properly stated. First it says there is a positive association between social capital and poor mental health.
24. Havenaar, J. M., Geerlings, M. I., Vivian, L., Collinson, M., & Robertson, B. *Soc Psychiatry Psychiatr Epidemiol*	To assess the prevalence and risk factors of common mental health and substance abuse problems in urban and rural area in South Africa	South Africa (Western Cape and Limpopo provinces), Cross sectional, Adults.	It would have been interesting to know the prevalence of men and women who sought mental health services from traditional healers.	In Khayelitsha, unemployed women had an increased likelihood of having mental health problems. In Agincourt having no primary education and	Interesting paper the factors which were significantly associated with common mental problems in Khayelitsha differed from those found in Agincourt.

2008				living in poverty was associated with an increased risk of mental health problems.	
25. Herman, A. A., Stein, D. J., Seedat, S., Heeringa, S. G., Moomal, H., & Williams, D. R. *South African Medical Journal* 2009	To describe the 12-month and lifetime prevalence of mental health disorders, as well as their socio-demographic correlates.	South Africa, Cross-sectional, Men and women	Men and women have been shown to have different prevalence of mental health but what is missing is a detailed description of factors explaining why the differences exist.	Provides the prevalence of mental disorders.	Generally, the paper does not provide a detailed description of mental health. Lacks clarity on the factors that are contributing to the prevalence of mental health.
26. Hewitt, B., Turrell, G., & Giskes, K. *J Epidemiol Community Health* 2012	To investigate the impact of transitions out of marriage (separation, widowhood) on self-reported mental health of men and women.	Australia, Longitudinal, Men and women	The study could have also controlled for the following predictors of mental health: adverse childhood experience, social capital and child support.	Men who separated or widowed had a decline in mental health compared to married men. This also applied to the females.	Social support was vital in improving widowed men's mental health immediately after the death of their spouse.
27. Hiyoshi, A., Fall, K., Netuveli, G., & Montgomery, S. *Social Science & Medicine* 2015	To examine if remarriage compared with remaining divorced is also associated with a reduced depression risk	Sweden, Cross-sectional, Men	It would have been interesting if the paper examined other family changes such as men who enter into a cohabitation relationship after divorcing.		The paper indicated that remarriage was significantly associated with increased risk of depression compared to men who remained divorced.
28. Hoard, L. R., & Anderson, E. A.	Examined low-income, noncustodial, predominantly African American fathers'	US, Cross-sectional, Non-custodial fathers		There is a significant positive relationship between fathers' total	Interesting how family support was measured. This would be helpful on how I will measure

Journal of community psychology, 2004	depression in relation to locality, social support, and life stresses.			life stress and their level of depression. Criminal conviction and no permanent residence, were statistically significantly related to depression.	family support in my study.
29. Horwitz, A. V., & White, H. R. *Journal of Marriage and the Family* 1998	The aim was to examine how the mental health of cohabitors compares with that of unmarried and of married persons	US, Longitudinal, young adults	The study should have also controlled for educational level, income, age at cohabitation.	There is no relationship between cohabitation and depression. However, cohabitation was associated with more alcohol problems in men compared to married and single men.	The paper is outdated but it has been included because it describes the relationship between cohabitation and mental health which is of interest to my study.
30. Hudson, D. L., Eaton, J., Banks, A., Sewell, W., & Neighbors, H. *American journal of men's health* 2018	To examine perceptions of depression and determine barriers to depression treatment among African American men.	United States of America, Qualitative, Men	The study could have included men who had been diagnosed as having depression to hear their perceptions.		Some men expressed concern in discussing issues to do with stress in groups which are non-judgmental
31. Hunduma, G., Girma, M., Digaffe, T., Weldegebreal, F., & Tola, A. *Pan African Medical Journal*	The aim of this study was to determine the magnitude of common mental disorders and its associated factors among adult residents of Harari Region.	Ethiopia (Harari Regional State), Cross-sectional, Adults	Family structure, debt, child support and health seeking behaviours could have been examined.	Among stressful life events, death of respondents' closed one, experiencing separation from spouse and emotional stress including	The paper has lot of grammatical errors. This makes one lose confidence in referencing such a paper. However, the author raises interesting predictors of mental health.

2016				substance uses like taking khat and tobacco were significantly associated with common mental illnesses.	
32. Hutter, 1998	Investigating the changing family	Book chapter	The family changes have not been discussed in relation to men's mental health.		There is little empirical evidence that family change is synonymous with family decline.
33. Jacobs, N., & Coetzee, D. *South African Medical Journal* 2018	To review the burden of mental illness in the Western Cape Province of SA and current provincial interventions suggested to decrease the burden of mental illness.	South Africa, Systematic Review, Mental health experts	The risk factors of mental illness are not disaggregated by gender.	The review is detailed such that one can see the prevalence, risk factors of mental illness, the consequences as well as the social and economic costs.	The paper provides an understanding of mental health issues particularly in the Western Cape province of South Africa.
34. Jenkins, R., Bhugra, D., Bebbington, P., Brugha, T., Farrell, M., Coid, J., ... & Meltzer, H. *Psychological medicine*, 2008	To examine the association between low income and mental disorder mediated by debt	UK, Cross-sectional, adults	Family structure was not controlled for.	Being in debt increased the risk of mental disorder compared to those without debt.	Low income and debt are associated with mental illness, with the effect of income being mediated by debt.
35. Johnson, J. L., Oliffe, J. L., Kelly, M. T., Galdas, P., & Ogrodniczuk, J. S.	To investigate men's experiences of depression	Canada, Qualitative, Men	The paper did not address the role of the family in the lived experiences of the men suffering from depression.		The gender ideologies are influential in the lived expression of depression in men.

Sociology of Health & Illness 2012					
36. Julion, W., Gross, D., Barclay-McLaughlin, G., & Fogg, L. Research in Nursing & Health, 2007	African American non-resident fathers' perspectives on involvement and perceptions of their involvement.	US, Qualitative,	Child support should have been included to understand if men paying child support are satisfied with child involvement.		The fathers lacked resources to deal with the challenge which hinders them to be involved with their children.
37. Kendrick, L., Anderson, N. L. R., & Moore, B. *Family & Community Health*, 2007	To identify the perceptions and expressions of depression among African American young men 18 to 25 years of age through ethnography and participatory research strategies.	US, Qualitative, Men	The paper should have looked at whether interventions exist to assist the black men to fight depression.	Black men define depression differently from the medical definition of depression. Depression is defined as having no control, with bad things happening without anywhere of changing the situation.	Depression in black men is described through men's negative experiences.
38. Liang, T. K., & George, T. S. *Journal of Comparative Family Studies* 2012	The study explored men's experiences of depression and the family's role in gender socialization	India, Qualitative, Men	. Socialization in early family relationships could have been studied together with the family stability at a later stage to understand their effect on men's mental health.		The paper provides an interesting overview of the family's role in depression experienced by men.
39. Lund, C., Myer, L., Stein, D. J., Williams, D. R., & Flisher, A. J.	To investigate the association between mental disorder and lost income in South Africa.	South Africa, Cross-sectional adults,	The study did not address direct costs linked to mental health such as treatment, lost	The paper indicated a strong association between lost income and	It was eye opening to see how income a predictor of mental health can also be affected by mental health problems.

Soc Psychiatry Psychiatr Epidemiol 2013			income among care givers.	severe depression and anxiety disorders in SA.	
40. McKenzie, S. K., Jenkin, G., & Collings, S. *International Journal of Men's Health*, 2016	To conduct a qualitative metasynthesis of 26 studies on men's perspectives of common mental health problems.	Systematic Review	The study did not address other family changes such as cohabitation, solitary living effect on men's mental health.	The paper indicated that the common triggers of mental health problems in men include work issues, relationships, family issues, masculine ideals, cultural differences and racism.	Family issues which affect men's mental health have not been explained.
41. Mckenzie, S. K., Gunasekara, F. I., Richardson, K., & Carter, K. *J Epidemiol Community Health* 2014	We investigate whether changes in multiple socioeconomic measures are associated with self-reported mental health.	New Zealand, Longitudinal, Men and Women	The paper could have also controlled for family changes, residential stability,	A change from being employed to unemployed was associated with changes in Mental health while changes in income and deprivation were not.	Most men pointed to mental health problems as related to work, family, relationships, and the pressure of dominant notions of masculinity.
42. Meadows, S. O. *J Health Soc Behav*. 2009	To examine the links between family structure change and paternal self-rated and mental health among fathers, with an emphasis on men who experience a non-marital birth.	United States, Longitudinal, Men	The study only focused on men who experienced a non-marital birth. The study could have looked at all men. The issue of child support was not addressed.		Interesting how the relationship transition and stability variables were formulated. The paper provides a clear explanation on the association between family structure and men's well-being including mental health
43. Meltzer, H., Bebbington, P., Brugha, T., Farrell,	To estimate the prevalence of 'specific' mental disorders	England, Cross-sectional, Adults		Being in debt was associated with an increased likelihood of	Borrowing money from pawnbrokers and moneylenders increased the rates of

M., & Jenkins, R. *The European Journal of Public Health*, 2013				common mental disorders. This was irrespective of the nature of the debt housing, utilities and purchases on credit.	common mental disorders
44. Miller, D. P., & Mincy, R. B. *Social Service Review* 2012	This study examines how child support arrears affect fathers' labor force participation.	United States of America, Longitudinal, fathers	The study should have used data collected from men using data from women concerning the arrears that the fathers had might have some bias.		Child support arrears affected fathers' engagement in formal work.
45. Mnyango, R. P., & Alpaslan, A. H. *Social Work Journal* 2018	The aim was to explore men's experiences of divorce, the challenges they faced and their coping strategies.	South Africa, Qualitative, divorced men	The paper does show that the men experience anxiety and depression after being separated from their children.	The study found that men experienced health problems such as anxiety, depression, and stress-related diabetes due to separation from their children. Men are treated as suspects or irresponsible by the law when it comes to taking care of children.	The study focused on men who had divorced and did not adequately discuss how men's mental health is affected. Depression was mentioned without using the tools that screen depression.
46. Möller-Leimkühler, A. M. (2003).	To examine the gender gap in suicide and premature death and why are men so vulnerable.	Europe, Systematic review	The paper does not indicate the role of social support in defining the gender gap in suicide.	Depressive symptoms are inconsistent with the masculine stereotype. Depression symptoms are held to be	Men hide depression by being aggressive, anger attacks, acting out, low impulse control and alcohol abuse.

				typical female symptoms and men are not supposed to suffer from them.	
47. Mushavi, R. C., Burns, B. F., Kakuhikire, B., Owembabazi, M., Vořechovská, D., McDonough, A. Q., ... & Tsai, A. C. *Social Science & Medicine* 2020	To estimate the association between water insecurity and depression symptom severity, and to identify the mechanisms underlying the observed association.	Uganda, Mixed Method, Men and Women	It would have been interesting to hear from men through the in-depth interviews why water insecurity affected their health. However, men were excluded in the qualitative part of the research.	The paper provides a clear description of how water insecurity is associated with depression. The water insecurity association with depression severity was larger among men compared to women.	The paper did not address how some stressful life events related to water insecurity contributed to depression.
48.Ngcobo & Pillay *African Journal of Psychiatry* 2008	To understand depression in African women attending a state health service.	South Africa, Cross-sectional, Women	Different types of IPV (physical, sexual, emotional violence) were not examined only infidelity has been looked at in relation to depression.	Participants thought that depression was a mode of communicatio n with ancestors. From the paper one can understand how depression is viewed in an African set up.	The paper focuses on women it was chosen specifically to understand depression issues in South Africa due to limited research in the area.
49. Ogrodniczuk, J., Oliffe, J., Kuhl, D., & Gross, P. A. *Canadian Family Physician* 2016	To provide a commentary which discusses how Canada has taken up the challenge of developing innovative approaches to addressing mental illness among men.	Canada, No method, Men	The paper does not address what families are doing to help in issues to do with mental health among men.	Interventions aimed at providing awareness of men's mental health are being conducted.	The paper provides a description of what is being done in Canada to address mental health problems among men.

50. Oliffe, J. L., Rasmussen, B., Bottorff, J. L., Kelly, M. T., Galdas, P. M., Phinney, A., & Ogrodniczuk, J. S. *Qualitative Health Research* 2013	To explore the connections between participants' depression, masculinities, work, and retirement.	Canada, Qualitative, Men	Other factors apart from work could have been explored. It could be that the depression was triggered in families and later carried to work. It would be interesting to know what motivated the men who sought help for mental health problems.	Work contributed to depression that the elderly men experienced. The narratives of the men indicated a self-blame of failing to use the opportunities which they once came through while working which resulted in some not having potential to do the best out of their work.	It seems depression also affected their work by reducing performance at work. The men would hide that they are suffering from depression and use other excuses such as physical injury to obtain sick leave. All in efforts to avoid stigma.
51. Petersen, Bhana and Swartz *Health policy and planning*, 2012	To provide a desk review of the current status of mental health promotion and prevention of mental disorders in South Africa	South Africa, Systematic Review	Mental health among adults should have been disaggregated by gender so that it is clear on the state of mental health between men and women.	It highlights on the policies of what the country has introduced to address mental health.	The paper provides a clear description of what South Africa has done to promote mental health.
52. Rissanen, A., & Aaltonen, M. *International Journal of Social Welfare*, 2019	To explore how particular economic and demographic factors contribute to the level of the child maintenance payment (CMP) paid by the non-resident parent	Finland, Longitudinal, Non-resident parents	The study should have also controlled for current marital status of the non-resident parents, family structure, educational level, type of occupation.		The paper indicated that the number of dependent children affects the size of the child maintenance payment.
53. Roche, A. M., Pidd, K., Fischer, J. A., Lee, N., Scarfe, A., &	To systematically review research on the prevalence of depression	The studies conducted in 10 countries:	I think it was important to also to know the duration that the	It is clear that depression is high in male dominated industries.	The rates of depression in some male dominated industries was higher compared to within-

Kostadinov, V. *Safety and health at work* 2016	among workers in male dominated industries and occupations.	. Systematic review, Men	men had worked in the industries.	Different tools have been used to measure various mental disorders.	study comparators. Yet in other industries the rates were lower.
54. Rosenthal, D. G., Learned, N., Liu, Y. H., & Weitzman, M. *Maternal and child health journal* 2013	This study describes characteristics of fathers with depressive symptoms in the USA.	US, Cross-sectional, Men	The study should have also controlled for transition to fatherhood and debt.	Poverty, maternal depressive symptoms, living with a child with special health care need, poor paternal physical health and paternal unemployment were associated with increased rates of paternal depressive symptoms.	Socioeconomic factors are associated with depression in fathers.
55. Sandfort, T. G., Bos, H., & Reddy, V. *Arch Sex Behav*. 2018	To explore gender expression and mental health in black South African men who have sex with men.	South Africa, Cross-sectional, Men who have sex with men	It would be interesting to know why the feminine men had lower reports of depression compared to masculine men.	It is not clear on the other predictors which were controlled for whether there was a significant or no significant difference with mental health.	The author should have explained what is meant by feminine men and masculine men. I am just concerned on why feminine, masculine and participants without a gender preference did not differ significantly in depression and anxiety.
56. Seidler, Z. E., Dawes, A. J., Rice, S. M., Oliffe, J. L., & Dhillon, H. M. *Clinical Psychology Review* 2016	To review findings related to the role of masculinity on men's help-seeking for depression and provide recommendations for further research.	USA, Canada, Systematic review, Men	The review could have included experiences of the men who had sought help for depression. The review was one sided it highlighted more on how masculinity	Depression is associated with shame, weakness and stigma which made it difficult for men to communicate.	This review provides a clear description of how notions of masculinity hinder men from expressing themselves regarding depression. Men only seek help when the depression symptoms are severe.

			negatively affected seeking help for depression.		
57. Seltzer 2019 *Demography*	To discuss why family is important to demography and what demographers mean by "family.	Systematic review	The study did not address how the changes in family impact on men's mental health	Family is important for the wellbeing of its members.	The paper emphasizes on the importance of demographers to focus on individuals' family relationships to have a better understanding of families.
58. Shackelford, T. K., Weekes-Shackelford, V. A., & Schmitt, D. P. *Basic and Applied Social Psychology* 2005	To review what is known about child support payments and identify which men pay or do not pay and why or why not.	United States of America, Systematic review, Men	The study did not address what could be the health implications of child support in men.		The review has highlighted the predictors of child support as in who pays and does not pay.
59. Shapero, B. G., Black, S. K., Liu, R. T., Klugman, J., Bender, R. E., Abramson, L. Y., & Alloy, L. B. (2014).	To examine the effects of early life stress on emotional reactivity to current stressors.	Australia, Systematic review	How the changes in family influence depression are not discussed?	Childhood emotional abuse increased depressive symptoms when confronted with current dependent stressors.	The paper calls for the inclusion of male symptoms of depression in the screening tool.
60. Skinner, C., & Davidson, J. *International Journal of Law, Policy and the Family* 2009	To outline child support regimes in 14 countries	14 Countries, Cross-sectional, National informants who are mainly academics	The informants did not discuss the health implications of child maintenance in men.		This paper generally provides an overview of what constitutes child maintenance. From this paper I had a background on child maintenance which is scarce in South Africa literature however, the child maintenance system

					might be different to what exists in SA.
61. Strohschein, L., & Ram, U. *Journal of Family Issues* 2017	This study is the first to explore sex-specific differences in the association between marital status and mental health in India, a country with high levels of gender inequality.	India, Cross-sectional, Youths	The paper should have controlled for social capital, family support, family stability	The married women had significantly increased reports of mental health problems compared to married males. Meanwhile the reports of mental health problems were lower among the single, never married females compared to their male counterparts.	The paper indicated that mental health operated differently for men and women.
62. Strohschein, L., McDonough, P., Monette, G., & Shao, Q. *Social science & medicine*, 2005	To test gender differences in the short-term mental health effects of a marital status transition.	Canada, Longitudinally, Men and women	The study did not include those who are cohabiting which could be a predictor of mental health	Married couples who did not experience any marital transition had lower levels of distress compared to those who remained single, separated and divorced.	Interesting I like the way the change in marital status variable has been constructed.
63. Strömberg, R., Backlund, L. G., & Löfvander, M. *Nordic Journal of Psychiatry* 2010	To study the usefulness of the Gotland male depression scale and Beck Depression Inventory (BDI) in detecting depression among men in primary care.	Sweden, Cross-sectional, Men	The study could have also included child support, family stability as predictors of mental health.	The Gotland scale for depression was quite advantageous in screening for depression among men. It indicated that clinical depression was prevalent among men had a high	However, the Gotland male depression scale missed mild depression compared to the BDI scale.

				consumption of alcohol.	
64. Stykes, J. B., Manning, W. D., & Brown, S. L. *Demographic research* 2013	To compare estimates of the non-resident father and socioeconomic characteristics of non-resident fathers identified in three surveys.	USA, Cross-sectional, Non-resident fathers	. It was not indicated on the duration the fathers have been paying child support. Also, examining how child support impact on men's mental health was going to be ideal.		This paper is the first one I have ever come across which compares survey data checking their consistencies on data on non-resident fathers. The paper showed were the three surveys varied in terms of no-resident fathers.
65. Symoens, S., Van de Velde, S., Colman, E., & Bracke, P. *Applied Research in Quality of Life* 2014	To investigate whether there are differences between the mental health of the married and the divorced including examining how gender interferes in the relationship.	23 European countries, Cross-sectional, men and women	It could have examined remarriage and cohabitation to see the impact that these has on women's and men's mental health.		Interesting to note that divorce is associated with mental health outcomes in both men and women. The study focused on the continuously married and ever-divorced men and women only
66. Thapa, S. B., Martinez, P., & Clausen, T. *Journal of Psychiatry* 2014	To estimate depression prevalence and identify correlates of depression among older adults in Ghana and South Africa.	South Africa, Cross-sectional, adults	The study did not address other predictors of depression such as family function, family support, retirement, stressful life events and family changes.	Only smoking was associated with depression among men in Ghana. While in SA higher age and lower quality of life was associated with depression among men.	Interesting the paper shows the predictors of depression in men and women. It disaggregates the prevalence of depression by gender.
67. Threlfall, J. M., & Kohl, P. L. *Family Relations* 2015	To explore the views of low-income fathers and fatherhood service providers of the child support system. To further investigate the ways in which the	United States of America, Qualitative, Men	It would have been interesting if the study explored whether there is any help the fathers are receiving from the state towards the struggles, they encounter		The perceptions of fathers concerning child support show that men who are paying child support are struggling. Despite such difficulties the study did not examine the impact that payment of child support has

	perceptions shape the provision of and men's engagement in fatherhood services.		with the child support system.		on the mental health of the men.
68. Tomlinson, M., & Lund, C. *PLoS Medicine* 2012	we will use the Shiffman and Smith framework to demonstrate that while some significant strides have been made, mental health still faces major challenges in establishing itself as a global initiative with meaningful political priority.	South Africa, Systematic Review	It would have been interesting to know what the international organizations are doing to enforce implementation of policies on mental health.	Globally, mental health receives less support or priority. When health budgets are being cut the first area to be cut is mental health. From the paper one can see how different countries do not give precedence to mental health issues.	The framework illustrates why mental health is not receiving attention globally. After reading the paper I became aware that it is not only in Africa where mental health issues are less funded even in developed countries there are given less precedence.
69. Tomlinson, M., Grimsrud, A. T., Stein, D. J., Williams, D. R., & Myer, L. *South African Medical Journal* 2009	To examine the epidemiology of major depression in South Africa.	South Africa, Cross-sectional, Adults	The study is not disaggregated by gender we cannot tell the effect of each predictor on men and women's depression.	Lower levels of education and old age is associated with major depression.	The paper states a valid point that data on the major depressive disorders that is nationally representative does not exist.
70. Turner, K. J., & Waller, M. R. *Journal of Marriage and Family*, 2017	how and why child support debt is related to paternal involvement u	US, Non-residential fathers, Cross-sectional	The study should have also looked at parents with children of all ages rather than restricting to 9 years.	A higher level of child support debt increased the risk for depressive symptoms among non-resident fathers whose noncustodial	Having child support arrears affected the father's involvement with their children.

				child was aged 9.	
71. Vogel, L. K. *Children and Youth Services Review* 2020	To examine the barriers to compliance with formal child support obligations through sharing perspectives of staff who work with noncustodial fathers struggling to find work and pay child support.	USA, Mixed Method, staff serving noncustodial parents	It would have been worthwhile for the study to also address how child support impacts on men's mental health.	Based on the study mental health has been said to affect employment which in turn affects payment of child support	The paper shows that some of the reasons of lack of compliance with payment of child support is due to mental health challenges among men.
72. Waller, M. R., & Plotnick, R. *Journal of Policy Analysis and Management:* 2001	To explain why the child support system breaks down for so many low-income families.	US, Systematic review, Men	The impact of the child support arrears on men's mental health is not addressed.		Fathers felt overwhelmed by the size of the child support arrears, yet they had limited earnings.
73. Ward, E., & Mengesha, M. *American Journal of Orthopsychiatry*, 2013	Systematic review on prevalence, risk factors and seeking behaviours of depression among African American men.	US, Systematic Review, Men	Consequences of depression on men's mental health not identified.	Level of education, employment status, work stress, and job security were associated with depression.	Being married, level of income, higher job status and job security, adult achievement and sense of mastery, and perceived social support are protective factors of depression.
74. Watkins, D. C., Green, B. L., Rivers, B. M., & Rowell, K. L. *Journal of Men's Health and Gender* 2006	To systematically review factors that lead to depression in Black men	US, Systematic review, Men	Debt and family stability also contribute to depression in men.	Psychosocial coping, economic status or income, and racism or discrimination contribute to depression and depressive symptoms in Black men.	Interesting paper on factors leading to depression in black men.
75. WHO & Calouste	To assess the social	Report	Family changes, stability and	Social, economic, and	The paper presented the actions to reduce

Gulbenkian Foundation, 2014	determinants of mental health		social support was not controlled for.	physical environments in which people live shape their mental health and common mental disorders	risk of mental disorders throughout the life course, at the community level and at the country level.
76. Wide, J., Mok, H., McKenna, M., & Ogrodniczuk, J. S. *Canadian Family Physician* 2011	To examine the association between men's conformity to masculine norms and depression.	Canada, Cross-sectional, Men	The paper could have controlled for membership in social support groups, religion and family cohesion.		From the paper it is important to devise a scale that is sensitive to male specific depression rather than focusing on the generic measure of depression. The typical depressive symptoms scale and the Gotland Scale of Male Depression was used.
77. Williams, D. R., Herman, A., Stein, D. J., Heeringa, S. G., Jackson, P. B., Moomal, H., & Kessler, R. C. *Psychol Med.* 2008	To examine the twelve month prevalence, service use and demographic correlates of mental disorders in South Africa	South Africa, Cross-sectional, Men and women	The study did not address the effect that family changes have on mental disorders among men.	It indicated that a small proportion of those suffering from mental disorders sought treatment from the mental health sector.	The paper identified the prevalence of mental disorder and its correlates in South Africa. to apply currently.
78. Zhou, X, • Zheng Yan, Therese, H. *Social psychiatry and psychiatric epidemiology* 2013	To examine whether older never-married men were more predisposed to depression, low self-esteem and aggression.	China, Cross-sectional, Men	The paper should have also highlighted on the living arrangements of the men.	Men who never married were significantly more likely to have lower self-esteem, higher depression scores, higher aggression scores and suicidal thoughts	A qualitative study can help with experiences of never married men to explore what was depressing about not marrying.

				compared to married men.	
79. Brown, S. L. (2000). *Journal of health and social behavior*	To evaluate the effect of union type (cohabitation versus marriage) on depression.	United States, Longitudinal, Couples	None	Couples cohabiting had higher levels of depression than their married counterparts.	Higher levels of depression are due to higher instability of the cohabiter's relationship compared to those who are married.
80. Das-Munshi, J., Lund, C., Mathews, C., Clark, C., Rothon, C., & Stansfeld, S. (2016). *PloS one*,	To assess mental health disparities in adolescents growing up in South Africa.	South Africa, Cross-sectional, adolescents	The following variables were not controlled for stressful life events and academic stress, family history of mental illness and living with a parent with a mental disorder	There prevalence of common mental disorders was high among the adolescents growing up in Cape Town, South Africa.	The prevalence was even higher than that reported in the South African adult mental health surveys.
81. Hiyoshi, A., Fall, K., Netuveli, G., & Montgomery, S. (2015). *Social Science & Medicine*	To examine if remarriage compared with remaining divorced is also associated with a reduced depression risk.	Sweden,Longitudinal, Couples	None	Remarriage was associated with an elevated risk of depression compared with men who remained divorced. The benefits of marriage are outweighed by interpersonal or financial difficulties.	Men who were consistently married and never divorced reported reduced depression risk.
82. McKinnon, B., Harper, S., & Moore, S. (2013). *BMC public health*	To examine the relationship of living arrangements and depressive symptoms among older adults in sub-Saharan Africa	Sub-Saharan Africa, Cross-sectional, elderly people	Negative life events were not assessed and changes in family.	Living alone among the elderly was associated with a higher prevalence of depressive symptoms than individuals living with a working adult.	Three types of older living arrangements were looked at: 1) Single-generation household 2) Skipped-generation household 3) Multigenerational household
83. Rotermann, M. (2007).	To examine the relationship between the	Canada, Longitudinal, adults	Remarriage and solitary living	Dissolution of a marriage or co-habiting	Marital dissolution was increasingly associated with

Health Reports,	dissolution of a marital or cohabitating relationship and depression among Canadians aged 20 to 64.		could have been controlled for.	relationship was associated with depression, compared with those who remained with a spouse over the two-year period.	depression among men than women.
84. Tomita, A., Vandormael, A. M., Cuadros, D., Slotow, R., Tanser, F., & Burns, J. K. (2017). *Social psychiatry and psychiatric epidemiology*,	To examine whether the distance to the primary healthcare clinic (PHCC) was associated with risk of depression in KwaZulu-Natal Province, South Africa.	South Africa, Longitudinally,	The study did not control for family variables as predictors of depression	Distance to the PHCC was independently associated with increased depression risk, even after controlling for key socioeconomic determinants.	Minimizing the distance to PHCC through mobile health clinics and technology could improve mental health.
85. Tosi, M., & van den Broek, T. (2020). *Social Science & Medicine*, 113030.	To analyze the effect of marital break-up on the mental health of adults aged 50 or over to test the crisis model and the chronic strain model of divorce.	UK, Longitudinal, Adults	Social support and financial status should have been controlled for.	Older adults' depressive symptoms increase in the years before and upon union dissolution. Post-divorce adjustment is faster for childless adults than for parents.	To account for time-invariant confounders and distinguish between pre- and post-divorce effects, a fixed effects linear regression models.
86. Wu, Z., & Hart, R. (2002). *Journal of Marriage and Family*,	To examine the effects of marital and non-marital union transition on health	Canada, Longitudinal, Couples	None	Exiting marriage and cohabitation is associated with reduced physical health and mental health.	Union transition well explained.
87. Brownhill,	This study aimed to investigate the	Australia, Mixed-	None	Socialization has taught men	Masculinity is vital in understanding

S., Wilhelm, K., Barclay, L., & Parker, G. (2002). *International Journal of Mens Health*,	experience of depression, coping, and help seeking from men's perspectives.	method, Men and women		to suppress emotional pain. When they seek help, they report physical pain which does not link them to any emotional distress.	men's mental health. Masculinities determine whether men will disclose or seek help for depression.
88. Burger, R., Posel, D., & von Fintel, M. (2017). *Journal of Affective Disorders*,	To examine the relationship between negative household events and vulnerability to depression among South African adults for the period 2008-2012	South Africa, Longitudinal, Adults	The study did not control for other predictors such as family changes	serious illness of a household member, or the death of a family member who provided financial assistance were associated with depression	Pooled OLS estimates and fixed effects estimates were used.

Appendix B: Policy Brief Appendix

Policy Brief

Family change and Child maintenance effect on Men's Mental health in South Africa

BACKGROUND

Over the past two decades, there has been an increase in mental health illness in South Africa (Murray et al., 2014), with depression emerging as a highly prevalent outcome (Bateman, 2015). One person in three South Africans is likely to experience a mental disorder during their lifetime (Lund, 2015). A recent study using the National Income Dynamics Study (NIDS) indicated that 26.05% of adults in South Africa experience Significant Depressive Symptoms SDS (Mungai & Bayat, 2020). Although the prevalence of mental health issues among the general population is well-documented, there is a significant gap in research on the specific effect of family change on men's mental health outcomes in South Africa. This hinders the understanding of unique challenges faced by men in the context of family change.

The aim of this study was to understand men's mental health in the context of family change and child maintenance.

METHODS

Study population and sample: The quantitative part of the research used longitudinal secondary data from the National Income Dynamics Study (NIDS) Waves 1-5 (2008-2017) with a sample size of 30 381 men aged 18 and older. Primary data was collected from 30 men in Johannesburg

Study Design: A mixed method approach was conducted

FINDINGS

Men who changed to live alone were more likely to experience depressive symptoms and psychiatric or psychological disorders compared to men who did not go through a family change.

Men who changed to cohabit were more likely to experiences depressive symptoms.

Payment of child maintenance did not affect men's mental health but denying the fathers access to their children affected their mental health. Men cried narrating their challenges. Men do not want to be financial fathers only.

CONCLUSION

This study sheds light on the effect of family change and child maintenance on men's mental health outcomes in South Africa. The mental health outcomes which were examined include depressive symptoms and psychological or psychiatric disorders. The changing nature of the family in South Africa characterised by increasing cohabitation and living alone affect men's mental health.

Living alone is a risk factor for both mental health outcomes while cohabiting is a risk factor for depressive symptoms in men.



POLICY RECOMMENDATIONS

Men living alone and cohabiting require mental health support. Counselling should be done simultaneously with interventions that help men who are denied access to their children.

Community programs that address mental health needs of men undergoing family change should be done. Including educational campaigns that raise awareness about mental health implications of family change and the importance of seeking help.

Child access denial should be addressed, existing laws should ensure that both parents have equal access to the children.

Crying in men should be normalized through public awareness campaigns that challenge traditional notions of masculinity.

Acknowledgements

We would like to appreciate the Demography and Population Studies programme and the Consortium for Advanced Research Training in Africa (CARTA). CARTA is jointly led by the African Population and Health Research Center and the University of the Witwatersrand and funded by the Wellcome Trust (UK) (Grant No: 087547/Z/08/Z), the Carnegie Corporation of New York (Grant No--B 8606.R02), Sida (Grant No:54100029)" The statements made, and views expressed are solely the responsibility of the authors.

Appendix C: Informed consent form

INFORMED CONSENT FORM



Title of project: Family change and child maintenance effect on men's mental health in South Africa

Name of researcher: Marifa Muchemwa

I ……., agree to participate in this project. The research has been explained and I fully understand what my participation will involve. I agree to the following:

(Please circle the relevant options below)

I agree that my participation will remain anonymous	YES	NO
I agree that the researcher may use anonymous quotes in his/her research report	YES	NO
I agree that the interview may be audio recorded	YES	NO

Signature……

Name of participant…….....

Date…….

Signature……...

Name of person seeking consent…….....

Date…….....

Appendix D: Participant Information Sheet



Dear Sir/Madam

My name is Marifa Muchemwa. I am conducting a research as part of the fulfilment of my PhD in Demography and Population Studies at the University of Witwatersrand. I am investigating family changes and child maintenance effect on men's mental health in South Africa". The main aim of the study is to examine the changing nature of the family (union formation, marital dissolution, cohabitation, living alone) in South Africa and its impact on men's mental health.

I would like to invite you to take part in an interview. The interview might take approximately 1 hour 30 minutes to 2 hours. I also request permission to audio record using an audio recorder. The recording will be stored in a place which can be assessed by the researcher, and it will be deleted after 10 years. The data will be stored on a laptop which has a password known by the researcher only.

The participation in this study is at no personal costs, there are no direct benefits associated with participation and disadvantages if you choose not to participate or withdraw from the study. You are free to withdraw any time or not answer any questions you are not comfortable with. The interview will be confidential, no information that provides your identification will be published and anonymity will be ensured as your name will not be required in all stages of the research. A pseudonym will be used during the interviews and in the final research report. The interview will be stopped anytime you experience distress or discomfort and resume another time.

You can ask any questions during or after the research through contact details which are listed at the end of this document. The information provided in the interviews will be used in writing up the research report which will be available online on the University of the Witwatersrand

thesis repository. If you have any questions regarding the research and procedures to be undertaken in 2 the study, please feel free to contact the University of the Witwatersrand Human Research Ethics Committee (Non-Medical) on the following contact details: Telephone: +27(0) 11 717 1408 and email: hrecnon-medical@wits.ac.za

Yours sincerely,
Marifa Muchemwa

Researcher:
Marifa Muchemwa, 911428@students.wits.ac.za

Supervisor:
Professor Clifford Odimegwu, clifford.odimegwu@wits.ac.za, +27(0) 11 717 4056

Appendix E: Interview Guide

INTERVIEW GUIDE



Section A

Demographic information

1. How old are you?
2. What language do you speak?
3. Where you born in Johannesburg. If no, in which province were you born?
4. Are you employed?
5. Are you married? If no, are you in a relationship?
6. How many children do you have?
7. How many children are you paying child maintenance for?
8. What language do you speak?

Section B

Perceptions of men on child maintenance in South Africa

1. What does child maintenance mean to you?
2. Are you gladly paying child maintenance? If yes why, If No why?
3. How do you perceive the child maintenance system in South Africa? Does it consider your circumstances or your concerns as a man?
4. Do you think it is fair on your part to pay maintenance?
5. Are you happy paying child maintenance for children, not under your custody?
6. Do you have full custody of the child or children you are paying child maintenance for?
7. Do you think it is your responsibility to pay child maintenance?
8. Do you think your child benefits from the child maintenance you are paying? If yes in what ways, if not why?

The state's role in supporting fragile families in complexities around child maintenance

1. Do you think the state is supportive of men who encounter problems in accessing their children. If yes, in what ways, if not why is it not supportive?
2. Do you think the state is aware of the complexities surrounding child maintenance?
3. What do you think the state should do to assist you as men paying child maintenance in the challenges you encounter?
4. Are there any organisations that you know which offer help to men experiencing problems regarding child maintenance?

How masculinity plays itself in men regarding family changes, child maintenance and mental health

1. As a man do you at any moment feel that your role is undermined of being a father to the child you are paying child maintenance for?
2. Do you see your role as a man and father of the child still in place when paying child maintenance?
3. Does paying child maintenance still gives you control over your child or children. If not why, if yes how?
4. Do you at any point feel bothered or worried about how the money for child maintenance is used by the guardian in the custody of the child?
5. Do you at any moment feel that child maintenance is a burden in your life?
6. Do you sometimes feel depressed concerning the payment of child maintenance?
7. When you feel burdened or stressed what do you do?
8. Has your family supported you regarding child maintenance? If yes how, if no why?
9. Does your family approve you paying child maintenance?
10. After paying child maintenance are you able to provide the basic needs for your family?
11. Do you face any challenges when trying to see the children who are not in your custody?
12. Do you have anyone that you share with your concerns or problems you encounter due to child maintenance or access to your children?

Appendix F: Ethics Approval

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Muchemwa

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER: H20/09/34**
PROJECT TITLE	Family Changes and Child Maintenance effect on Men's Mental Health in South Africa
INVESTIGATOR(S)	Miss M Muchemwa
SCHOOL/DEPARTMENT	Social Sciences/
DATE CONSIDERED	18 September 2020
DECISION OF THE COMMITTEE	Approved Risk Level: Low
EXPIRY DATE	23 June 2025
DATE 24 June 2022	**CHAIRPERSON** _____ (Professor J Watermeyer)

cc: Supervisor : Professor C Odimegwu

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University. Unreported changes to the application may invalidate the clearance given by the HREC (Non-Medical)

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to submit an amendment of the protocol to the Committee. **I agree to completion of a regular progress report. For Minimal and Low studies, this is due annually on 31 December. For Medium and High Risk studies, this is due twice annually on 30 June and 31 December.**

Appendix G: Dofile

```
//Data weighting
//Post stratified weight
rename w1_wgt poststratified_weight
//Design weight
rename w1_dwgt design_weight
gen iweight=design_weight

//Converting to panel data
xtset pid year

///Dropping females
drop if w1_a_gen ~=1

//Dropping observations that only appear once in panel data
bysort pid: drop if _N==1

//Age
gen age = (w1_a_intrv_y - w1_a_dob_y)
recode age (-7991/-1325=.),gen (agee)
label values agee agee
label variable agee "agee"
ta agee

drop if agee <=17
ta agee

//Renaming
rename w1_a_dob_y dateof_birthyear
//Year of interview
rename w1_a_intrv_y year
//Province
rename w1_a_lv06prov current_province
//province respondent born in
rename w1_a_brnprov province_born
//Province before current location
rename w1_a_lvbfprov previous_province

//Independent variables
// highest education grade
ta w1_a_edschgrd,nol
recode w1_a_edschgrd (-9/-3=.) (25=0 "no education")(1/7=1 "primary")(8/15=2
"secondary"),gen(highesteduc_grade)
label values highesteduc_grade highesteduc_grade
label variable highesteduc_grade "highest school grade completed"
ta highesteduc_grade

//employment status
ta w1_a_em1,nol
recode w1_a_em1 (-8/-3=.)(2=0 "No")(1=1 "Yes"),gen(employment_status)
```

```
label values employment_status employment_status
label variable employment_status "Employment status"
ta employment_status

//Perceived health status
recode w1_a_hldes (-9/-3=.)(1=1 "Excellent")(2/3=2 "Good")(4=3 "Fair")(5=4
"Poor"),gen(perceived_healthstatus)
label values perceived_healthstatus perceived_healthstatus
label variable perceived_healthstatus "Perceived health status"
ta perceived_healthstatus

//Race
ta w1_a_popgrp,nol
recode w1_a_popgrp (-3=.)(1=1 "African")(2=2 "Coloured")(3=3 "Asian/Indian")(4=4
"white"),gen(race)
label values race race
label variable race "Population group"
ta race

//Current Marital Status
recode w1_a_marstt (-3=.)(1=1 "Married")(2=2 "Living with partner")(3=3
"Widow/widower")(4=4 "Divorced or separated") (5=5 "Never married"),gen(marital_status)
label values marital_status marital_status
label variable marital_status "current marital status"
ta marital_status

//Religion
recode w1_a_rel (-8/-3=.)(1=0 "No religion")(2=2 "Christianity")(3/7=3
"Other"),gen(Religion)
label values Religion Religion
label variable Religion "Religion"
ta Religion

//satisfaction level of life currently
ta w1_a_wbsat
recode w1_a_wbsat (-9/-3=.)(1/5=0 "not satisfied")(6/10=1 "Satisfied"),gen(satisfaction_life)
label values satisfaction_life satisfaction_life
label variable satisfaction_life "satisfaction level of life currently"
ta satisfaction_life

//Child maintenance
//Receiver's Relationship
recode w1_a_cgrel1 (-9/-3=.)(4=1 "Son or daughter")(3=0 "Other_familymember")(5/26=0
"Other_familymember"),gen(receiver_relationship)
label values receiver_relationship receiver_relationship
label variable receiver_relationship "Receiver's relationship"
ta receiver_relationship


//Child maintanence in the past 12 months
```

```
recode w1_a_cgyrv1 (-9/-3=.),gen(childmaintenance_twelve)
label values childmaintenance_twelve childmaintenance_twelve
label variable childmaintenance_twelve "Total amount of remittance in money sent in past 12
months"
ta childmaintenance_twelve

//Child maintennace
generate Child_Maintenance=.
replace Child_Maintenance=1 if childmaintenance_twelve<=480000 &
receiver_relationship==2
replace Child_Maintenance=0 if receiver_relationship==1

//Child Maintenance
recode childmaintenance_twelve (0/1000=1 "R1-R1000")(1001/2500=2 "R1001-
R2500")(2501/5000=3 "R2501-R5000")(5001/10000=4 "R5001-R10000")(10001/480000=5
"More than R10000"),gen(ChildManPaid)
label values ChildManPaid ChildManPaid
label variable ChildManPaid "Child maintenance in 12 months"

//Leaving those paying for their children
generate Child_Maintenance=.
replace Child_Maintenance=1 if childmaintenance_twelve<=480000 &
receiver_relationship==2
replace Child_Maintenance=0 if receiver_relationship==1

//HOUSEHOLD DERIVED
//PID of a person who answered
rename w1_h_respondent pid_answered

//Sampled Province (2011 Census)
rename w1_prov2011 sampled_province11

//Sample province(2001 Census)
rename w1_prov2001 sampled_province01
//Sampled Geotype (2011 Census)
rename w1_geo2011 sampled_geoptype11

//Sampled GeoType (2001)
ta w1_geo2001,nol
recode w1_geo2001 (1/2=0 "Rural")(3/4=1 "Urban"),gen(sampled_geotype01)
label values sampled_geotype01 sampled_geotype01
label variable sampled_geotype01 "Sampled GeoType 2001 census"
ta sampled_geotype01

//Income classification of household
ta w1_a_fwbrelinc
recode w1_a_fwbrelinc (-9/-3=.)(1/2=1 "above average income")(3=2 "average
income")(4/5=3 "below average income"),gen(income_household)
label values income_household income_household
label variable income_household "Income classification of household"
```

```
ta income_household

//Number of household residents
rename w1_hhsizer numbhoueseholds

///Socio-economic status
//Type of dwelling
ta w1_h_dwltyp,nolab
recode w1_h_dwltyp (-3=.),gen(dwelling_type)
label values dwelling_type dwelling_type
label variable dwelling_type "Type of dwelling"
ta dwelling_type

//household's main water source
ta w1_h_watsrc,nol
recode w1_h_watsrc (-3=.),gen(water_source)
label values water_source water_source
label variable water_source "Household's main water source"
ta water_source

//type of toilet facility available to household
ta w1_h_toi,nol
recode w1_h_toi(-5/-3=.),gen(toilet_facility)
label values toilet_facility toilet_facility
label variable toilet_facility "type of toilet facility available to household"
ta toilet_facility

//household's main source of energy/fuel for cooking
ta w1_h_enrgck,nol
recode w1_h_enrgck (-3=.),gen(sourceof_energycooking)
label values sourceof_energycooking sourceof_energycooking
label variable sourceof_energycooking "household's main source of energy or fuel for
cooking"
ta sourceof_energycooking

//refuse/rubbish is removed weekly by local authorities
ta w1_h_refrem ,nol
recode w1_h_refrem  (-5/-3=.),gen(refuse_removal)
label values refuse_removal refuse_removal
label variable refuse_removal "refuse/rubbish is removed weekly by local authorities"
ta refuse_removal

//own television
ta w1_h_owntel,nol
recode w1_h_owntel (-3=.),gen(own_televison)
label values own_televison own_televison
label variable own_televison "Does the household own at least one TV"
ta own_televison
```

```
//own fridge
ta w1_h_ownfrg,nol
recode w1_h_ownfrg (-3=.),gen(own_fridge)
label values own_fridge own_fridge
label variable own_fridge "Does the household own at least one fridge/freezer"
ta own_fridge


//own a radio
ta w1_h_ownrad,nol
recode w1_h_ownrad (-3=.),gen(own_radio)
label values own_radio own_radio
label variable own_radio "Ownership of a radio"
ta own_radio


//own a computer
ta w1_h_owncom,nol
recode w1_h_owncom(-3=.),gen(own_computer)
label values own_computer own_computer
label variable own_computer "Does the household own at least one computer"
ta own_computer


//own a telephone
ta w1_h_telln,nol
recode w1_h_telln (-3=.),gen(own_telephone)
label values own_telephone own_telephone
label variable own_telephone "Household has a landline telephone"
ta own_telephone


//own a cellphone
ta w1_a_owncel,nol
recode w1_a_owncel (-8/-3=.),gen(own_cellphone)
label values own_cellphone own_cellphone
label variable own_cellphone "Household has a cellphone available for regular use"
ta own_cellphone

///SOCIO ECONOMIC STATUS INDEX

//Multiple correspondence analysis for Socio-economic index
mca dwelling_type water_source toilet_facility sourceof_energycooking refuse_removal
own_televison own_fridge own_radio own_computer own_telephone own_cellphone

predict ses
sum ses
xtile ses_cat=ses,nq(3)

//converting to terciles
```

```
xtile ses_3=ses,nq(3)

//converting net income to terciles
xtile netincome_3=netincome,nq(3)

///COMMUNITY LEVEL VARIABLES
//Community domestic violence
xtile propdomesticviol_2=propdomesticviol,nq(2)
ta propdomesticviol_2
ta propdomesticviol_2 [iweight=design_weight]

//Community violence
xtile propneighviolence_2=propneighviolence,nq(2)
ta propneighviolence_2
ta propneighviolence_2 [iweight=design_weight]

//Community drug or alcohol abuse
xtile propdrugalcoabuse_2=propdrugalcoabuse,nq(2)
ta propdrugalcoabuse_2
ta propdrugalcoabuse_2 [iweight=design_weight]

//Community crime
xtile propcrime_2=propcrime,nq(2)
ta propcrime_2
ta propcrime_2 [iweight=design_weight]


//Community unemployment
xtile propEmployment_2=propEmployment,nq(2)
ta propEmployment_2
ta propEmployment_2 [iweight=design_weight]

//Community education
xtile propnoeducation_2=propnoeducation,nq(2)
ta propnoeducation_2
ta propnoeducation_2 [iweight=design_weight]

//Community poverty
xtile proppovertyy_2=proppovertyy,nq(2)
ta proppovertyy_2
ta proppovertyy_2 [iweight=design_weight]

//Community migration residential instability
xtile propmigration_2=propmigration,nq(2)
ta propmigration_2
ta propmigration_2 [iweight=design_weight]


//Level of urbanisation
xtile propurbanis_2=propurbanis,nq(2)
```

```
ta propurbanis_2
ta propurbanis_2 [iweight=design_weight]


//Community social cohesion
xtile propSocialcohesion_2=propSocialcohesion,nq(2)
ta propSocialcohesion_2
ta propSocialcohesion_2 [iweight=design_weight]

///DEPENDENT VARIABLE
//respondent bothered in the past weekly
ta w1_a_emobth,nol
recode w1_a_emobth (1=0 "Rarely or none")(2=1 "some or little")(3=2 "occasionally")(4=3
"All of the time")(-8/-3=.),gen(bothered)
label values bothered bothered
label variable bothered "was bothered"
ta bothered

//had trouble focusing in the past weekly
ta w1_a_emomnd,nol
recode w1_a_emomnd (1=0 "Rarely or none")(2=1 "some or little")(3=2 "occasionally")(4=3
"All of the time")(-8/-3=.),gen(trouble_focusing)
label values trouble_focusing trouble_focusing
label variable trouble_focusing "trouble focusing"
ta trouble_focusing

//felt depressed in the past week
ta w1_a_emodep,nol
recode w1_a_emodep (1=0 "Rarely or none")(2=1 "some or little")(3=2 "occasionally")(4=3
"All of the time")(-8/-3=.),gen(felt_depressed)
label values felt_depressed  felt_depressed
label variable felt_depressed  "was depressed"
ta felt_depressed

//felt that everything was an effort in the past week
ta w1_a_emoeff,nol
recode w1_a_emoeff (1=0 "Rarely or none")(2=1 "some or little")(3=2 "occasionally")(4=3
"All of the time")(-8/-3=.),gen(everything_effort)
label values everything_effort everything_effort
label variable everything_effort "every was effort"
ta everything_effort

//respondent felt fearful in the past week
ta w1_a_emofear,nol
recode w1_a_emofear (1=0 "Rarely or none")(2=1 "some or little")(3=2 "occasionally")(4=3
"All of the time")(-8/-3=.),gen(felt_fearful)
label values felt_fearful felt_fearful
label variable felt_fearful "was fearful"
ta felt_fearful
```

```
//sleep was restless in the past week
ta w1_a_emoslp,nol
recode w1_a_emoslp (1=0 "Rarely or none")(2=1 "some or little")(3=2 "occasionally")(4=3
"All of the time")(-8/-3=.),gen(sleep_restless)
label values sleep_restless sleep_restless
label variable sleep_restless "sleep was restless"
ta sleep_restless

//felt lonely in the past week
ta w1_a_emolone,nol
recode w1_a_emolone (1=0 "Rarely or none")(2=1 "some or little")(3=2 "occasionally")(4=3
"All of the time")(-8/-3=.),gen(felt_lonely)
label values felt_lonely felt_lonely
label variable felt_lonely "was lonely"
ta felt_lonely

//could not get going
ta w1_a_emogo,nol
recode w1_a_emogo (1=0 "Rarely or none")(2=1 "some or little")(3=2 "occasionally")(4=3
"All of the time")(-8/-3=.),gen(not_getgoing)
label values not_getgoing not_getgoing
label variable not_getgoing "was not getgoing"
ta not_getgoing

//was happy in the past week
ta w1_a_emohap,nol
recode w1_a_emohap (1=0 "Rarely or none")(2=1 "some or little")(3=2 "occasionally")(4=3
"All of the time")(-8/-3=.),gen(happy)
label values happy happy
label variable happy "felt happy"
ta happy

//hopeful about the future in the past week
ta w1_a_emohope,nol
recode  w1_a_emohope (1=0 "Rarely or none")(2=1 "some or little")(3=2
"occasionally")(4=3 "All of the time")(-9/-3=.),gen(hopeful)
label values hopeful hopeful
label variable hopeful "felt hopeful"
ta hopeful

//two positively phrased items have been reverse-scored
recode hopeful (3=0)(2=1)(1=2)(0=3)
recode happy (3=0)(2=1)(1=2)(0=3)


///DEPRESSION

//Calculating the depression score
ge depression_sc= bothered + trouble_focus + felt_depressed + everything_effort + hopeful+
felt_fearful + sleep_restless + happy + felt_lonely + not_getgoing
```

```
ta depression_sc

//Binary depression score
generate depression_ca=.
replace depression_ca=0 if (depression<10) & depression !=.
replace depression_ca =1 if (depression>=10) & (depression <=30)& depression !=.
label define depression_ca 0 "No" 1 "Yes"
label values depression_ca depression_ca
label variable depression_ca "depressive symptoms"
ta depression_ca

//replacing occupation for those not having one
replace Occupation=0 if Occupation==. & employment_status==0
label define Occupation 0 "none", add
replace netincome=0 if netincome==. & employment_status==0

//Checking missing values
misstable summarize current_province agee numbhoueseholds highesteduc_grade
employment_status perceived_healthstatus race race duration_married language Occupation
Religion imprt_religious netincome receiver_relationship childmaintenance_twelve
childmaintenance_thirty income_household perceived_househldincome satisfaction_life
sampled_geotype01 depression ses_3 debt negative_events
misschk current_province agee numbhoueseholds highesteduc_grade employment_status
perceived_healthstatus race race duration_married language Occupation Religion
imprt_religious netincome receiver_relationship childmaintenance_twelve
childmaintenance_thirty income_household perceived_househldincome satisfaction_life
sampled_geotype01 depression ses_3 debt negative_events, gen(miss)


//IMPUTATION
mi set mlong
mi register imputed childmaintenance_twelve debt ses_3 Religion
mi impute chained (mlogit) ses_3 Religion (regress) childmaintenance_twelve=
depression_sc, add(20) rseed(298721)
mi impute chained (logit)debt (mlogit) ses_3 Religion (regress) childmaintenance_twelve=
depression_sc, add(20) rseed(298721)


//Testing for Normality
//Shapiro-Wilk W test
swilk childmaintenance_twelve

//Jarque-Bera test
jb childmaintenance_twelve

//Testing for multicollinearity
regress depression_ca i.Race i.Age i.ses_quantiles_whole_dataset i.highesteduc_grade
i.employment_status i.perceived_healthstatus i.marital_status  i.current_province i.Religion
i.Number_Householdd i.sampled_geotype01 Social_Cohesion i.domesticviol i.drugalcoabuse
i.neighviolence i.crime i.Poverty_H i.migration i.family_change
```

```
vif

//Creating a time variables
tostring year,gen(datevar)
gen year2=date(datevar, "Y")
format year2 %td


//Characteristics of the men (All waves)
ta Marital_Status [iweight=design_weight]
ta Race [iweight=design_weight]
ta highesteduc_grade [iweight=design_weight]
ta employment_status [iweight=design_weight]
ta Occupation [iweight=design_weight]
ta income_household [iweight=design_weight]
ta ses_3 [iweight=design_weight]
ta perceived_healthstatus [iweight=design_weight]
ta Religion [iweight=design_weight]
ta Age [iweight=design_weight]
ta satisfaction_life [iweight=design_weight]
ta Number_Household [iweight=design_weight]
ta migration [iweight=design_weight]

//Bivariate analysis Kruskal-Wallis
kwallis childmaintenance_twelve, by(race)
kwallis childmaintenance_twelve, by(Age)
kwallis childmaintenance_twelve, by(debt)
kwallis childmaintenance_twelve, by(ses_quantiles_whole_dataset)
kwallis childmaintenance_twelve, by(highesteduc_grade)
kwallis childmaintenance_twelve, by(employment_status)
kwallis childmaintenance_twelve, by(perceived_healthstatus)
kwallis childmaintenance_twelve, by(Occupation)
kwallis childmaintenance_twelve, by(Marital_Status)
kwallis childmaintenance_twelve, by(current_province)
kwallis childmaintenance_twelve, by(Religion)
kwallis childmaintenance_twelve, by(Number_Householdd)
kwallis childmaintenance_twelve, by(sampled_geotype01)
kwallis childmaintenance_twelve, by(Net_income)

//Characteristics of men that have experienced depressive symptoms
bysort year: ta marital_status depression_ca,col chi2
bysort year: ta Race depression_ca,col chi2
bysort year: ta highesteduc_grade depression_ca,col chi2
bysort year: ta employment_status depression_ca,col chi2
bysort year: ta ses_quantiles_individual_waves depression_ca,col chi2
bysort year: ta perceived_healthstatus depression_ca,col chi2
bysort year: ta Religion depression_ca,col chi2
bysort year: ta Age depression_ca,col chi2
bysort year: ta satisfaction_life depression_ca,col chi2
```

```
bysort year: ta depression_ca

////Characteristics of men that have experienced psychiatric or psychological disorders
ta  marital_status Psych_psychiatricdisorder,col chi2
ta  Race Psych_psychiatricdisorder,col chi2
ta highesteduc_grade Psych_psychiatricdisorder,col chi2
ta employment_status Psych_psychiatricdisorder,col chi2
ta income_household Psych_psychiatricdisorder,col chi2
ta ses_quantiles_individual_waves Psych_psychiatricdisorder,col chi2
ta perceived_healthstatus Psych_psychiatricdisorder,col chi2
ta Religion Psych_psychiatricdisorder,col chi2
ta imprt_religious Psych_psychiatricdisorder,col chi2
ta Age Psych_psychiatricdisorder,col chi2
ta debt Psych_psychiatricdisorder,col chi2
ta negative_events Psych_psychiatricdisorder,col chi2
ta satisfaction_life Psych_psychiatricdisorder,col chi2
ta Number_Household Psych_psychiatricdisorder,col chi2


//Model One
xtmelogit depression_ca ||cluster:
estat icc
estat ic

//Model Two
xtmelogit depression_ca i.FChange i.Householdsize||cluster:,or
estat icc
estat ic


//Model Three
xtmelogit depression_ca i.Child_Maintenance||cluster:,or
estat icc
estat ic

//Model Four
xtmelogit depression_ca i.Race i.highesteduc_grade i.employment_status
i.perceived_healthstatus i.Religion i.Age i.satisfaction_life||cluster:,or
estat icc
estat ic

//Model Five
xtmelogit depression_ca i.income_household i.ses_quantiles_whole_dataset i.Poverty_H
||cluster:,or
estat icc
estat ic

//Model Six
xtmelogit depression_ca i.current_province i.sampled_geotype01 i.propdomesticviol_2
i.propneighviolence_2 i.propdrugalcoabuse_2 i.propcrime_2 i.propEmployment_2
```

```
i.propnoeducation_2 i.proppovertyy_2 i.propmigration_2 i.propurbanis_2
i.propSocialcohesion_2||cluster:,or
estat icc
estat ic

//Model Seven
xtmelogit depression_ca i.FChange i.Householdsize i.Race i.highesteduc_grade
i.employment_status i.perceived_healthstatus i.Religion i.Age i.satisfaction_life
i.Child_Maintenance i.income_household i.ses_quantiles_whole_dataset i.Poverty_H
i.current_province i.sampled_geotype01 i.propdomesticviol_2 i.propneighviolence_2
i.propdrugalcoabuse_2 i.propcrime_2 i.propEmployment_2 i.propnoeducation_2
i.proppovertyy_2 i.propmigration_2 i.propurbanis_2 i.propSocialcohesion_2||cluster:,or
estat icc
estat ic

//With interaction
xtmelogit depression_ca i.FChange i.Householdsize i.Race i.highesteduc_grade
i.employment_status i.perceived_healthstatus i.Religion i.Age i.satisfaction_life
i.Child_Maintenance i.income_household i.ses_quantiles_whole_dataset i.Poverty_H
i.current_province i.sampled_geotype01 i.propdomesticviol_2 i.propneighviolence_2
i.propdrugalcoabuse_2 i.propcrime_2 i.propEmployment_2 i.propnoeducation_2
i.proppovertyy_2 i.propmigration_2 i.propurbanis_2 i.propSocialcohesion_2
i.FChange##i.Child_Maintenance||cluster:,or
estat icc
estat ic
////Pscy

//Model One
xtmelogit Psych ||cluster:
estat icc
estat ic

//Model Two
xtmelogit Psych i.FChange i.Householdsize||cluster:,or
estat icc
estat ic

//Model Three
xtmelogit Psych i.Child_Maintenance||cluster:,or
estat icc
estat ic

//Model Four
xtmelogit Psych i.Race i.highesteduc_grade i.employment_status i.perceived_healthstatus
i.Religion i.Age i.satisfaction_life||cluster:,or
estat icc
estat ic

//Model Five
xtmelogit Psych i.income_household i.ses_quantiles_whole_dataset i.Poverty_H||cluster:,or
```

```
estat icc
estat ic

//Model Six
xtmelogit Psych i.current_province i.sampled_geotype01 i.propdomesticviol_2
i.propneighviolence_2 i.propdrugalcoabuse_2 i.propcrime_2 i.propEmployment_2
i.propnoeducation_2 i.proppovertyy_2 i.propmigration_2 i.propurbanis_2
i.propSocialcohesion_2||cluster:,or
estat icc
estat ic

//Model Seven
xtmelogit Psych i.FChange i.Householdsize i.Race i.highesteduc_grade i.employment_status
i.perceived_healthstatus i.Religion i.Age i.satisfaction_life i.Child_Maintenance
i.income_household i.ses_quantiles_whole_dataset i.Poverty_H i.current_province
i.sampled_geotype01 i.propdomesticviol_2 i.propneighviolence_2 i.propdrugalcoabuse_2
i.propcrime_2 i.propEmployment_2 i.propnoeducation_2 i.proppovertyy_2 i.propmigration_2
i.propurbanis_2 i.propSocialcohesion_2||cluster:,or
estat icc
estat ic


//Became married
recode FChange (0=0 "No change")(1=1 "Became married")(2/6=2
"other"),gen(Became_Married)
label values Became_Married Became_Married
label variable Became_Married "Became Married men"
ta Became_Married

drop if Became_Married ==2

//Cohabiting
recode FChange (0=0 "No change")(2=1 "cohabiting")(1=2 "other")(3/6=2
"other"),gen(Cohabiting)
label values Cohabiting Cohabiting
label variable Cohabiting "lives with a partner"
ta Cohabiting

drop if Cohabiting ==2

///Living alone
////Pscy
//Model One
xtmelogit Cohabiting ||cluster:
estat icc
estat ic
```

```
//Model Two
xtmelogit Cohabiting i.Race i.highesteduc_grade i.employment_status
i.perceived_healthstatus i.Religion i.Age ||cluster:,or variance
estat icc
estat ic

//Model Three
xtmelogit Cohabiting i.income_household i.ses_quantiles_whole_dataset i.Poverty_H
||cluster:,or variance
estat icc
estat ic

//Model Four
xtmelogit Cohabiting i.current_province i.sampled_geotype01 i.propdrugalcoabuse_2
i.propEmployment_2 i.propnoeducation_2 i.proppovertyy_2 i.propmigration_2
i.propurbanis_2 ||cluster:,or variance
estat icc
estat ic

//Model Five
xtmelogit Cohabiting i.Race i.highesteduc_grade i.employment_status
i.perceived_healthstatus i.Religion i.Age i.income_household i.ses_quantiles_whole_dataset
i.Poverty_H i.drugalcoabuse i.current_province i.sampled_geotype01 i.propdrugalcoabuse_2
i.propEmployment_2 i.propnoeducation_2 i.proppovertyy_2 i.propmigration_2
i.propurbanis_2||cluster:,or variance
estat icc
estat ic

///GEE

//QIC (selecting correlation structure for GEE)
qic childmaintenance_twelve Race Age ses_quantiles_whole_dataset highesteduc_grade
employment_status perceived_healthstatus Marital_Status current_province Religion
Number_Household sampled_geotype01, family(gamma) link(log) corr(independent)

qic childmaintenance_twelve Race Age ses_quantiles_whole_dataset highesteduc_grade
employment_status perceived_healthstatus Marital_Status current_province Religion
Number_Household sampled_geotype01, family(gamma) link(log) corr(exchangeable)

qic childmaintenance_twelve Race Age debt ses_quantiles_whole_dataset highesteduc_grade
employment_status perceived_healthstatus Marital_Status current_province Religion
Number_Household sampled_geotype01, family(gamma) link(log) corr(unstructured)


//GEE Analysis

//Final model Unadjusted (independent)
xtgee childmaintenance_twelve i.Race, family(gamma) link(log) corr(independent)
xtgee childmaintenance_twelve i.Age , family(gamma) link(log) corr(independent)
```

```
xtgee childmaintenance_twelve i.ses_quantiles_whole_dataset, family(gamma) link(log)
corr(independent)
xtgee childmaintenance_twelve i.highesteduc_grade, family(gamma) link(log)
corr(independent)
xtgee childmaintenance_twelve i.employment_status, family(gamma) link(log)
corr(independent)
xtgee childmaintenance_twelve i.perceived_healthstatus, family(gamma) link(log)
corr(independent)
xtgee childmaintenance_twelve i.Marital_Status, family(gamma) link(log) corr(independent)
xtgee childmaintenance_twelve  i.current_province, family(gamma) link(log)
corr(independent)
xtgee childmaintenance_twelve i.Religion, family(gamma) link(log) corr(independent)
xtgee childmaintenance_twelve i.Number_Householdd, family(gamma) link(log)
corr(independent)
xtgee childmaintenance_twelve i.sampled_geotype01, family(gamma) link(log)
corr(independent)
xtgee childmaintenance_twelve i.year, family(gamma) link(log) corr(independent)


//Final model Unadjusted (exchangeable)
xtgee childmaintenance_twelve i.Race, family(gamma) link(log) corr(exchangeable)
xtgee childmaintenance_twelve i.Age , family(gamma) link(log) corr(exchangeable)
xtgee childmaintenance_twelve i.ses_quantiles_whole_dataset, family(gamma) link(log)
corr(exchangeable)
xtgee childmaintenance_twelve i.highesteduc_grade, family(gamma) link(log)
corr(exchangeable)
xtgee childmaintenance_twelve i.employment_status, family(gamma) link(log)
corr(exchangeable)
xtgee childmaintenance_twelve i.Marital_Status, family(gamma) link(log)
corr(exchangeable)
xtgee childmaintenance_twelve  i.current_province, family(gamma) link(log)
corr(exchangeable)
xtgee childmaintenance_twelve i.Religion, family(gamma) link(log) corr(exchangeable)
xtgee childmaintenance_twelve i.Number_Householdd, family(gamma) link(log)
corr(exchangeable)
xtgee childmaintenance_twelve i.sampled_geotype01, family(gamma) link(log)
corr(exchangeable)
xtgee childmaintenance_twelve i.year, family(gamma) link(log) corr(exchangeable)


//Final model Unadjusted (unstructured)
xtgee childmaintenance_twelve i.Race, family(gamma) link(log) corr(unstructured)
xtgee childmaintenance_twelve i.Age , family(gamma) link(log) corr(unstructured)
xtgee childmaintenance_twelve i.ses_quantiles_whole_dataset, family(gamma) link(log)
corr(unstructured)
xtgee childmaintenance_twelve i.highesteduc_grade, family(gamma) link(log)
corr(unstructured)
xtgee childmaintenance_twelve i.employment_status, family(gamma) link(log)
corr(unstructured)
xtgee childmaintenance_twelve i.perceived_healthstatus, family(gamma) link(log)
```

```
xtgee childmaintenance_twelve i.Marital_Status, family(gamma) link(log) corr(unstructured)
xtgee childmaintenance_twelve  i.current_province, family(gamma) link(log)
corr(unstructured)
xtgee childmaintenance_twelve i.Religion, family(gamma) link(log) corr(unstructured)
xtgee childmaintenance_twelve i.Number_Householdd, family(gamma) link(log)
corr(unstructured)
xtgee childmaintenance_twelve i.sampled_geotype01, family(gamma) link(log)
corr(unstructured)

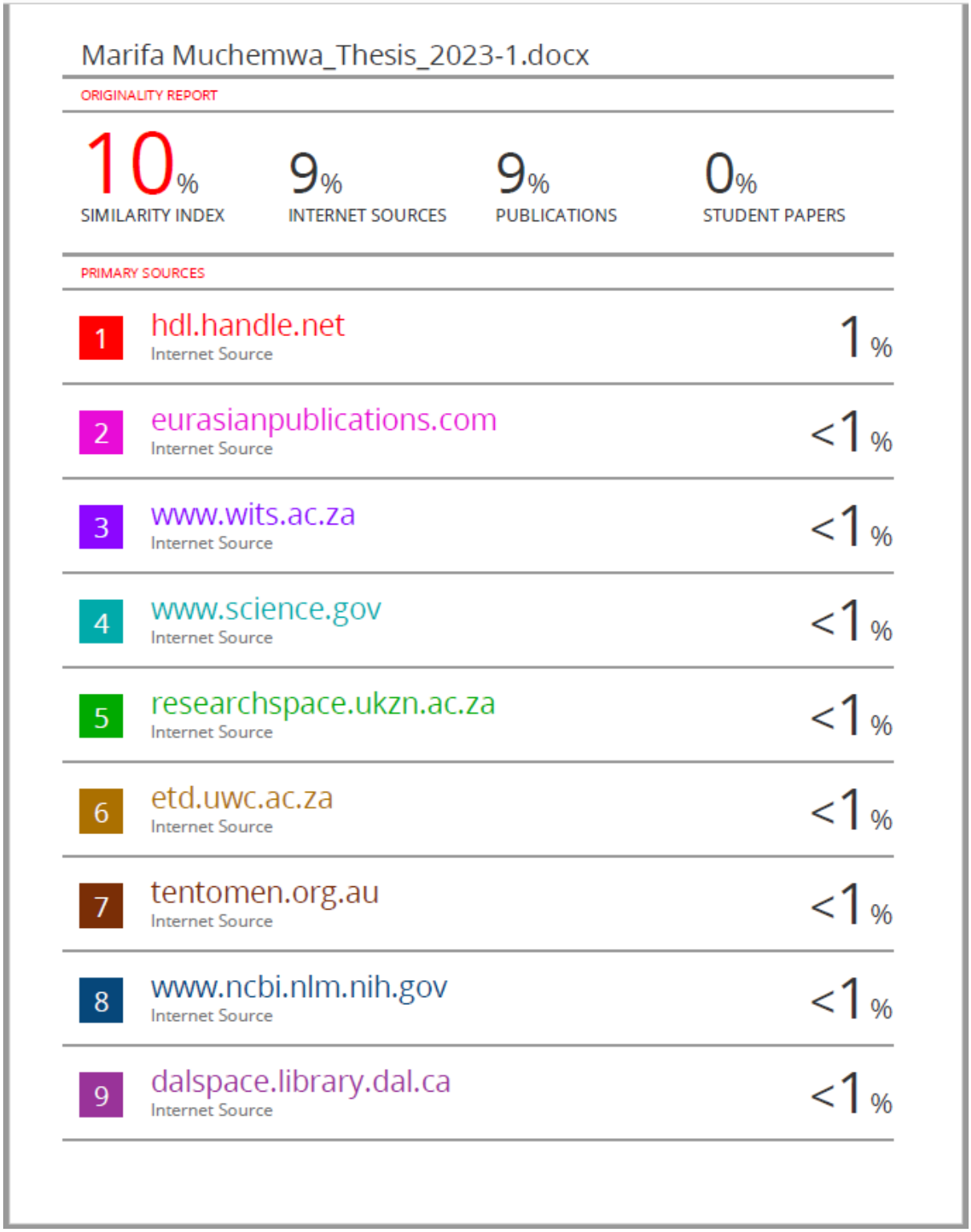

///Final analysis gee (Adjusted)
xtgee childmaintenance_twelve i.Race i.Age i.ses_quantiles_whole_dataset
i.highesteduc_grade i.employment_status i.perceived_healthstatus i.Marital_Status
i.current_province i.Religion i.Number_Householdd i.sampled_geotype01, family(gamma)
link(log) corr(independent)

xtgee childmaintenance_twelve i.Race i.Age i.debt i.ses_quantiles_whole_dataset
i.highesteduc_grade i.employment_status i.perceived_healthstatus i.Occupation
i.Marital_Status  i.current_province i.Religion i.Number_Householdd i.sampled_geotype01
netincome, family(gamma) link(log) corr(exchangeable)

xtgee childmaintenance_twelve i.Race i.Age i.debt i.ses_quantiles_whole_dataset
i.highesteduc_grade i.employment_status i.perceived_healthstatus i.Marital_Status
i.current_province i.Religion i.Number_Householdd i.sampled_geotype01, family(gamma)
link(log) corr(unstructured)

//Robustness (SEmi-robust)
putdocx begin
putdocx table Table1=etable
xtgee childmaintenance_twelve i.Race i.Age i.debt i.ses_quantiles_whole_dataset
i.highesteduc_grade i.employment_status i.perceived_healthstatus i.Marital_Status
i.current_province i.Religion i.Number_Householdd i.sampled_geotype01 i.year,
family(gamma) link(log) robust corr(independent)
putdocx table Table1=etable,border()
putdocx save ADJ
```

Appendix G: Turnitin Report



Marifa Muchemwa_Thesis_2023-1.docx

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