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UNDER-FIVE MORTALITY AMONG CHILDREN RAISED IN NON-ORPHANED KINSHIP CARE IN SOUTH AFRICA: A MIXED-METHODS STUDY



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ABSTRACT

Background Non-orphaned kinship care is a family arrangement in which children are raised by relativesin the absence of their biological parents who are alive but are unable to provide parental care. In South Africa, many non-orphaned children live in households where aunts, uncles, or grandparents play the primary caregiver role. Literature has shown that 65% of children (both orphaned and non-orphaned) who do not live in the same household as their biological parents, reside with their grandmothers, close to 20% reside with aunts, 6% with additional extended kin and only 1% reside with non-related adults. Although kinship care is associated with a number of benefits, the spatial diffusion of children to grandparents and other extended kin has been found to be coupled with negative child health outcomes. The issue of under-five mortality is a major public health concern that has been largely debated in the fields of Demography, Public Health and Social Sciences. Under-five mortality is defined as a death that has occurred between birth and the fifth birthday. Several scholars have made considerable efforts to establish individual, household and community-level factors that explain under-five mortality. Scholars have identified maternal individual, household and community-level characteristics such as maternal education, maternal age, breastfeeding status, wealth status and place of residence as the main contributors of under-five mortality. Under-five mortality has received considerable attention in existing demographic literature in relation to family structure although the mortality risks of children raised in alternative care contexts, particularly non-orphaned children raised by extended family members, remain largely unknown.Therefore, this study aimed to investigate under-five mortality in kinship care to examine the role of extended kin on child survival, especially given how the living arrangements of kin caregivers and the kinship system in itself, plays a pivotal role in influencing child health outcomes. This was done by examining how sociodemographic factors, health-seeking behaviours and familial characteristics of kin caregivers influence under-five mortality among children raised in non-orphaned kinship care in South Africa.

Methodology This study employed an explanatory sequential mixed-methods design. This research design involves using both quantitative and qualitative research approaches in two distinct phases. The first phase is the analysis of quantitative data, followed by the collection and analysis of qualitative data. The outcome variable in this study was under-five mortality and children who had died before the observation period were right censored. For the quantitative phase, secondary data obtained from the 2014/15 to 2017 (Wave 4 to 5) South African National Income Dynamics Survey (NIDS) was analysed. The weighted sample size of under-five children (using appropriate NIDS sampling weights) who were living with a kin-caregiver in 2014/15 (Wave 4) was 126,859.

These children were then followed to investigate their probability of dying in the year 2017 (Wave 5). The weighted sample size of under-five deaths obtained among children raised by kin in Wave 5 was 7,761. Event History Analysis was employed in the study using a series of Kaplan-Meier limit product estimators and Cox Proportional Hazard Regression models. In the follow up qualitative phase, in-depth interviews that explored the influence of kin caregiver health-seeking behaviours and familial characteristics on child survival were conducted. This was conducted with 24 kin caregivers, from the Eastern Cape and KwaZulu-Natal provinces between the period February – April 2019, to help explain and provide an in-depth understanding of the quantitative results. Various methodological strategies were employed in order to ensure validity and reliability of the qualitative findings in order to complement the quantitative findings.

Results and Findings The Kaplan-Meier estimates in the quantitative phase showed that there are differences in the hazards of under-five mortality by type of kin caregiver. The hazard of death was highest among children raised by grandparents (almost 80%), followed by children raised by aunts or uncles (>75%). Lower mortality hazards were observed among children who were raised by other extended family members. Key results that emerged from the adjusted Cox Proportional Hazard Regression models showed that grandparent and aunt or uncle perceived health status and age had a significant influence on under-five mortality among children in their care. Results showed that there were 22% increased hazards of death among children whose grandparents perceived their health to be excellent or very good. Further, there were 10% increased hazards of death among children whose aunts or uncles also perceived their health to be excellent or very good. Children whose grandparents were 60 years and above had 22% increased hazards of dying before age 5. Amongst children living with aunts or uncles between the age groups 30-34 there was a 6.87 times higher hazard of death. Perceived health status of non-orphaned under-five children was a child characteristic that had a significant influence on under-five mortality among children raised by grandparents and aunts or uncles. Mortality risks were highest among children who were perceived to have excellent or very good health by their grandparents and aunts or uncles. Perceived health status had a significant influence on under-five mortality. Among children raised by grandparents it was 22.9 times higher and 48% higher among children raised by aunts or uncles who perceived the children's health to be excellent or very good.

Qualitative findings emerging from the thematic analysis adequately explained and corroborated the quantitative results. Various health-seeking practices and beliefs in particular notions and perceptions held by kin caregivers pertaining to health status and illness such as increased reliance in traditional medicine and traditional healers, notion of witchcraft and faith healing were significant impediments that contributed to kin caregivers not accessing healthcare services for the

children under their care. In addition, the family environment has helped provide an understanding of the child's health outcomes as the characteristics of families emerging from the findings have emerged as important determinants of health. Also, the way the family functions and the support and care, or lack thereof, that family members provide to each other influences the families' subsequent life course outcomes. Specifically, among children raised in such a family institution.

Conclusions The findings of this study show that the survival of a child is influenced greatly by complex interactions that occur at the individual and family level. Importantly, the findings suggest that the individual characteristics of kin caregivers, healthcare preferences and behaviours and their family environments are risk factors. These risk factors play a crucial role in compromising the ability of kin caregivers to provide adequate care. These factors also affect caregivers' ability to provide a conducive caregiving environment to the children under their care, rather than the kinship system itself. These circumstances expose children placed under such care to various risks that may be detrimental to their health and development.

Policy and Research Recommendations Kin caregivers need to be provided with adequate counselling and support services to enable them to feel equipped and ready enough to assume the caregiving role. Child welfare authorities need to achieve this by equipping kin caregivers with the necessary knowledge and skills needed to provide adequate care to children. This will ultimately foster positive developmental outcomes. In addition, kin caregivers can be provided with informative training videos that educate them on how to handle situations pertaining to childcare. Further research, in particular longitudinal research, should be conducted to examine the multiple transitions or placement instability in kinship care. Such studies must also investigate the subsequent effect this may have on child developmental outcomes and wellbeing. Such research will provide an important groundwork in understanding this complex relationship and the life trajectories of non-orphaned children who experience these family transitions.

Keywords: *Under-five mortality; Child health; Kinship care; Non-orphaned kinship care; Child Welfare; South Africa; Event History Analysis; Kaplan-Meier limit product estimators.*

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LIST OF ACRONYMS

CARMMA - Campaign on Accelerated Reduction of Maternal and Child Mortality

CCPP - Child Care and Protection Policy

DoH - Department of Health

DSD - Department of Social Development

HDSS - Health and Demographic Surveillance Site

HREC - Human Research Ethics Committee

MDGs - Millennium Development Goals

NCDs - Non-Communicable diseases

NIDS - National Income Dynamics Survey

OVC - Orphaned and Vulnerable Children

SDGs - Sustainable Development Goals

WHO - World Health Organisation

DECLARATION

I, Khuthala Mabetha, hereby declare that this thesis is my own original work. All secondary material that has been utilised in this study has been carefully acknowledged and referenced according to the American Psychological Association (APA) referencing style.

This thesis is being submitted for the degree of Doctor of Philosophy in Demography and Population Studies at the University of the Witwatersrand, Johannesburg (South Africa).

Furthermore, I proclaim that this thesis has not been submitted before in part or in full to other universities for any other examination or degree purposes.



Khuthala Mabetha

Student Number: 545817

27 day of October 2021

DEDICATION

This thesis is dedicated to my Almighty Lord (my saviour, comforter and provider), my beloved parents Jabulisile and Calvin Mabetha, aunt, and uncle, Duduzile Elsie and Khayalakhe Booi, Grandmother Kholeka Mabetha. I also dedicate this thesis to my supervisors Professors Nicole De Wet-Billings and Clifford Odimegwu, who have supported me throughout this journey and have been my pillars of strength. I will forever be grateful for your patience and encouragement. God Bless you abundantly. I would also like to dedicate this thesis to my late maternal grandmother, Maria Khuzwayo, who believed in me and would have been proud of my achievements.

To my little sister Nondumiso, ***Forti nihil difficilius- "Nothing is too difficult for the brave***". May you always live according to this principle and may this be an inspiration for you to work hard in life. Always aim high and you shall reap great rewards. Much love!

Most importantly, to all the kin caregivers, the role you have assumed has been guided by the heart - and done out of love. May God bless you abundantly for offering yourselves selflessly in assuming the primary caregiver role, in hopes of providing comfort and support. You are truly appreciated.

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under your care. I truly pray that this work will help open avenues that will be of great assistance to you. May God bless you for taking on a role that most people would not be willing to take on.

CHAPTER ONE
INTRODUCTION TO THE STUDY

1.1. Background

Families and household arrangements are ever-changing as they are constantly responding to economic, political, and social factors (Sooryamoorthy & Makhoba, 2016; Hall et al., 2018; Hall & Posel, 2019). Globally, the family institution is experiencing changes. South Africa is a country known to have dynamic household living arrangements, fewer people entering marital unions, and a rise in households in which adult females are the sole or main income generators and decision-makers (Hall et al., 2018). In South Africa, family structures and responsibilities have changed over time (Mokone, 2014; Sooryamoorthy & Makhoba, 2016). The family institution is essentially multidimensional in nature. It affects and is affected by the social structure - the various socio-economic, cultural, and political institutions within society (Amoateng, 2007; Hall et al., 2018). The extended family institution in South Africa has transformed over time, due to the process of urbanisation and modernisation (Sooryamoorthy & Makhoba, 2016). Other factors that have contributed to changes in the structure, functioning and processes of families which have resulted in the complex family compositions in particular, the extended family institution are poverty, divorce, violence, unemployment, as well as mortality and morbidity attributable to the HIV/AIDS epidemic (Poggenpoel et al., 2017). Moreover, urban economic and educational opportunities, urban residential limitations, and cultural and familial ties to rural homestead, has intensified the phenomenon of an extended family institution (Rabe, 2017c; Knijn & Patel, 2018). The traditional family was conventionally the nuclear family and other extended kin. This has now been replaced with new forms of living arrangements due to family instability, death, desertion, and marital dissolution (Mokone, 2014). These changes have resulted in changing family roles. Traditionally, most children who were orphaned would be placed under the care of relatives who assumed full care and responsibility of the children (Hill, 2010; Mohale, 2013; Mtshali, 2015). However, the last few decades have seen an increase in family arrangements whereby relatives provide primary care (kin-caregivers) to children who are non-orphaned (Broad, 2007; Ariyo et al., 2018; Cudjoe et al., 2019; Cudjoe et al., 2020).

Kinship care refers to a family arrangement in which children receive primary care from relatives, instead of their biological parents (Hill, 2010; Kelley & Whitley, 2014; Rubin et al., 2017; Gibson et al., 2020). There are three main categories of kinship care namely: (1) informal

kinship care, (2) formal kinship care and (3) voluntary kinship care. Informal kinship care occurs when children receive primary care from relatives, on an ongoing basis, without the intervention of child welfare authorities or government intervention (Roby, 2011; Butler, 2015). Conversely, formal kinship care occurs when children receive care from relatives because of an arrangement that has been made by the government or child welfare authorities, with the relatives of the child (Strozier & Krisman, 2007; Winokur et al., 2008; Roby, 2011). Voluntary kinship care occurs when children receive primary care from relatives with the involvement of child welfare authorities, but in the absence of any legal custody or court involvement (Child Welfare Information Gateway, 2016). Within these categories, kinship care exists in two main forms - orphaned kinship care and non-orphaned kinship care. Orphaned kinship care occurs when children aged 0-17 years, who have lost one or both parents to death, are raised by relatives. On the other hand, non-orphaned kinship care occurs when children are raised primarily by extended kin despite having one or both parents alive (Broad, 2007). In this study, children who are in non-orphaned kinship care were investigated.

The number of non-orphaned children living with kin-caregivers has increased significantly over the past 20 years (Geen, 2004). Between 17% and 22% of under-five children did not receive primary care from either of their living biological parents throughout the periods of 2002-2012 (Statistics South Africa, 2013). These children mainly received primary care from their grandparents (Statistics South Africa, 2013). Additionally, a total of 19% of under-five children did not receive primary care from either of their living biological parents (Statistics South Africa, 2012). Overall, 10% of infants and 17% of children between the age group 1-2 years received primary care from their grandparents. The remaining 15% of under-five children lived in households headed by other relatives (Statistics South Africa, 2012). In addition, 62% of children living in South Africa have been reported to be raised in extended family households (Hall et al., 2018). Another study showed provincial differences in the number of non-orphaned children living with relatives. Over a third (35%) of non-orphaned children in the Eastern Cape were raised by relatives, 13% in Gauteng, and 12% in the Western Cape (Meintjies & Hall, 2011). These patterns remained consistent between 2002 and 2011 (Meintjies & Hall, 2011). Recent literature has shown that of the estimated number of close to 20 million children who reside in South Africa, 20.9% of these children whose parents are alive, do not live with these parents (Hall et al., 2017). In addition, 65% of children (both orphaned and non-orphaned) who do not live in the same household as their biological parents, reside with their grandmothers, close to 20% reside with aunts, 6% with additional extended

kin and only 1% reside with non-related adults (Mkhwanazi et al., 2018). Moreover, a comparative study of 49 countries that examined the structure and composition of families indicated that despite the marked increases in family changes on a global level, over the last 50 years, most children have a higher likelihood of being raised in nuclear families except in South Africa (Child Trends, 2014).

With the gradual emergence of this form of family structure, considerable efforts have been made by scholars to explore factors that are associated with the shift from parental care to non-orphaned kinship care. Generally, the unusual shape of families in South Africa is to some extent historically and culturally determined, as children have been traditionally raised by grandparents. This has been done to strengthen family attachments, intergenerational learning, as well as draw on the ability of out-of-work relatives to assume the primary caregiver role (Russell, 2003). Literature has shown that widespread labour migration in South Africa has also contributed to an increased number of non-orphaned children receiving primary care from relatives (Mokone, 2014). In fact, even earlier studies have shown that the increased mobility of people within societies has had a major effect on the family institution (Chipungu & Everett, 1998). This is because if a child is raised in a family institution where family members are geographically segregated, then a child has an increased likelihood of being placed away from their nuclear home (Forrest & Rushton, 1990). Furthermore, research has also found parental unemployment, parental drug and alcohol abuse, lack of housing, child abandonment, abuse, and neglect to be other significant reasons (Blackie, 2015; Boning & Ferreira, 2014). Moreover, other studies suggest that non-orphaned kinship care is attributed to the shortages of available foster care placements and family disruptions such as marital dissolution, separation, remarriage as well as removal of children from the primary parental home due to parental incarceration, neglect or abandonment (Winokur et al., 2008; Backhouse & Graham, 2010; Green & Goodman, 2010).

Living arrangements have been found to play a pivotal role in children's' health outcomes (Akwara et al., 2010). Some research conducted in South Africa has provided empirical evidence of the benefits of kinship care. The placement of a child with relatives is reported to reduce the grief that is caused by relocating and being separated from parent(s) (Roby, 2011). In addition, kinship care reduces the possibility of the child being subjected to multiple placements and keeps children within their biological families (Ngwabi, 2015). Further, care is beneficial as the degree of relatedness is vital with regards to the quality of care that a child

receives from relatives (Bishai et al., 2013), and provides stability, a greater sense of identity and is also associated with fewer behavioural problems (Assima, 2013). Moreover, kinship care has been reported to preserve children's' family and school ties (Winokur et al., 2014; Denby, 2015; Davey, 2016; Donoghue & Stacey, 2018). It also helps foster positive long-term outcomes such as good physical and mental health, academic achievement and helps children develop strong personal and social relationships (O'Brien, 2012; Bramlett et al., 2017; Epstein, 2017). Finally, kinship care also enables children to live in a familiar environment (Font, 2015).

Despite these benefits, other research has established that children who reside with relatives also experience adverse outcomes (Nandy et al., 2011; Broad et al., 2013; Boning & Ferreira, 2014; Szilagyi et al., 2015; Fortune, 2016; Bramlett et al., 2017; Patel et al., 2017; Breman et al., 2018;). To illustrate this, old empirical evidence indicated that although kinship care is largely deemed to be beneficial to children placed under such care, placements may be deemed unsuitable due to the parenting ability, age, physical ability, place of residence and the family relationships of the specific primary kin caregiver (Connolly, 2003). Several studies have investigated the implication of the death of a parent on the survival of a child, demonstrating that the death of one or both parents increases the risk of death of their children (Atrash, 2011; Cas et al., 2014; Houle et al., 2015; Miller & Belizán, 2015; Scott et al., 2017). Literature has also examined the influence of parental death on children and families. Being an orphan significantly reduces the chances of a child's survival, independent of who assumes full care of the child - including kin (Remes et al., 2010; Atrash, 2011). This study thus served to expand on current knowledge, and shed new light, on non-orphaned kinship care by examining one of the adverse outcomes – the mortality risk among these children.

The spatial diffusion of children to grandparents and other extended kin has been reported to negatively influence child outcomes (Roby, 2011). A study that examined the influence of kin on the survival of children in rural Ethiopia found that 15% of children placed under the care of relatives died before age five, while 14% died before the age of three (Sear et al., 2002). Another study in Gambia examined the effect of kin on child mortality. This study found that there were 179.9 under-five deaths per 1000 of under-five children living with maternal grandmothers in Gambia (Sear et al., 2002). Furthermore, it has been found that children living with relatives often experience a burden of illness and disease that is disproportionally high, and often results in increased risks of mortality (Radel & Bramlett, 2014; Gao et al., 2016). Children who are raised by relatives tend to receive less attention and social protection support

from welfare authorities, which results in their living circumstances remaining largely unmonitored (Lin, 2014; Bramlett et al., 2017). As a result, such children face the risk of having their rights violated which may consequently affect their development (Roby, 2011). One study showed that kinship care does not always guarantee that a child will receive proper care and support from caregivers (Assim, 2013). This is because there have been reports of children who are raised in such care obtaining unequal treatment in the household with regards to food, education, health care and other forms of support, in relation to biological children (Assim, 2013). These findings thus warranted examining the mortality risks of non-orphaned children raised n Kinship care in South Africa.

1.2. Problem of the Study

Goal 4 of Target 5 of the Millennium Development Goals (MDGs) for South Africa set for the year 2015 was to reduce under-five mortality rates to 20 deaths per 1000 live births (Maluleke & Chola, 2015). Although improvements have been made in reducing under-five mortality rates in several regions, under-five mortality remains a major problem (Houle et al., 2013; Acehampong et al., 2019; Ekholuenetale et al., 2020). Global estimates show a substantial decline in the levels of under-five mortality. Globally, the mortality rate declined from 93 deaths per 1000 live births in 1990 to 39 deaths per 1000 live births in 2018 (Naz et al., 2020). However, sub-Saharan Africa continues to have the highest under-five mortality rates on the globe. Ten (10) countries in the sub-Saharan African region have high prevalence rates of under-five mortality in both the region and the world (Naz et al., 2020). The highest levels of under-five mortality are reported in The Democratic Republic of Congo (88 deaths/1000 live births), Benin (92 deaths/1000 live births), Mali (97 deaths/1000 live births), South Sudan (98 deaths/1000 live births), Guinea (100 deaths/1000 live births), Sierra Leone (105 deaths/1000 live births), Central African Republic (116 deaths/1000 live births), Chad (118 deaths/ 1000 live births), Nigeria (119 deaths/1000 live births) and Somalia (121 deaths/1000 live births) (World Bank Development Indicators, 2018).

Trends in under-five mortality indicate a marked decrease in South Africa and are lower than other parts of Africa. However, South Africa failed to meet its MDG target as the rate has been 34.4 deaths per 1000 live births since 2014-2015 (Maluleke & Chola, 2015). Another study found that under-five mortality in South Africa is around 37 to 40 deaths per 1000 live births

in 2018 (Bamford et al., 2018). Access to basic healthcare services, particularly of children who live in poor circumstances in South Africa, has been found to be very low (Buchner-Eveleigh, 2016) This has resulted in increased exposure to several health problems (Buchner-Eveleigh, 2016). The impact of both pneumonia and diarrhoea has been found to account for one-third of all under-five deaths in South Africa (Maluleke & Chola, 2015). In addition, South Africa continues to face challenges concerning complete coverage of crucial interventions that would reduce under-five mortality, including routine immunisations (Nkonki et al., 2011; Verguet et al., 2012; Prioreschi, 2020).

The issue of health and mortality has also been studied extensively in various contexts of South Africa. The South African government has made significant economic investments in health and healthcare. However, these investments have not translated into substantial improvements in the health of South African citizens (van Rensburg & Engelbrecht, 2012). For instance, accelerating rates of chronic diseases, non-communicable diseases (NCDs), the HIV and AIDS epidemic, and poor access to basic services have hindered the ability to achieve good health among all citizens (Christian, 2014). Furthermore, despite increases in the provision of public health facilities in the country, access to healthcare has remained a general problem in the country (McLaren et al., 2013). Also, inequities in the provision of healthcare services exist in the country, with the African Black population displaying the poorest access to affordable and quality health services (Benatar, 2013). Given this background, for South Africa to achieve the Sustainable Development Goal (SDG) target of lessening the under-five mortality rate to less than 25 per 1000 live births by 2030 (Bamford et al., 2018), previously unknown contributors to under-five mortality need to be examined.

Several scholars have made considerable efforts to establish factors that explain under-five mortality in South Africa. Scholars have identified maternal individual, household, and community-level characteristics as main contributors of under-five mortality. These include, amongst others, maternal education, maternal age, wealth status and place of residence (Argeseanu, 2004; Hossain & Islam, 2009; Worku, 2009; Buwembo, 2010; Kyei, 2011; Worku, 2011; Zewdie, 2014; Hlongwa, 2016; Bija, 2019; Rademeyer, 2019; Motsima et al., 2020). Moreover, literature has shown that family structure plays a pivotal role in child survival (Bernadi et al., 2013; Freeman & Brewer, 2013). For instance, previous studies have found that single motherhood, marital instability, cohabitation, and polygyny are significant predictors of under-five mortality in Ghana, Nigeria, Zambia, Cameroon, and the Democratic Republic of

Congo (Adedini, 2014; Clark & Hamplovà, 2013; Ntoimo & Odimegwu, 2014; Remes et al., 2010; Van Bodegom et al., 2012).

Family and household composition has been found to influence child mortality significantly (Houle, 2013). Furthermore, the diffusion of children to grandparents and other extended kin is reported to negatively influence child outcomes (Roby, 2011). Overall, the general health of non-orphaned children who are raised in kinship care has become a global concern, as such children often present with various mental, physical, emotional and behavioural challenges (Galehouse et al., 2010; Raghavan et al., 2010; Kelley et al., 2011; Blythe, 2012; Bramlett et al., 2017; Lee et al., 2020; Stene et al., 2020). Consequently, kin caregivers thus serve as a major determinant of child health outcomes (Beal & Greiner, 2016; Negussie et al., 2019). Although kinship care is often viewed to be altruistic and reciprocal, it is not always beneficial for a child who is placed under such care (Block, 2014). Previous literature has shown that non-orphaned children who are raised in kinship care have poorer health outcomes than children who are raised in other contexts (Vandivere et al., 2012; Bramlett & Radel, 2014; Hayduk, 2014; Rapoport et al., 2020). Children who are raised by kin caregivers are also less likely to obtain important child healthcare services and measures taken for disease prevention - such as check-ups, patient counselling, and screenings (Berman & Carpenter, 2014). Thus, children who are raised by kin-caregivers are documented to lack health coverage, lack frequent caregiving, and are often found to be in comparatively poor health, which may result in increased mortality risks (CARE, 2015; Szilagyi et al., 2015; Lohr & Jones, 2016; Seltzer et al., 2017; Flaherty et al., 2019).

While there is substantial literature that examines maternal characteristics and various family structures in relation to under-five mortality in sub-Saharan African, several gaps persist. Although non-orphaned kinship care is practiced in South Africa, the mortality risks of non-orphaned under-five children who are raised by extended kin remains largely unknown. Secondly, the individual and household characteristics of kin-caregivers on the mortality risks of these under-five children have also not been investigated in South Africa. This study therefore investigated under-five mortality among children raised in non-orphaned kinship care in South Africa.

1.3. Research Questions

1.3.1. Main question

How do sociodemographic factors, health-seeking behaviours, and familial characteristics of kin-caregivers influence under-five mortality among children raised in non-orphaned kinship care in South Africa?

1.3.2. Specific questions

1. What are the kin-caregiver's individual and household characteristics that influence under-five mortality among children raised in non-orphaned kinship care in South Africa?
2. What are the health-seeking behaviours and challenges faced by kin-caregivers that influence under-five mortality among children raised in non-orphaned kinship care in South Africa?
3. How does family functioning within the caregiver's household influence under-five mortality?

1.4. Objectives

1.4.1. Main objective

To investigate the influence of sociodemographic factors, health-seeking behaviours, and familial characteristics of kin-caregivers on under-five mortality among children raised in non-orphaned kinship care in South Africa.

1.4.2. Specific objectives

1. To determine the level of under-five mortality among children raised in non-orphaned kinship care in South Africa.

2. To determine the kin-caregiver's individual and household characteristics that influence under-five mortality among children raised in non-orphaned kinship care in South Africa.
3. To investigate the health-seeking behaviours and challenges faced by kin-caregivers that influence under-five mortality among children raised in non-orphaned kinship care in South Africa.
4. To ascertain the effect of family functioning within the kin-caregiver's household on under-five mortality.

1.5. Definitions and Delimitations

1.5.1. Definitions

Kinship care: A family arrangement in which children receive primary care from relatives, instead of their biological parents (Hill, 2010; Kelley & Whitley, 2014; Rubin et al., 2017; Gibson et al., 2020).

Non-orphaned kinship care: Children who are raised by extended kin despite having one or both parents alive (Broad, 2007).

Under-five mortality: Likelihood of a child experiencing death between their birth and fifth birthday (World Health Organisation, 2013; UNICEF, 2016).

Household factors: Features or characteristics of family members who reside in the same household that is headed by a single domestic head (Beaman & Dillon, 2012).

Mixed-methods research design: This is a design that involves employing and combining both quantitative and qualitative research approaches to make inferences about a specific population that is of interest (Gresswell & Plano Clark, 2007; Creswell, 2014).

Family functioning: It is a concept that embodies the characteristics or features of the family as a system. These characteristics include the communication or interaction, cohesion, role assignment, affective involvement, family structure and organisation as well as transactional patterns of the family system that determines behaviour between family members (Lenders, 2015).

1.5.2. Delimitations

This study focused on children who died between their birth and fifth birthday, while living in the household (placed under the care) of a kin-caregiver in South Africa. Additionally, the study also looked at under-five children who are alive and live in the household of a kin caregiver, as the comparator group.

1.6. Significance of the Study

The issue of under-five mortality remains a problem in South Africa, despite the marked decrease in under-five mortality rates in the past decade (Bamford et al., 2018). South Africa, as with other countries, failed to reach their MDG goal for under-five mortality. Hence, the development and implementation of the Post-2015 SDGs, that aims to achieve universal health. The reduction of under-five mortality rates is a central post-2015 SDG, in particular, SDG 3. Furthermore, the reduction of under-five mortality rates has been a major focus of the Convention on the Rights of Children Initiative (Mekonen & Tiruneh, 2014; September 2014; Reinbold, 2019; Tait et al., 2020). The mandate of the Convention of the Rights of Children Initiative is to advocate for a proper family environment. Proper family environment includes alternative care that is conducive towards the development of a child's full potential (September 2014; Tai et al., 2020).

Despite improvements in the provision of child healthcare services and wider coverage of the vaccination programme in South Africa, extensive improvements to child health has been very slow (Rebhan, 2011; Ndwandwe et al., 2020). It is thus important for governments to focus on vulnerable children without parents as their health is a potentially valuable economic investment (Bellie et al., 2005). This simply means that healthy children are more likely to develop into better educated and productive adults who contribute to economic growth. This in turn could combat the continuous cycle of intergenerational poverty (Bellie et al., 2005).

This study will be useful to several South African organisations that focus on child health. Save the Children South Africa, for instance, aims to ensure that no child under the age of 5 dies from preventable diseases by 2020. Furthermore, the results obtained in this study will be useful to the Campaign on Accelerated Reduction of Maternal and Child Mortality

(CARMMA). The goal of CARMMA is to further reduce child mortality rates by establishing new and innovative mechanisms and programmes that foster positive child health outcomes (DoH, n.d.). Moreover, in the year 2017, several groups such a Non-Governmental Organisations, faith-based organisations and other orgnisations were requested by the South African National Department of Social Development to provide feedback on the Child Care and Protection Policy (CCPP) (Department of Social Development, 2017). The policy recognises that there are a number of at-risk children. Currently, the government of South Africa is not providing sufficient services that aim to ameliorate these risks (Hall et al., 2018). The policy, therefore, seeks to promote a national programme that provides protective care and services, and ensure that all relevant stakeholders work together to promote survival among children and ensure that they develop fully (Sebopela, 2018). Most importantly, this study will be useful to National policies that support diverse family forms - such as the White Paper for Social Welfare, National Family Policy, and the Draft National Policy Framework for Families. These policies strengthen families to combat the debilitating effect of development challenges and other socio-economic risk factors (Department of Social Development; 2013).

Despite the considerable attention that under-five mortality in literature has received, there is a dearth of literature that focuses on the mortality risks of children who are raised in other care contexts. Furthermore, studies have not disaggregated under-five mortality by care contexts. Not much is known about the effect that extended kin can have on child survival (Sear et al., 2002). Non-orphaned children remain largely marginalised in literature as it is commonly believed that the care they receive from extended kin is beneficial for them. Given this gap, there is a need to examine the role of extended kin on child survival, especially given how the living arrangements of kin caregivers and the kinship system in itself, plays a pivotal role in influencing child health outcomes. Furthermore, it is vital to focus on children who are raised in kinship care contexts. Often these children are placed in situations that are complex and where serious physical, mental, developmental, and psychosocial problems develop (Bramlett & Blumberg, 2007; Szilagyi et al., 2015).

Children without parents (i.e children whose parents are absent or have died) are important and among the most vulnerable group of children. They are often exposed to various risks that may be detrimental to their development and wellbeing (Bagattini, 2019). As such, children without parents are classified as children with specialised needs that are related to healthcare (Szilagyi et al., 2015). Further, it is critical to examine the kin-caregiver's individual and household

characteristics because they are not a homogenous group. This is even though kin-caregivers share the common characteristic of providing care to children who lack parental care. Thus, kin-caregivers have a variety of demographic and familial characteristics. They have different relations with the children under their care and the experiences and context in which they live may differ. These differences may occur depending on whether the child is in the care of aunts, uncles, cousins, grandparents, or siblings. Secondly, some caregivers may have access to specific benefits or support services that improve their socioeconomic conditions over other caregiver types. This may, therefore, have adverse effects on their socioeconomic conditions. Furthermore, this may create differences in the characteristics of kin-caregivers resulting in far-reaching effects in the quality of care provided to children and their survival. Thirdly, their connectedness and relationship to other members of the family and family relations may also differ. These varying circumstances may influence under-five mortality in different ways.

Therefore, this study will be relevant to contemporary public and population health issues in sub-Saharan Africa. The identification of factors that affect mortality risks of children raised in non-orphaned kinship care is needed to meet the Post-2015 SDG of reducing under-five mortality by 2030. Moreover, the results obtained in this study will be central to social policies and programs that target vulnerable children who do not have parents and their caregivers. Furthermore, the results will inform child protection policies about the challenges kin-caregivers face in providing care to children.

Employing a mixed-methods research design (quantitative and qualitative) is advantageous. Studies that have conducted research focusing on children in kinship care have largely been cross-sectional (Hynes & Dunifon, 2007). Given this gap, there is currently no research that has used both a quantitative and a qualitative approach to demonstrate whether children raised in non-orphaned kinship care have different health outcomes to children in other care contexts. Thus, a mixed-methods research design will be suitable for this study as it will be useful in understanding the context in which data is collected, by obtaining more in-depth and rich narrative information. These will in turn result in the production of findings that are reliable and credible (Creswell, 2014).

CHAPTER TWO

LITERATURE REVIEW, THEORETICAL AND OPERATIONAL FRAMEWORKS

2.1. Introduction

This section reviews all relevant international and local literature on the practice of kinship care and under-five mortality within kinship care arrangements. The literature is presented under 6 subheadings namely: (1) Overview of kinship care: Understanding the practice and context, (2) Overview of the characteristics of kin caregivers, (3) Health outcomes of children raised in kinship care, (4) Overview of under-five mortality in kinship care arrangements, (5) Utilisation of healthcare services and support of kin caregivers and (6) Family dynamics of kin caregivers on child health: Cooperative or competitive.

This study has identified that the mortality risks of non-orphaned under-five children who are raised by extended kin remain largely unknown. Furthermore, the individual and household characteristics of kin-caregivers that may influence the mortality risks of under-five children have not been well investigated. As such, there is a need to investigate under-five mortality in non-orphaned kinship care contexts. Identification of these characteristics in this study will contribute significantly to the global debate on the role of family structure on under-five mortality. The main rationale for including global studies in this literature review is because there is a paucity of research that looks at the effects and characteristics of kin on child survival in South Africa. Although most studies reviewed are not based on South African literature, they provide insight on the health outcomes of children in non-orphaned kinship care contexts.

2.1.1. Overview of kinship care: Understanding the practice and context

In most societies, the rearing and socialisation of children is not only a responsibility that is assumed by the children's biological parents, but it also involves other extended adult kin (Ajiboye et lal., 2012; Okon, 2012; Raj & Raval, 2013; Qvortrup, 2014; Murovhi et al., 2018; Sanchez et al., 2020). Kin relationships have always been comprised of mothers, fathers, grandparents, siblings, and other extended kin such as aunts and uncles (Bester & Malan-Van-

Rooyen, 2015; Clark et al., 2017; Murovhi et al., 2018). The practice of kinship care, which is the placement of children with other extended kin (other than the biological parents) is a phenomenon that is gradually receiving much attention and focus from child welfare systems, despite its existence in societies for decades (Assim, 2013). It is the largest alternative care option for children who cannot be raised by their biological parents (Ann E.Casey Foundation, 2012; CWIG, 2012; Selwyn & Nandy, 2014), and increasingly growing at an accelerated rate compared to traditional foster care (Bell & Romano, 2017; Rubin et al., 2017; Shelton, 2018; Dziro & Mhlanga, 2018; McCartan et al.,2018; Skoglund & Thornblad, 2019; Kiraly et al., 2020). The definition of who constitutes a relative kin caregiver differs across contexts. It is distinguished according to whom is a blood relative, is related by means of matrimony, adoption, as well as to any individual who has strong familial ties with certain individuals (Freeman & Brewer, 2013). These ties play a major role in preserving relations within wider communities (Kyomugisha & Rutayuga, 2011). The historical and traditional practice of kinship care has been largely documented to have emerged in West Africa (Bledsoe, 1990, Gottlieb, 2015; Notermans, 2004) Oceania (Donner, 1999; Barlow, 2004), Latin America (Leinaweaver, 2008; Walmsley, 2008; Van Vleet, 2009), and other parts of North America (Strong, 2001; Keller, 2013). Generally, grandparents have mostly been the primary caregivers to children without parental care - but other extended kin such as aunts, uncles and siblings are also increasingly assuming the primary parental role (Lee et al., 2016). The practice of kinship care was not fundamental to the child welfare system until the late 20th century and only gained attention and became a renowned alternative form of care in the child welfare system in the late 20th century (McGowan, 2010).

Since its emergence, kinship care has become an internationally viable placement option that most countries have come to be heavily dependent on. This form of care has become a means of trying to fulfil the needs of children who have been removed from the primary parental home (Denby, 2011; Sullivan et al., 2016; Lee et al., 2017; Rushovich et al., 2017). Kinship care has not only emerged as an important part of the child welfare system, but it is a highly favoured and a preferred form of out-of-home care when an alternative to parental care is required (Davey, 2016; McCartan et al., 2018; Uys & Kaziboni, 2020).

Kin caregivers have been largely deemed to play an integral part in providing care to children. However, child welfare systems rarely provide them with sufficient resources to provide adequate care (Sen & Broadhurst, 2011; O'Brien, 2012; Coleman & Wu, 2016; Connolly et

al., 2017). In addition, it is largely viewed as a strategy for promoting the preservation and continuation of family ties (Burge, 2020). Kinship care being widely practiced at an international level. However, there is a dearth of literature that provides sufficient information on whether kinship care is suitable for children placed under such care, as well as their families at large. This is largely attributed to poorly represented samples, issues related to the methodology, and lack of appropriate measures that examine the outcomes of children at baseline and follow them throughout to make comparisons (Connolly, 2003). Over the past twenty years, a vast body of literature that has emerged focuses on the impact of family structure on child health (Anderson, 2014; Beal & Greiner, 2016; Brown et al., 2016; Jaggers et al., 2016; McKenzie & Silverberg, 2018). There is extensive literature that provides conclusive evidence of families undergoing rapid changes in their structure and formation. In sub-Saharan Africa, orphaned and vulnerable children (OVC) have traditionally received primary care from their relatives. This has largely remained a customary practice in contemporary society (Assim, 2013). This is the main reason that kinship care was deemed to be an important source of care and support in family structures within African societies (Assim, 2013).

It frequently occurs even with both parents are alive (Hedges et al., 2019). In traditional African societies, children have been the responsibility of both the parents and extended family. Literature that focuses on the living arrangements of children in sub-Saharan Africa reveals that it has long been a common practice for children to be spatially diffused, relocated or given out to other extended kin (Ibrahim, n.d.). The institution of kinship care in African societies is traditionally one that is comprised of a complex myriad of human relationships that are interconnected (Gayapersad et al., 2019). The kinship institution in most African societies usually includes an individuals' biological mother and father, brothers and sisters, grandparents and great-grandparents, uncles and aunts, cousins, nieces, and nephews as well as other non-related kin such as spouses (Gayapersad et al., 2019). These interconnected and complex human relationships within kinship families are embedded within specific communities. As such, the rearing of a child becomes a shared and integral responsibility of all members of that community (Kyomugisha & Rutayuga, 2011; Moroney, 2016).

The importance of kinship care has only recently received considerable attention in literature, as it is emerging as a major policy issue that needs to be addressed (Boetto et al., 2010; Connolly et al., 2017; Kokorelias et al., 2019). Demographic changes that are occurring in

society, such as the emergence of the HIV and AIDS epidemics, impoverishment and labour migration have consequently weakened family networks. This has resulted in traditional nuclear families experiencing structural changes in their family composition. This has made it challenging for parents to provide primary care to their children and has led to child-rearing responsibilities being handed over to relatives (Assim, 2013; de Vise-Lewis, 2012). The obligation of child welfare authorities is to provide alternative care to children who lack parental care. However, relatives continue to bear the greatest burden in caring for children who do not assume parental responsibilities.

Grandparents, uncles, and aunts have been found to be the main kin who provide primary care to children who are placed in kinship care contexts (Kiraly & Humphreys, 2013; Lee et al., 2016; Skoglund & Thornblad, 2019). However, grandparents provide the most care to their grandchildren (Coall et al., 2016). This is because grandmothers have been reported to serve a supplementary parental role, when parents are not present in the child's life (Vuolanto, 2017). In addition, grandmothers are more likely to invest in the wellbeing of the offspring of their own children once they have discontinued their own childbearing (Vuolanto, 2017). Literature has shown that kinship care provides children placed under such care with higher levels of permanency which are accompanied by fewer placement changes and less re-entry rates into foster care placements, thus allowing them to remain in the same family environment (Ryan et al., 2010; Winokur & Holtan, 2014; Font, 2015; Burge, 2020). Above all, results from one study showed that the increased reliance in the use of kinship care stems from the fact that child welfare systems are highly overstretched. This is because the number of non-related foster care parents who want to assume care for non-related children has decreased rapidly (Commission for Children and Young People, 2019).

Additionally, child welfare authorities have developed a burgeoning interest in moving towards an approach that concentrates on the family. Such an approach can help alleviate the risks placed on children under their care, as well as strengthen familial relations (Pugh, 2010). Despite the existence of these complex challenges, empirical evidence shows that African families withstand difficulties and hardships remarkably well, while ensuring that children receive sufficient care and protection (Skodval & Daniel, 2012; Von Backström, 2015). While this evidence is encouraging, it has long been established that lack of parental care has adverse effects on the survival of children. Children who lack parental care often have poorer educational and health outcomes (Vandivere et al., 2012; Gale, 2019). In addition, issues that

occur across the individual and socio-political context such as poor socioeconomic status, lack of support services, fewer health services and lower level of child welfare supervision and caregiver support in the kinship environment could potentially place both kin-caregivers, and the children placed in their care, at a significant risk (Worrall, 2009; O'Brien, 2012; van Groenou & De Boer, 2016).

The way kinship care is viewed and receives attention varies by society. Kin caregivers in some countries are viewed by child welfare authorities as formal foster caregivers if they have received extensive training and approval to provide care to children placed under their care (Cantwell et al., 2014). In other countries, kin caregivers must go through legal procedures before assuming care for children (Hernandez & Berrick, 2018). Conversely, the practice is accompanied by less rigid laws as kin caregivers can assume the care of a child without the involvement of child welfare authorities. They can also do so without receiving extensive training and a license that gives them approval to assume the parental role (Testa, 2013). Evidence shows that there is a progressive rise in the percentage of children being placed in kinship care. However, there is a dearth of literature that has followed the children's placement from baseline up to the end of their placement. Such information would be helpful to determine if these children share similar characteristics or not.

2.1.2. Overview of the characteristics of kin caregivers

The literature that is available has provided inconclusive results and has been conducted mostly in the late 20th century. Children in kinship care have been reported to experience several challenges and adverse outcomes. These are largely attributed to the demographic and socioeconomic characteristics of the caregivers who are providing them with primary care (Wu et al., 2015; Bramlett et al., 2017; Engler et al., 2020). Characteristics of kin caregivers as well as the challenges that they face has been widely documented (Neely et al., 2010; Bavier, 2011; AECF, 2012; Davis-Sowers, 2012; Bundy-Fazioli et al., 2013; Feldman & Fertig, 2013; Yancura,2013; Harnett et al., 2014; Doley et al., 2015; Hayslip et al., 2015; Sprang et al.,2015; Lee et al., 2016). Overall, kin caregivers who provide the most primary care have been reported to be mostly female (Desta, 2012; Sharma et al., 2016), most being maternal grandmothers (Kaziboni, 2015; Lee et al., 2016; Pashos et al., 2016), followed by aunts (Butler, 2015). In general, the majority of kin caregivers are unmarried, elderly, fall in the lowest wealth quintiles,

experience poorer physical and mental health challenges and have some form of education, although they are generally less educated (Bavier, 2011; AECF, 2012; Kelley et al., 2013; Yancura, 2013; Denby et al., 2014; Harnett et al., 2014; Stein et al., 2014; Doley et al., 2015; Choi et al., 2016). Furthermore, most kin caregivers who are grandmothers have retired from work and survive on government grants - which do not entirely meet their financial needs (Lee et al., 2016; Davis et al., 2020; Pitrone, 2020; Xu et al., 2020).

Majority of kin caregivers have been reported to be active participants in the labour force although grandparent kin caregivers have been reported to be less likely to being employed (Trail Ross et al., 2017). In addition, kin caregivers have been reported to be the household heads in their respective homes (Delap, 2012). However, despite most kin caregivers being household heads, their homes have been reported to be inadequate in providing sufficient care to children placed in those homes (Reinhard et al., 2008). However, although some studies have found that kin caregivers tend to have poor health, particularly with physical functioning (Bucki et al., 2016; Bouldin et al., 2018), another study found that kin caregivers tend to present with good health (Leek & Smith, 2017). Moreover, the health of kin caregivers (particularly that of grandmothers, aunts, and sisters) has been found to influence the wellbeing of all household members significantly (Clark et al., 2017; Clark et al., 2018). Older studies have shown that kin caregivers who lack adequate economic resources also tend to reside in households and neighbourhoods that are characterised by poor quality resources and poverty (Aber et al., 2000; Eamon, 2001). Such challenges thus exacerbate distress among kin caregivers which may ultimately affect their ability to provide adequate care (Eamon, 2001). Furthermore, two studies also found that kin caregivers' inability to provide adequate care can largely be attributed to the fact that most kin caregivers do not have full information about the needs of the children (Cole & Eamon, 2007; Jedwab et al., 2020).

Furthermore, literature has indicated that kin caregivers have a greatly reduced likelihood of obtaining social and financial support. Furthermore, they also have reduced contact in the form of regular check-up calls, visits, and monitoring of their households from welfare authorities despite the challenges that they face (Feldman & Fertig, 2013; Yancura, 2013; Stein et al., 2014). Furthermore, grandparent-headed households have been found to be characterised by poor socioeconomic status with 48% of which are classified to be impoverished (Baker & Mutchler, 2010). With regards to race, age, education and income, a study conducted in Cape Town, South Africa showed that the majority of primary kin caregivers were Black, younger

than 60 years of age, had completed some secondary education and earned less than R1001 (Yakubu & Schutte, 2018).

Moreover, other studies have found that married kin caregivers, particularly grandmothers, are less likely to provide adequate care to the children, if they have additional older children in their households. However, this effect is non-existent for grandmothers who are unmarried (Hughes et al., 2008). Previous literature has shown that the number of children or other grandchildren that grandparents are taking care of, also influences their caregiving significantly (Mtshali, 2015; Schultz & Shirindi, 2019). An astounding finding that emerged in one study showed that kin caregiver characteristics vary greatly, despite being classified as a homogenous group in terms of their kin caregiver status (Font, 2015). The exact characteristics found in literature have, however, been inconclusive resulting in kinship care being viewed positively by some scholars, and negatively by others. Moreover, most kin caregivers have found themselves assuming full responsibility for the children under their care involuntarily (Schultz, 2016; Esq, 2016). This is due to problems that have arisen in families and conflicts that have affected familial relations. This is even the case when families aware that they do not have sufficient space and adequate resources to attend to the needs of the child (Esq, 2016).

With regards to age, older literature has shown that age has a significant effect on the kin caregivers' ability to adequately fulfill their caregiving role (Cole & Eamon, 2007). Literature has shown that kin caregivers whose age is above 30 are most likely to provide adequate care to children placed under their care (Gibbs, 2005). On the other hand, kin caregivers who are beyond age 55, tend to experience several health problems which subsequently affect their caregiving (Cole, 2005). A possible explanation for this outcome is that older caregivers do not provide adequate care because the pressure that accompanies caregiving comes at a time when this is physically challenging for the older kin caregivers (Harden et al., 2004). Thus, the advancing age of some kin caregivers may thus accelerate their susceptibility to caregiving difficulties, which may translate into poor child outcomes (Harden et al., 2004). However, contrary to this finding, one older study indicated no association between the kin caregiver's age and ability to fulfill the caregiving role (Pashos, 2000). A further astonishing finding that emerged in another older study revealed that some kin caregivers are indifferent about the needs of children placed under their care (Gebel, 1996). In terms of place of residence, other studies have shown that children who are raised in urban kin caregiver households are more likely to benefit in terms of health and wellbeing compared to children who are raised in rural

kin caregiver households (Eloundou-Enyegue & Stokes, 2002; Zimmerman, 2003; Akresh, 2004).

With reference to level of education, earlier research has not established an association between the kin caregiver's level of education and kinship care (Berrick et al., 1994). This finding implies that education has no influence on the caregiving ability of a kin caregiver. On the other hand, other literature has shown that higher educational qualifications may promote increased knowledge about adequate childcare practices. It could further allow for a comprehensive insight into the needs of non-orphaned children and how to source the necessary resources (Cole & Eamon, 2007). Further, in terms of socioeconomic standing and the basic physical and organisational structures of the communities in which the children are raised in by their kin caregivers, is greatly deemed to influence the outcomes of the children (Wakhweya et al., 2008).

2.1.3. Health outcomes of children raised in kinship care

Generally, children are removed from the primary parental home and placed with extended kin when they have been exposed to parental neglect, abandonment, and abuse (Wilkinson & Bowyer, 2017; Harwin et al., 2019). Extensive research has focused on the influence of living arrangements on health outcomes of children in sub-Saharan Africa (Houle et al., 2013; Grant & Yeatman, 2014; Makiwane et al., 2016; Noel-Miller, 2016; Banda et al., 2017; Ntshebe, 2017; Liwin & Houle, 2019; Ntshebe et al., 2019; Sechin Matouri et al., 2019). Some studies have focused their attention on the role that various kin play on childrearing, nutrition, and other child developmental aspects. Such studies play a pivotal role in shaping our comprehension of the role social networks play in childcare (Breiner et al., 2016; Berry & Malek, 2017; Mkhwanazu et al., 2018; Negussie et al., 2019; Patel et al., 2019; Patel et al., 2019; Walford, n.d.; Patel & Ross, 2020; Ross et al., 2020). Resilience in childhood is entrenched in the provision of nurturing care by a receptive caregiver who promotes the healthy upbringing of a child (Szilagyi et al., 2015). Literature shows that children can endure significant life challenges. This is if they are raised in a family context in which the caregiver is protective, caring and endorses a child to believe in their innate ability to achieve their goals (Cicchetti et al., 2000; Masten, 2001; Buckner et al., 2003). Empirical evidence has shown that children experience positive outcomes when raised in households that are stable and in

which caregivers are nurturing and responsive to the needs of the children (Lane, 2012; Quiroga & Hamilton-Glachritsis, 2016; World Health Organisation, 2018; Bhopal et al., 2019; Magnuson & Schindler, 2019).

Due to the increased number of children placed under this type of out-of-home care, considerable efforts have been made by scholars to determine if kinship care provides appropriate care experiences for children (O; Brien, 2012; Martin & Zulaika., 2016; Epstein, 2017). Although their overall wellbeing is slightly better than that of children who are raised in non-related foster care (Vanschoonlandt et al., 2012; Winokur et al., 2015; Bessas, 2017; Bramlett et al., 2018), the households of kin caregivers are often characterised by high levels of impoverishment because as the size of the household increases with additional members, this may affect food security of the household, compromise nutrition and, subsequently affect child wellbeing (Assim, 2013; Fernandez & Lee, 2013; Beal, 2016; Davey, 2016; Martin & Zulaika, 2016). The unmet health needs of children in kinship care are embedded in their experiences of traumatic events and compounded by their poor access to appropriate health care services (Hillen & Gafson, 2015). Also, children who are raised by relatives usually endure several difficulties, including cruel or violent treatment and instability and conflict within their families (Jee et al., 2016). Further, children who are raised in both formal and informal kinship care have increased hazards of lacking health insurance (Vandivere et al., 2012). This includes lack of sufficient immunization and poor dental care (Rubin et al., 2017; Taylor et al., 2020). For instance, an older study conducted in the USA found that one-third of children raised by a grandparent had no health insurance, 20% higher than the national average (Casper & Bryson, 1998). Another study found that only 49% of children raised by kin-caregivers are covered by medical aid in the USA (Ehrle et al., 2001). A possible explanation for this is that children who are raised in kinship care often have incomplete medical records due to the changes in placement with different kin (Jones et al., 2019). However, other studies reported that children who are raised in kinship care may not always be exposed to unfavourable circumstances, especially when the children have a very close relationship with the respective kin caregiver (Franklin & Volk, 2016; Hedges et al., 2019). For instance, a study conducted in Northern Tanzania revealed that children who are raised in kinship care are not exposed to an increased susceptibility to adverse outcomes such as mortality, in relation to children who are brought up by their parents (Lawson et al., 2017). These studies thus suggest that kinship care need not always be presented as a factor that affects child health but can also serve as a protective factor.

Children who are raised by kin caregivers are also less likely to obtain important child healthcare services and measures taken for disease prevention - such as check-ups, patient counselling, and screenings (Berman & Carpenter, 2014). As mentioned above, children who are raised by kin-caregivers are documented to lack health coverage, lack frequent caregiving, and are often found to be in comparatively poor health (CARE, 2015; Szilagyi et al., 2015; Lohr & Jones, 2016; Seltzer et al., 2017; Flaherty rt al., 2019). Other studies have specifically noted that children who are raised by grandparents present with adverse health challenges in relation to children in the general population (Bradshaw, 2010; Livingston & Parker, 2010; Kelch-Oliver, 2011; Billing et al., 2012; Tang et al., 2015; Bradshaw, 2016; Md-Yunus, 2017). One study that examined the health outcomes of children in kinship care showed that these children exhibit relatively low levels of positive physical and mental health relative to those raised in nuclear families (Sun, 2003). However, no variations have been observed in the health outcomes of children who reside in grandparent-headed households and those in other relative-headed households (Conway & Li, 2012).

2.1.4. Overview of under-five mortality in kinship care arrangements

Evolutionary anthropologists exhibit a profound interest in the impact of relative kin caregivers on demographic outcomes, such as mortality and fertility (Aassve et al., 2012; Lawson & Uggla, 2014; Stevenson & Worthman, 2014; Sear, 2017; Waynforth, 2020). These provide insight on how the social organisation of humans has evolved over time (Sear et al., 2002). We now know that mortality risks of children are vastly dependent on the quality of care that they receive from their caregivers (Hampshire, 2002; Sear et al., 2000; Sear et al., 2002; Aubel et al., 2004; Sear & Mace, 2008). Diverse family structures of children over the past five decades have led to an increased concern among practitioners and policymakers regarding the wellbeing of children (Sandstrom & Huerta, 2013). Children require a substantial amount of care and attention from adults to survive their childhood years (Unicef & World Health Organisation, 2012).

In some societies raising a child is deemed to be a familial duty and not the sole duty of the biological parents (Sear et al., 2002; Domingo, 2011; Abraham, 2017; Rutgers, 2020). However, studies have not examined the impact of other household members and characteristics on under-five mortality (Houle et al., 2013; Ekholuenetale et al., 2020).

Moreover, literature has shown that adults' investment on child wellbeing is determined greatly by the level of genetic relatedness (Sear & Mace, 2008; Mitchell et al., 2015; Pezzoli et al., 2019; Antfolk et al., 2017). In addition, care that is provided by any type of kin caregiver, is to a certain degree, facultative. However, this depends greatly on the availability of resources necessary to caregiving as well as the presence of other extended kin (Sear & Mace, 2008), Additionally, access to resources such as food and medical care that are provided by adults other than the biological parents has been found to influence child wellbeing significantly (Sear & Mace, 2008; Houle et al., 2013).

Globally, demographers have focused concerted efforts in studying the determinants of under-five mortality, although there is a dearth of literature on the influence of other kin on the survival of children (Sear et al., 2002; Sear, 2008; Dong et al., 2017; Sadruddin et al., 2019; Nenko et al., 2020). The role of extended kin in providing stability and protection to children has changed over time. This has merited further research to establish how these changes are occurring over time (Houle et al., 2013). Several global studies have shown that children who are raised in non-traditional families, such as kinship care, have poor health outcomes compared to children raised by both biological parents. This was found to be the case even after controlling for household resources (Lang & Zagorsky, 2001; Ribar, 2004). In addition, the small literature that has examined the effects of kin on the survival of children has shown varying results. Extended kin caregivers have an integral influence on the survival of children particularly in the first 5 years of a child's life (Stacks & Partridge, 2011). However, different kin have been found to have varying effects across the 5-year life course (Sear et al., 2009).

Studies have found that grandmothers are the most dependable kin to provide adequate care to children under their care, thus improving their wellbeing and survival (Hawkes, 2003; Hawkes, 2004; Hrdy, 2005; Mace & Sear, 2005; Robson et al., 2006; Crittenden & Marlowe, 2008; Euler & Michalski, 2008; Sear & Mace, 2008; Hrdy, 2009; Coall & Hertwig, 2010; Kaptijn et al., 2010; Strassmann & Garrard, 2011; Sear & Coall, 2011; Waynforth, 2012; Coall et al., 2014; Tanskanen et al., 2011; Meehan et al., 2014; Snopkowski & Sear, 2015; Sheppard & Sear, 2016). The care that a grandmother provides to a child has been found to significantly influence the difference between optimal wellbeing and death (Sear & Mace, 2008). However, not all grandmothers were found to positively contribute to child survival (Sear & Mace, 2008). This is because variations have been identified in the childcare patterns of paternal grandmothers and maternal grandmothers (Sear, 2006; Lamm et al., 2008).

A distinctive finding that emerged in previous studies showed that paternal grandmothers have a detrimental effect on child survival; while the reverse is true for maternal grandmothers (Sear, 2007; Sear & Mace, 2008; Strassman & Garrard, 2011). This variability in childcare patterns can be partly explained by the fact that paternal grandmothers and maternal grandmothers play different roles in the lives of children (Beise, 2002; Sear et al., 2002; Sear & Mace, 2008; Dunifon & Bajracharya, 2012; Dunifon, 2013; Sheppard & Sear, 2016). One reason could be that paternal grandmothers may be uncertain of the child's paternity, which may reduce the paternal grandmother's odds of investing in the child's health and wellbeing (Perry & Daly, 2017; Schrijner & Smits, 2019). However, one older study found that paternal grandmothers can sometimes serve a cooperative role and improve the chances of child survival (Jamison et al., 2002).

A study of Paraguayan hunter-gatherers found that a mother's presence is vital, even after infancy. Children who are raised without mothers are more likely to experience increased death rates up to the 10th birthday. The effect, however, after the age of five was minimal (Hill & Hurtado, 2017). Furthermore, it was found that maternal grandmothers have the strongest positive effect on child survival around the age of weaning (Beise & Voland, 2002; Beise, 2004; Ferreira et al., 2018). This is because weaning is considered to increase young children's exposure to microorganisms found in food (Beise & Voland, 2002; Voland & Beise, 2005). Additionally, the weaning period may occur simultaneously with the birth of a younger sibling. Mothers may invest more time in caring for a new-born child than weaning older children (Voland & Beise, 2005). However, contrary to these findings, two studies found that the presence of a grandparent is not beneficial. The odds of dying for children who are raised by grandparents was higher than those raised by other kin (West et al., 2008; Tanskanen & Danielsbacka, 2012).

Other studies have shown varying effects of grandfathers and other adult kin on child survival. A study conducted in Poland found that the mortality risks of children placed under the care of both grandmothers and grandfathers are much lower in the child's first year of life. Mortality risks start to increase with every one-year increase in the child's age (Tymicki, 2009). Interestingly, a study that examined the differential impact of grandparents on grandchildren's survival established that there is a relationship between a grandparent's marital status and under-five mortality. The study found that the risk of experiencing under-five mortality is lower when both grandparents (either the grandfather or grandmother) are still married to their first

spouse (Kemkes-Grottenthaler, 2005). In contrast, under-five mortality increases significantly when either grandparent remarries (Kemkes-Grottenthaler, 2005). Further, the widowhood of a grandmother has been found to have a strong and heightened effect on under-five mortality. This may be due to the fact a spousal death results in decreased quality of life of the widowed grandparent, which in turn influences the child's health (Kemkes-Grottenthaler, 2005).

Studies focusing on under-five mortality are sparse and those that exist are largely outdated. A study conducted in rural Gambia found that maternal grandmothers have a protective effect against under-five mortality, particularly at age two (Sear et al., 2002; Sear et al, 2009). However, children who are raised by maternal grandmothers who have not completed childbearing have increased odds of dying before the age of five (Sear et al., 2000). This finding has suggested that older female kin who have completed childbearing are more likely to engage in childrearing and to improve the survival chances of children. Another study, conducted in Malawi, found that grandmothers increased child survival significantly. However, this survival was only significant for female children. Furthermore, a study conducted among the Chewa children in Malawi showed that aunt caregivers decreased child survival, but only in households where female household members owned resources (Sear, 2006; Sear & Mace, 2008). In addition, in Kenya, the survival of children placed under the care of grandmothers only improved in the presence of an uncle. This effect is stronger in poor households compared to rich households (Mulder, 2007). Grandfathers have shown to play a less important role to childcare, which subsequently results in them having no impact on child survival (Lahdenpera et al., 2004; Sear & Mace, 2008).

The developmental outcomes and overall wellbeing of a child that occurs over a short or long period of time are largely determined by the family environment in which they live. Specifically, it is determined by the quality of care that they receive in that family environment (Biemba et al., 2010). There is a small body of literature that has also shown the effects of other kin on child survival (Marlowe, 2001; Bove et al., 2002; Kramer, 2002; Leonetti et al., 2004; Tymicki, 2004). There is a dearth of literature that focuses on the effects of reproductive-aged adults such as aunts and uncles on child survival. The little evidence found in literature has shown that the effects of reproductive-aged kin vary greatly (Borgehoff Mulder, 2007). Children who are raised by uncles who reside in poor households have been found to have increased likelihoods of dying (Borgerhoff Mulder, 2007). Another study showed that aunts provide more care to their nieces and nephews than uncles, even though they may lack complete

certainty of the degree of relatedness (Pashos & McBurney, 2008). On the other hand, a study conducted in China showed that children who are raised in the households of reproductive-aged females such as aunts, have increased mortality risks (Campbell & Lee, 2002). Although reproductive-aged adult kin, such as aunts, may be able to assist with childcare, the mortality risks of children placed under the care of these adults is likely to be higher (Campbell & Lee, 2002). This may be attributed to the fact that reproductive-aged adults are more likely to divert their attention to the wellbeing of their own young children (Sear & Mace, 2008). Further, these children are more likely to compete with other children in the household for resources (Campbell & Lee, 2002).

A study conducted among Kipsigis group of people in Kenya showed that children had an increased likelihood of surviving if they received primary care from either paternal or maternal uncles. This effect is largely explained by how the living arrangements of the family are influenced by the wealth of that family, rather than the actual care that they provide (Borgehoff Mulder, 2007). Additionally, a study conducted among Venetian children showed that aunts and uncles neither have a protective nor negative effect on child survival (Derosas, 2002). On the other hand, maternal uncles and both paternal and maternal aunts have a protective effect on child survival among Mormons (Heath, 2003). Further, it was found that in four villages of rural Gambia the presence of older siblings, particularly elder sisters, increased the survival of children between ages 2-5 years (Sear, 2002; Sear et al., 2000). Contrary to this finding, other literature has found that examining the effect of siblings on child survival is challenging as some siblings often portray competitive behavior. However, other siblings may assist in providing care, which benefits the wellbeing of their younger siblings (Sear & Mace, 2008).

In South Africa it has been found that household resources with a lower per capita and extensive childcare responsibilities may affect the utilisation of healthcare services. This would in turn influence under-five mortality significantly (Sauerborn et al., 1996). Household socioeconomic status has also been found to have a significant effect on under-five mortality (Houle et al., 2013). A higher socioeconomic status increases access to healthcare services, improves nutrition as well as other living conditions (Houle et al., 2013). One study assessed the effects of household context, composition, and socioeconomic status on the death of a child in the Agincourt Health and Demographic Surveillance Site (HDSS) in rural South Africa. This study found that children who are placed in households with an adult that is a relative have reduced mortality risks (Houle et al., 2013). These children have 38% lower odds of dying compared

to children who reside in households with no adult relative (Houle et al., 2013). It is, thus, suggested that adults have a protective effect on children (Case, 2004). This is because as the size and diversity of the household increases with additional members, kinship care effects on under-five mortality may become more significant (Case, 2004; Hosegood, 2009; Madhavan & Townsend, 2007; Nielsen, 1994). This is usually due to the inclusion of orphaned children and other vulnerable extended family members who previously lived-in other households (Case, 2004; Hosegood, 2009; Madhavan & Townsend, 2007). Whilst Nielsen (1994) this is explained by the degree of relatedness to the child. In addition, one study has found that the increased number of dependents in a household may affect food security of the household, compromise nutrition and reduce income levels (Marmot, 2005). Additionally, the mortality risk of children is highest in households that have many children who are also young (Knodel & Hermalin, 1994). All these factors may influence under-five mortality (Marmot, 2005). It is suggested that this could occur because as household diversity increases, the inclusion of other related adults has either a protective or negative effect on children (Case, 2004; Hosegood, 2009; Madhavan & Townsend, 2007). Finally, one study found that the effects that kin have on child survival are mostly influenced by the age and sex of the child (Sear & Mace, 2008).

2.1.5. Utilisation of healthcare services and support of kin caregivers

A lack of support to caregivers raises considerable concern about the wellbeing of children, now and in the future. This is regardless of the commitment of the kin-caregivers to provide care to children (Broad, 2007). Some literature has suggested that kin-caregivers may provide care less effectively as they are often exposed to fewer services and training. Kin-caregivers have also been found to have fewer resources and receive less social support in relation to non-kin-caregivers (Fuentes-Palaez, 2015; Wu, 2016; Weissmann, 2016). Children raised in kinship care have been reported to have extensive healthcare needs, due possibly to past experiences of neglect (O' Brien.2012; Chinyenze, 2017; Gomo et al., 2017). Therefore, these children often require an array of services to improve their emotional difficulties (Vanderfort et a., 2012; Assim, 2013; Oakley et al., 2018). However, one study found that children raised by kin-caregivers are less likely to obtain mental health-related treatment (Bessas, 2017). This is even the case when compared to children who are raised in other care contexts but have similar healthcare needs (Gordon et al., 2003).

Kin-caregivers have an increased likelihood of being less receptive to the needs of children under their care. They are also less likely to access additional services and are often less likely to have their care regulated by welfare authorities (Groza et al., 2011). The reasons why kin-caregivers are less likely to access and utilise services remains inconclusive. An older study suggested that kin-caregivers do not use services as they reported not to need them, refuse to utilise the services, or believe that it is the responsibility of the child welfare authorities (Dubowitz et al., 1993). However, another study showed that kin-caregivers do not use healthcare services because of inadequate information and poor access to resources, making it harder to assume the full role of providing care to children (Patton, 2003). Further, two studies that assessed how kin-caregivers address the needs of children in their care found that kin-caregivers are less likely to refer children to healthcare services and often expose children to less extensive services (Fernandez & Maplestone, 2006; Harden et al., 2004). In addition, kin-caregivers were found to be less empathetic towards the needs of children (Ponnert, 2017; Cudjoe et al., 2019). Also, kin-caregivers provided less attention to activities that foster the social development of children between the ages of 3 to 5 years (Wu et al., 2015; Rubin et al., 2017).

2.1.6. Family dynamics of kin caregivers on child health: Cooperative or competitive

The family environment has been globally documented to have a significant influence on the lives of young children (Crosnoe et al., 2014; Moore et al., 2015; Simmons et al., 2017; Orth, 2018). Families (as they exist in various forms) are largely deemed to play an integral role in providing support, love, and protection to children. Families also assist children to learn behaviours and norms that are deemed acceptable in a particular culture or society (Wakhweya et al., 2008). Thus, the family structure is known to be an important institution that protects the overall wellbeing of children (Hodgson, 2017). In addition, families exert a major impact on the overall survival, health, adaptation, and academic success of children (Wakhweya et al., 2008).

Members of a family that live in an emotionally safe environment that is characterised by peace, harmony, respect, teamwork, and resilience are more likely to have an increased urge to offer adequate caregiving to the children under their care. All while ensuring that children have

adequate access to resources, with the assistance of other fellow family members (Wakhweya et al., 2008). In addition, members of a family with whom one shares a common living space with play an integral role in the life of a fellow family member (Madhavan et al., 2014). However, the family environment may not always be harmonious as there are often experiences of disagreement and dissent that occur among members of the family (Sear, 2011).

The support that kin provide to each other has a significant influence on child health in various literature (Snopkowski & Sear, 2015; Pashos et al., 2016; Sear, 2016; Clark et al., 2017; Thomas et al., 2017; Tanskanen, 2017; Taylor et al.,2018; Sadruddin et al., 2019). Even though the people who provide care to children who live outside the primary parental home may vary greatly from one country to another, the trend in kin caregiving has remained constant (Sear, 2008; Sear & Mace, 2008). Kin are naturally viewed as cooperative beings particularly with respect to providing care to children who are not biologically their own (Jaeggi et al., 2010; Kramer, 2010; Gray & Crittenden, 2014; Hublin et al., 2015; Kramer & Ota' rola-Castillo, 2015; Voorhees et al., 2018). This is mainly since kin are expected to serve a supplementary role in providing care to children, in the same manner that children would receive direct care from their biological parents (mostly mothers) (Meehan & Crittenden, 2016; Gayapersad et al., 2019).

Although some kin do provide adequate care and contribute positively to the wellbeing of children placed under their care, older studies showed that not all kin are cooperative or beneficial in that respect (Jamison et al., 2002; Beise, 2004). To illustrate this finding, a theory that focuses on the investment of extended kin on childcare has revealed that kin will only assist if *"the benefits of helping the recipient outweigh the costs incurred to the donor, weighted by the coefficient of relatedness between the two [Hamilton' s Rule]"* (Williams, 1957; Hamilton, 1964). This simply means that the less genetically related (in biological terms) members of the family are to the child, the less likely they will cooperate in providing adequate care and support to the child (Smith, 1991; Euler & Weitzel, 1996; Chrastil et al., 2006; Pollet et al., 2006; Coall et al., 2014).

A review of literature has shown conflicting views regarding the benefits and risks of placing children in the primary care of relatives. Children who are raised by relatives have an increased likelihood of experiencing a greater level of stability, growth, and can preserve their identity (Gleeson, 2007). These characteristics are often deemed important in achieving positive health and behavioural outcomes for children who are not raised by their biological parents (Gleeson,

2007). However, others have found that children in kinship care tend to be in environments that have an increased likelihood of providing children with inadequate basic resources. They also found that kin caregivers are less responsive to the needs of children and are more likely to provide children with a poor standard of living (Townsend & Dawes, 2004; Abebe & Aase, 2007; Courtney & Iwaniec, 2009; Huynh, 2014; Gayapersad et al., 2019). This is because these family environments often experience challenges related to the lack of sufficient material and financial resources, as well as other problems that occur within the home and family relationships (Whitley et al., 2001; Baker & Silverstein, 2008; Gayapersad et al.,2019).

Although kinship care is a family institution that does not often receive much focus in literature generally, it has received much attention in most branches of social science research (Sear 2017). Particularly in the fields of anthropology (Shenk & Mattison, 2011) and demography (Burch & Gendell, 1970; Caldwell, 1978; Ruggles, 1986; Laslett, 1988). To illustrate this, evolutionary social scientists have focused their research efforts in studying extended kin families and the effects that extended kin have on demographic and health outcomes such as fertility, mortality, and migration (Sear, 2018). This interest in extended kin families stems from the theory of evolutionary kin selection proposed by evolutionary theorists. This theory holds that individuals who are genetically related are more likely to invest in the overall health and wellbeing of those they are genetically related to (Hamilton, 1964).

However, there is a dearth of literature that focuses on the experiences of kin caregivers, specifically those who are not grandparents (Lee et al., 2016). Also, little is known on those who do not receive support and assistance from child welfare authorities, given that these children are absent in the formal child welfare databases (Bavier, 2011; Walsh, 2013). Additionally, there is little research on household dynamics of children raised in kinship care arrangements, including the quality of the relationship of the child to the caregiver as well as other relatives within the household (Vandivere et al., 2012).

Households of kin-caregivers tend to be overcrowded and are often in a poor structural condition (South African Human Rights Commission & Unicef, 2014; Polvere et al., 2018). As such, these houses are characterized by lack of safety, unhygienic living circumstances, violence among family members as well as substance abuse among adults in the household (Cuddeback, 2004). Moreover, children raised by relatives may become entwined in intra-familial conflicts. Often this is due to a lack of clarity over roles and responsibilities - such

family instability may consequently have adverse effects on the children (Broad, 2007; Vandivere et al., 2012).

The health of children who are raised in kinship care is largely influenced by the way their primary caregivers manage the dynamics of the family within which they reside (Neimetz, 2011; Drah, 2012). Furthermore, assuming the primary caregiving role while simultaneously focusing on other family responsibilities while trying to preserve familial relationships has an adverse impact on kin caregivers' ability to fulfill their primary caregiving tasks successfully (Schultz, 2016). It has also been reported that the assistance, or lack thereof, that primary kin caregivers receive from other kin residing in the same household also has a significant impact on the primary kin caregiver's ability to fulfill their caregiving role (Cole & Eamon, 2007). Further, children who are raised in households in which the primary kin caregiver receives support (emotional, social, and material) from other kin who are resident in the same household are more likely to present with positive health or developmental milestones (Teti & Gelfand, 1991; Orme & Buehler, 2001; Cole & Eamon, 2007). Conversely, a lack of support from other kin resident in the household may affect the primary kin caregiver's ability to effectively perform or manage tasks related to providing care to the child affecting the child's wellbeing (Manderson & Block, 2016).

Kin caregivers can experience increased pressure within their households, greatly affecting their ability to provide adequate care to the children (East, 2010; Kadungure, 2017). Their inability to provide adequate care is attributed greatly to the qualities of the kin caregiver, the relationship they have with other kin in the household as well as their quality as an appropriate caregiver (Goldberg & Short, 2012). According to Hunt (2003) family environments and relationships of kin caregivers who assume parental responsibility for a child are often strained and have increased likelihood of breaking down, following the placement of the child. This is because the need for family members to cooperate in providing care to children who are not biologically their own, increases the likelihood of conflict amongst members of the family (Sear, 2008; Strassmann & Garrard, 2011; Mace, 2013; Sheppard & Sear, 2016).

Similarly, older studies have provided the view that an addition to the family creates competition for resources. This then translates into conflict, poor altruistic behaviour, poor familial cooperation and increased competitive behaviour among kin, resulting into poor child health outcomes (Hamilton, 1967; Boyd, 1982; Frank, 1998; West et al., 2001; Griffin et al., 2004). This is largely because households that have many people tend to have fewer resources

(particularly resources related to childcare) (Bratman et al., 2016). This translates into inequities with respect to obtaining resources in the household (Hrdy & Judge, 1993), as well as hostility among members of the primary kin caregiver's family (Emlen, 1995). Similarly, another study showed that a child's health and wellbeing is influenced greatly by whether other kin, other than their primary kin caregiver, provide them with the necessary resources. This is likely to be the case if the kin have a higher degree of relatedness to the child (Sear & Mace, 2008). Children who are raised by kin caregivers who reside in households that have many household members tend to have reduced and unequal access to resources that are specifically reserved for children within that household (Marks, 2006; Hall et al., 2018). Conversely, another study found that households with a large size of household family members tend to offer more options for investing in children although this investment may be directed to specific children over others (Coall et al., 2016). This preference in investing in the wellbeing of certain children over others is explained by the fact those who are preferred often have closer relationships (usually biological) to the members of that family (Parker & Short, 2009; Cunningham et al., 2010). However, other studies have shown that children who are raised in households where members of the kin family work cooperatively in assisting the primary kin caregiver to provide care, are more likely to have positive health outcomes, particularly in societies that are characterised by high rates of child mortality (Douglass & McGadney-Douglass, 2008; Bezner Kerr et al., 2008; Sear & Mace, 2008). However, in some contexts though primary kin caregivers may reside with other extended kin in the same household, they may be more likely to be the sole caregiver since they may not be genetically related to other family members. This is because some family members may have married into that family and thus the family environment may be competitive rather than cooperative, particularly since the resource base is shared (Harden et al., 2004; Sear, 2008).

2.2. Deficiencies in Existing Literature

Much literature exists on kinship care, which has provided sufficient empirical evidence on how the practice is acknowledged and prioritised. However, most literature focuses on several Western societies such as Europe, Australia, UK, and USA, as well as a few sub-Saharan African countries (Malawi, Mali, Kenya, Ghana, Gambia). Unfortunately, to date there has

been no South African research investigating the outcomes of children related to health, who are in kinship care.

On the other hand, there have been several studies that have focused on under-five mortality in South Africa. Most have examined under-five mortality in relation to maternal individual, household, and community-level characteristics. A study that assessed factors associated with infant and child mortality at a contextual level in Nigeria found that maternal education, maternal ethnic affiliation, access to toilet facilities, safe drinking water, access to health facilities and family structure are significant determinants of infant and child mortality (Adedini, 2014). However, in this study family structure was measured in terms of monogamous or polygamous family structure and it did not observe other forms of family structures. Similar studies have been conducted in other sub-Saharan African countries (Izugbara, 2014; Nasejje et al., 2015).

Additionally, further studies have examined the association between family structure and under-five mortality. Most of them have looked at the effects of single motherhood, marital instability, cohabitation, and polygyny on under-five mortality (Adedini, 2014; Arthi & Fenske, 2018; Ntoimo & Odimegwu, 2014). However, what remains largely neglected in literature are the effects of other family structures on child health outcomes, particularly the survival of children raised by relatives. Demographers have devoted concerted efforts to identify factors associated with child mortality, but there is scant literature on the effect of kin on the survival of children. Literature that has focused on the effect of kin/ relatives on under-five mortality have provided only correlational evidence that shows whether kin-caregivers have a positive or negative effect on child survival (Beise & Voland, 2004; Mulder, 2007; Sear et al., 2002; Sear & Mace, 2008). Such evidence has been correlational as it only showed the relationship between the type of kin-caregiver (Such as aunt, uncle, grandmother, and grandfather) and under-five mortality. In other words, whether the demographic and socioeconomic characteristics of the kin-caregivers have a positive or negative influence on child health outcomes.

In addition, the risks of mortality varied by the type of kin-caregiver. One study showed that children who are raised in households of reproductive-aged females, such as aunts, have increased mortality risks (Campbell & Lee, 2002). However, there is a dearth of empirical evidence that looks at the individual and household characteristics of the kin-caregivers that

may have a significant influence on the survival of a child. Furthermore, the effect of other relatives such as uncles on under-five mortality is unclear from the available literature.

Even though kinship has rapidly arisen as a customary practice in South Africa, as elsewhere, little has been done to discern the physical health outcomes of children placed under such care. It is also not known whether children fare better or worse under such care, particularly in the South African context. Most studies have lacked samples that are representative of the entire population. Furthermore, no study has made comparisons between factors that have contributed to poor health outcomes among children who have died and those that survived under the care of a kin caregiver.

Most importantly, there is no information on the mortality levels of children raised in non-orphaned kinship care in South Africa, despite the substantial proportion of children in the country raised under this living arrangement.

2.3. Theoretical Frameworks

This study built its theoretical foundation upon two existing frameworks to develop an operational framework for this study. The two theoretical frameworks that are integrated in this study are the (1) Social Determinants of Health Framework and (2) Family Systems Theory. These two perspectives provide a multiple-lens framework for understanding how the caregivers' household and individual characteristics influence the mortality risks of children placed under their care.

2.3.1. Social Determinants of Health Framework

The Social Determinants of Health Framework is an analytical framework that was formally commissioned by the Director General, Lee Jon Wook of the WHO (WHO, 2010). Generally, the Social Determinants of Health Framework is nested within broader ecological models that focus on multiple factors that impact the determinants of health (World Health Organisation, 2010).

The Social Determinants of Health Framework looks at the social, physical, political, and economic context in which people live. This includes where they work and access to healthcare, amongst others. The framework posits that the social, economic, and political context in which people reside, is made up of macroeconomic, social, public and governance policies (WHO, 2010). This context brings about a set of socioeconomic characteristics which result in individuals being stratified according to level of education, profession, wealth status, gender, population group or ethnic group and other factors (WHO, 2010). These factors then shape the specific determinants of health of individuals' social status, as well as distinct exposure and susceptibility to conditions that may have adverse effects on health (WHO, 2010). Furthermore, the social, economic, and political context that individuals live in, encompasses their socioeconomic and structural characteristics. These structural characteristics then operate through intermediary characteristics which include:

1) **Material circumstances** such as housing, availability of food, living and working conditions
2) **Psychosocial characteristics** such as stressful living circumstances, poor or lack of social support)
3) **Behavioural and biological characteristics** (health-seeking behaviours), which ultimately affect the health outcome

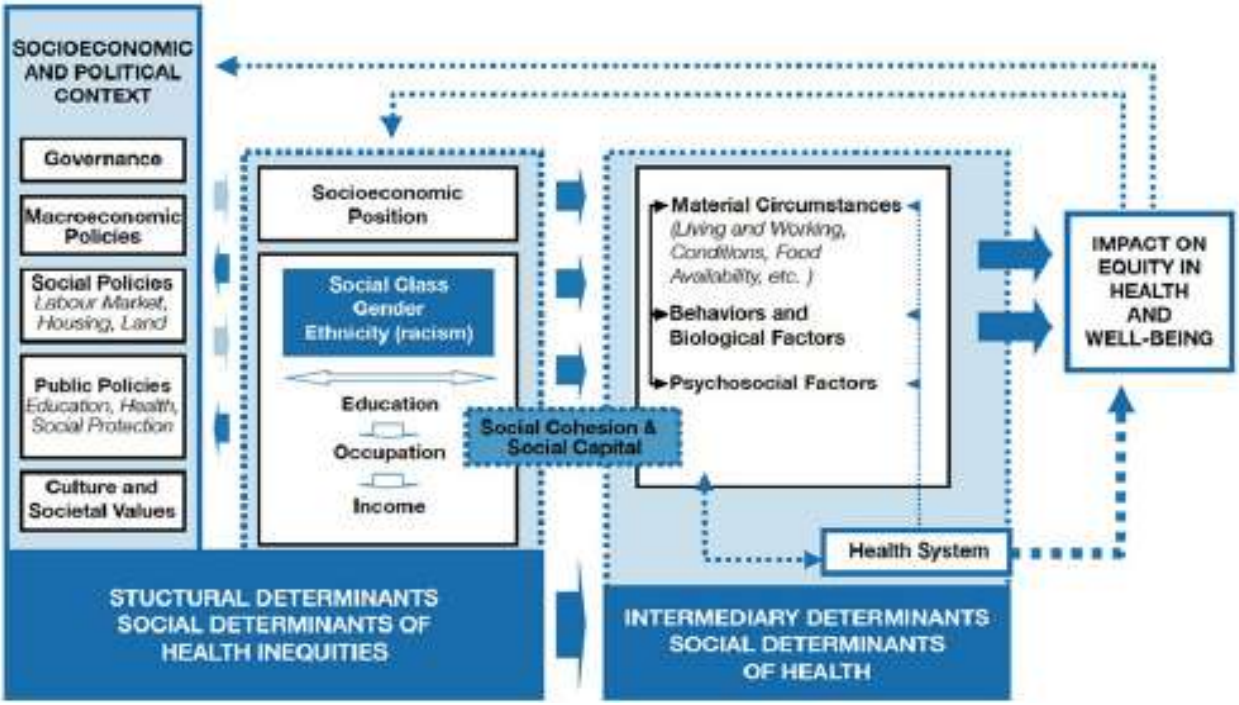
(WHO, 2010)

Overall, the structural characteristics are antecedent to the intermediary characteristics. As such, they serve as distal factors that operate through the intermediary characteristics (proximal factors) that ultimately affect health outcomes. Intermediary characteristics are connected to influences that are at an individual-level, such as health-related behaviours and physiological characteristics (WHO, 2010). Overall, intermediary characteristics flow from the underlying structural determinants that stratify individuals according to their respective social statuses. This, in turn, determines differences in exposure and vulnerability to health compromising conditions. In addition, intermediary characteristics can mediate health effects so that they have a direct impact on health. These may be associated with specific mechanisms that foster socioeconomic inequalities in access to healthcare (WHO, 2010). Thus, the material circumstances, psychosocial factors and behavioural and biological factors that constitute the intermediary factors directly address differences in exposure or access to healthcare.

The Social Determinants of Health Framework indicates that individuals from lower wealth quintiles reside in less favourable circumstances compared to individuals from higher wealth quintiles (WHO, 2010). In addition, individuals of lower socioeconomic status frequently engage in health-damaging behaviours. These individuals have a decreased likelihood of gage in health-promoting behaviours in relation to individuals of higher socioeconomic status (World Health Organisation, 2010). Thus, differences in material living standards, psychosocial circumstances, as well as behavioural and biological factors directly impact on health. These factors, therefore, may be associated with specific mechanisms that can plausibly affect health outcomes in a positive or negative way. For instance, poor living conditions or overcrowding in one household is often associated with few economic resources which may have a direct effect on access to healthcare.

Stressful living circumstances or lack of social support may also affect social inequalities in health. This is due to various individuals being exposed to different experiences. Thus, all the factors encompassed by the intermediary characteristics create differences in access to healthcare. This partly explains the long-term pattern of social inequalities in access to healthcare, but also indicates the social patterning of health outcomes. Although the Social Determinants of Health Framework was developed to study inequalities linked to health, particularly to determine health equity in societies, it can also be adapted to study the determinants of health outcomes, such as mortality.

Figure 2.1: *Social Determinants of Health Framework*



Source: WHO, 2010

Application of the Social Determinants of Health Framework in Previous Infant Mortality Studies

The Social Determinants of Health Framework has been largely applied to the study of mortality. An example of a cross-country systematic review conducted in the USA and Western Europe, was theorised based on the Social Determinants of Health Framework (Kim & Saada, 2013). In this study, the authors drew upon the Social Determinants of Health Framework to examine determinants of infant mortality at a social and individual-level. The study used the framework to explain the differences in infant mortality outcomes across several Western developed countries (Kim & Saada, 2013). Building on the framework, the authors offered an adapted conceptual framework focusing on the hypothesised social determinants of infant mortality. The authors postulated that the broader macroeconomic and societal context results in the emergence of a set of factors that arrange people into strata according to various socioeconomic, racial and gender groups (Kim & Saada, 2013). These characteristics then operate through intermediary characteristics (behavioural, biological, and psychosocial factors), to produce differences in the risks and inequities of infant mortality (Kim & Saada, 2013).

Application of the Social Determinants of Health Framework in the Current Study

Although this framework was developed for determining equal access to healthcare, this framework is applicable in the conceptualisation of this study. In this study, the Social Determinants of Health Framework was adapted to examine how individual-level characteristics of kin-caregivers operate through their intermediary characteristics (household or material characteristics, psychosocial factors (For example, access to social support services) and behavioural factors (For example, health-seeking behaviours) to directly influence under-five mortality. This is because the interplay of socioeconomic and structural circumstances in which children are raised influences a child's health outcomes. In addition, access to healthcare services and the quality of the actual healthcare services also plays an important role in determining a child's health outcomes. Thus, this framework could assist in providing the background to the social, health and economic environment in which the kin-caregivers live. It is these conditions that are likely to influence their health-seeking behaviours and practices, and ultimately determine the mortality outcomes of a child placed under their care.

The components of governance, macroeconomic policies, social policies, public policies, culture, and social values are included in the original framework. However, these components were not examined in this study as they are beyond the scope of this study. This is because addressing the effect of these components on the social aspects of health requires a comprehensive understanding of their effects, which can only be provided by experts in the areas of health management and policy. This can particularly be policymakers in the public sector or individuals who commissioned the Social Determinants of Health. Given this background, it is not envisioned that these experts may have knowledge on kinship care, health-seeking behaviours, challenges, and experiences of kin caregivers as their focus is more on health policy and epidemiology.

2.3.2. Family Systems Theory

The Family Systems Theory was developed by Murray Bowen and focuses on general family functioning (Bowen, 1978). The central premise of the theory is that families operate as a complex, organised, and interactive system that works together (Bowen, 1978; Von Bertalanffy, 1975). In addition, families constitute a multitude of parts that are dependent upon

one another. When one part of the system malfunctions, all other parts will be affected (Bowen, 1978; Constantine, 1986). Furthermore, factors such as family interactions, general family functioning, degree of connectedness or separation, and adaptation to change are factors that determine the overall function and system of the family (Sabatelli et al., 1993). In this theory, families are considered to consist of the immediate individuals with whom the person resides (biological parents or nuclear family), the extended family, or the community (Bowen, 1978). Hence, the theory helps provide insight on how subsystems (parents, children, and siblings) and suprasytems (families in relation to their extended families or relatives) function as a family. It also provides insight on the complex nature of each part of the family (Bowen, 1978).

Additionally, the theory holds that when one member of the family modifies his or her behaviour or actions, this change may likely influence other family members (Bowen, 1978). It further provides insight on the challenges that individuals face within the family system. Overall, Bowen postulates that to gain an understanding of an individual's outcomes, the family context in which that individual resides needs to be observed first (Bowen, 1978). Additionally, the Family Systems Theory also provides us with comprehensive insight on factors that may influence a child's and family's quality of life. This in turn may either threaten or strengthen the wellbeing of the child or family members (Sabatelli et al., 1993).

Application of the Family Systems Theory in Previous Studies focusing on Child Health Outcomes

The Family Systems Theory was applied in a study that examined a family perspective on child health outcomes (Witt & DeLeire, 2009). In this study, the authors drew upon the theory to examine the effect of family functioning on child health outcomes. The authors found that the family environment in which a child lives can influence the child's health significantly (Witt & DeLeire, 2009). Conversely, the child's health can also affect family functioning as well as the family's health, which can influence the psychosocial adjustment of the child and the family (Witt & DeLeire, 2009).

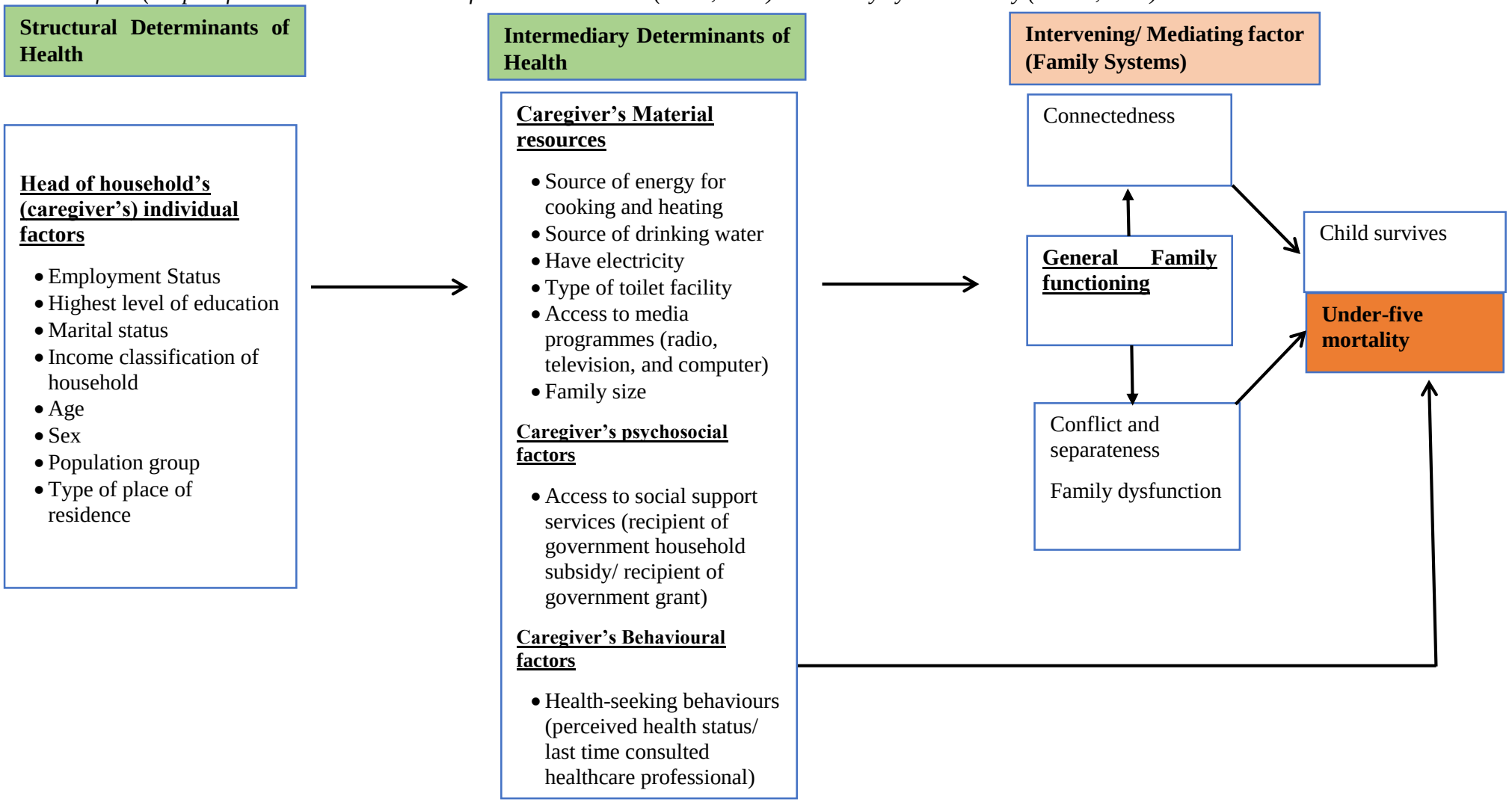
Application of the Family Systems Theory in the Current Study

The Family Systems Theory is applicable in the conceptualisation of this study as it provided insight on the familial characteristics that could influence a child's health outcomes. The theory was adapted to show how the family environment in which a child is raised can have a

significant influence on their health. To gain an in-depth understanding of how under-five mortality could possibly occur, it is vital to observe the family context in which the child resides. Furthermore, the general functioning and degree of connectedness are important as this plays a crucial role in whether a child will have positive or negative health outcomes. Thus, the way the family functions may thus mediate or moderate the effects of various kin-caregivers on child survival. This theory, therefore, was useful in gaining an in-depth understanding of how under-five mortality could possibly occur, and this was analysed from a qualitative perspective.

2.4. Operational Framework

Figure 2.2: *Operational framework for studying the proximate and distal causes of under-five mortality among children raised in non-orphaned kinship care in South Africa (adapted from Social Determinants of Health Framework (WHO, 2010) and Family Systems Theory (Bowen, 1978).*



In developing the operational framework for this study, the Social Determinants of Health Framework and the Family Systems Theory were adapted to suit the overall study objective. This operational framework offers the mechanisms that ultimately influence a child's health outcomes. In Figure 2.2, the arrow which extends from the independent variables (structural determinants of health) to the intermediary characteristics (material resources) indicates the direction of influence. Overall, the caregiver's individual characteristics (distal factors) operate through a set of intermediary characteristics (household level caregiver characteristics) to ultimately influence mortality outcomes. Furthermore, Figure 2.2 shows that intermediary factors directly influence under-five mortality. Intermediary factors include the caregiver's household assets and resources, access to social services and health-seeking behaviours. As such, the household conditions in which a child is raised can significantly and independently influence a child's mortality risks.

With respect to integrating the Family Systems Theory, one study has shown that an important factor that is often overlooked in studies that focus on the association between child health and determinants of health is the family (Witt & DeLeire, 2009). The authors further argue that the family environment can have a major influence on the health outcomes of an individual, particularly those of a child (Witt & DeLeire, 2009). Given that the Family Systems Theory posits that to gain an understanding of an individual's outcomes (such as that of a child), the family context in which that individual resides needs to be observed first. Furthermore, the theory provides insight on factors that may influence a child's and family's quality of life. This may either threaten or strengthen the wellbeing of the child or family members (Sabatelli et al., 1993).

The Social Determinants of Health Framework and the Family Systems Theory were integrated taking into consideration that the mortality risks of children raised in kinship care cannot be viewed in isolation from another. The Social Determinants of Health Framework can be adapted to provide factors that can explain the mortality risks or differentials of children raised in kinship care. However, it does not include a component that focuses on the relationships between adults and children, nor their functioning within a particular household (in this case, the kin caregiver and the child placed under the care of the child). Furthermore, it does not stipulate how these relationships ultimately influence child health. However, there is value in considering other factors that are provided by other theoretical perspectives that influence health outcomes (such as the Family Systems Theory). Thus the Family Systems Theory

complements the Social Determinants of Health Framework in several ways. Firstly, the characteristics of families are often deemed important determinants of health outcomes. Secondly, families represent the first point of contact between children and the larger world. Families provide an environment that can either foster or hinder childhood development or influence the health of children. Thirdly, the family institution is generally recognised as the first point of support for children. Therefore, once there is dysfunction in the family, children inevitably become vulnerable. However, the Social Determinants of Health Framework does not capture these characteristics.

Conversely, the Social Determinants of Health Framework also complements the Family Systems theory in the following manner: family institutions exist within a broader macrosystem or societal context which arrange families into various strata i.e. different social, health and economic strata. These characteristics then expose families to various behavioural, biological and psychosocial factors and the interplay of the socioeconomic and structural circumstances in which these family institutions are embedded in, may consequently influence the family environment particularly family stability and parenting practices, which may then affect developmental outcomes of children. In other words, families exist within and are influenced by the broader economic, historical, political, geographical, cultural and social context of society. Each of these systems can be enabling or constraining for family life. For instance, th manner in which society is structured will have a bearing on the manner in which the family functions and their ability to access quality healthcare, education and training opportunities. The social and political context will shape what services and benefits families can draw on to ensure that they are able to fulfil their roles and caregiving responsibilities

Given this evidence, integrating the two theories provides an opportunity to explore other important factors. Integration of the two theories will further generate knowledge on whether family systems and social determinants of health viewed holistically could influence the mortality risks of children raised in kinship care. This will be useful in the investigation of characteristics that are likely to affect the mortality risks of children, hitherto under-researched. Therefore, this framework may possibly serve as a multidimensional composite framework that can be used to study child health outcomes.

Thus, the framework shows the logical flow in that the caregivers' individual characteristics (distal factors) operate on a set of intermediary characteristics. These intermediary characteristics may affect the general functioning of a family (e, g. lack of access to resources

or competition for resources may create conflict or dysfunction in the family). Conversely, the availability of material resources and equal access to resources may foster some degree of connectedness which may foster positive child health outcomes. Thus, the way the family functions may mediate or moderate the effects of these determinants on child health outcomes. This may either ultimately foster positive child health outcomes or result in increased mortality risks.

2.5. Research Hypotheses

1. **H_0:** Children who are raised by grandparents have a higher probability of dying before age 5.

   H_1: Children who are raised by grandparents have a lower probability of dying before age 5.

2. **H_0:** Children who are raised by other relatives have a lower probability of dying before age 5.

   H_1: Children who are raised by other relatives have a higher probability of dying before age 5.

3. **H_0:** The kin-caregivers' level of education has no influence on under-five mortality among children raised in non-orphaned kinship care in South Africa.

   H_1: The kin-caregivers' level of education has an influence on under-five mortality among children raised in non-orphaned kinship care in South Africa.

4. **H_0:** Healthcare-seeking behaviours of kin-caregivers have no influence on under-five mortality among children raised in non-orphaned kinship care in South Africa.

   H_1: Healthcare-seeking behaviours of kin-caregivers influence under-five mortality among children raised in non-orphaned kinship care in South Africa.

5. **H_0:** The kin caregivers' type of place of residence has no influence on under-five mortality among children raised in non-orphaned kinship care in South Africa.

H_1: The kin caregivers' type of place of residence has an influence on under-five mortality among children raised in non-orphaned kinship care in South Africa.

6. **H_0:** The kin caregivers' employment status has no influence on under-five mortality among children raised in non-orphaned kinship care in South Africa.

   H_1: The kin caregivers' employment status has an influence on under-five mortality among children raised in non-orphaned kinship care in South Africa.

CHAPTER THREE
METHODOLOGY

3.1. Study Setting

The study was conducted in South Africa. South Africa is bordered by Mozambique, Zimbabwe, Botswana, Lesotho, Swaziland, and Namibia. The country has nine provinces and the midyear population estimate for 2021 is 60.14 million (Statistics South Africa, 2021). South Africa has been chosen as the focal area of study based on several central reasons. Firstly, South Africa is among the African countries with the highest proportion of children who are below the age of 15 years relative to the general population. About 28.3% (17.04 million) of the population is considered young (Lehohla, 2020; Statistics South Africa, 2021). Secondly, although under-five mortality rates indicate a marked decrease in South Africa, South Africa fell short of achieving the 2015 MDG target of reducing under-five mortality rates to 20 deaths per 1000 live births (Maluleke & Chola, 2015). Thirdly, the practice of kinship care is highly prevalent in South Africa with an estimated 64% of non-orphaned children being in the care of relatives (Meintjies & Hall, 2013).

Additionally, it is a common practice in South Africa for children to live separately from their biological parents in the primary care of relatives due to poverty, labour migration, educational opportunities, and cultural factors (Meintjies & Hall, 2011). Moreover, the South African foster care system is a highly administrative, rigid, and complex system due to the legal orders and vast administrative work that need to be carried out to ensure long-term child monitoring (Fortune, 2016). This system has resulted in social workers often being unable to provide adequate monitoring to ensure that children are protected from any form of neglect and maltreatment (Fortune, 2016). As such, the health outcomes of the children and caregivers (or the home environment in which the children are raised) are largely unknown. Given this background, it is thus worth conducting a study of this nature in South Africa.

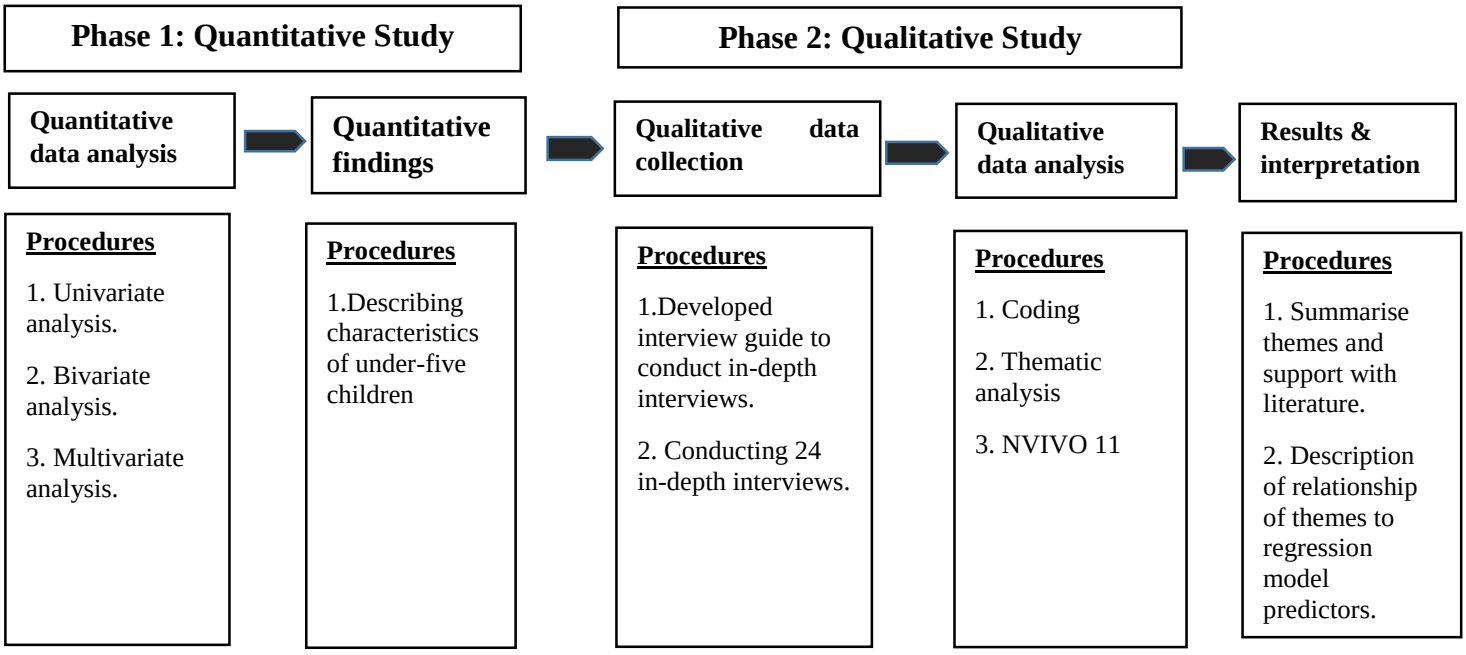
3.2. Study Design

This study utilised a mixed-methods research design, specifically an explanatory sequential mixed-methods research design. This research design involves using both quantitative and

qualitative research approaches in two distinct phases. This begins with the analysis of quantitative data, followed by the collection and analysis of qualitative data (Greswell & Plano Clark, 2007; Creswell, 2014). Furthermore, the results obtained from both approaches are combined during the interpretation of the findings. The rationale for employing an explanatory sequential mixed-methods research design in this study was to make it possible to make inferences by comparing and synthesising the results in the discussion of the study.

Additionally, quantitative results often provide a general picture of the problem under study and, therefore, the collection of qualitative data is also necessary to refine and further explain the quantitative results obtained (Creswell, 2014). The results that were obtained in the quantitative analysis assisted in developing and informing the qualitative research phase. The mixed-methods research design was further adopted in the study to provide a broader insight into the issue being studied. By combining the strengths of both qualitative and quantitative research the generalisability of the results obtained will be strengthened (Greswell & Plano Clark, 2007; Tashakorri & Teddlie, 2010).

Figure 3.1: *Diagrammatic representation of how Explanatory Sequential Mixed-Methods research design was employed in this study*



3.3. Data sources

3.3.1. Quantitative data source

The secondary data sources that were utilised in the analysis of the quantitative objectives were the 2014/15-2017 South African National Income Dynamics Survey (NIDS), Waves 4 and 5. The rationale for only using two waves was because the children's and caregivers' household and individual PID numbers changed in some Waves. Therefore, this means that the primary caregiver was not consistent throughout the Waves. Also, children could have possibly moved from one household to another. This instability in living arrangements would thus make it difficult to ascertain which kin caregiver characteristic has influenced under-five mortality in the next Wave. Secondly, Waves 4 and 5 provide the most recent rates of under-five mortality relative to the earlier Waves.

NIDS is the first national panel household survey that was conducted in South Africa using a series of Waves. Each wave followed the same individuals over time, using repeated quantitative surveys (Southern Africa Labour and Development Research Unit, 2016). The survey provides insight into the lives of South Africans by providing sufficient information on internal migration, fertility, mortality, savings, health, education, and household spending patterns (Southern Africa Labour and Development Research Unit, 2016). The first Wave was conducted in 2008 followed by the second Wave in 2010-2011, the third Wave in 2012, the fourth Wave in 2014-2015 and the fifth Wave in 2016 (Southern Africa Labour and Development Research Unit, 2016)**.**

Six types of surveys were used in all five Waves of the NIDS. These included the Household Questionnaire, Household-derived questionnaire, Individual-derived questionnaire, Child Questionnaire, Adult Questionnaire, and Proxy Questionnaire. The variables of interest in this study were obtained from the child, adult, household, household-derived and individual-derived questionnaires. Further, these variables were analysed from Wave 4 to 5 to observe the change in the living status of the children, as well as how the characteristics of the children and their kin caregivers in Wave 4 contributed to changes in Wave 5. The data generated in Wave 4 was merged to data generated in Wave 5, using the unique person identifying number assigned to each kin-caregiver and child, to create a panel.

3.3.2. Qualitative data source

The interviews were conducted during the period of February to April 2019. The sample of participants was obtained by seeking permission from the child welfare authorities in the KwaZulu-Natal and Eastern Cape Department of Social Development (DSD). Both departments assisted in identifying a sample of kin-caregivers who have provided primary care to children below the age of 5 (see appendix C and D for approval letters). Although the inclusion of stakeholders who oversee regulating kinship care could have added another perspective to the information gathered for this study through additional in-depth interviews with the stakeholders, they were not included in the study for one important reason. Although the placement of most children who are raised in kinship is recorded in the Child Welfare system, the process of placing children under alternative care reduces the time and resources of social workers to follow up on the wellbeing of children who are placed under such care (Mkhwanazi et al., 2018). Instead, caregivers are encouraged to apply for foster care grants which oftentimes results in social workers not periodically reviewing the placement (Mkhwanazi et al., 2018). Based on this evidence, the scope of this study was limited to kin caregivers as it was envisioned that stakeholders that regulate kinship care may not have comprehensive knowledge about the health-seeking behaviours, challenges and experiences faced by kin caregivers. Thus, kin caregivers are the only suitable participants that could provide in-depth, rich narrative results that would be useful in answering the objectives of this study.

In order to ensure validity and reliability for this mixed-methods approach, various methodological strategies were employed. Firstly, similarities and differences were sought across the narrative accounts of the kin caregivers in order to ensure that different perspectives were represented which thus assisted greatly in complementing the quantitative analysis. Secondly, rich verbatim descriptions of kin caregiver's accounts were included in the qualitative findings in order to support the quantitative findings. Thirdly, clarity in terms of the processes and different phases of inquiry that were undertaken during both quantitative and qualitative analysis and subsequent interpretations was demonstrated. Lastly, given that the study was of a mixed-methods nature, the application of research instruments that included both close-ended questions (NIDS dataset) and open-ended questions (in-depth interview guide) was useful as these different ways of gathering information supplemented each other and thus enhanced the validity and reliability of the data and provided more robust and reliable

results. In addition, the data was collected from different sources (different kin caregivers from two different provinces in both rural and urban settings and in the quantitative phase, analysis was conducted at a national level across various kin caregivers). Therefore, collecting the varied types of data through different sources, greatly enhanced the reliability of the data and the results.

3.4. Population and Sample Size

The population of interest were children under the age of five who died between birth and fifth birthday, while living in the household (placed under the care) of a relative kin-caregiver in South Africa. Children were linked to kin caregivers on a household basis (i.e. children were matched with the kin caregiver they lived with using two pieces of information (1) Person responsible for care of child and (2) Child resident in the resident head's household. First, the variable "person responsible for care of child" obtained in Wave 4 was used and restricted only to kin caregivers. Secondly, the PID (person identifier) number of the person responsible for the care of the child was linked with the PID number of the child and of each respective kin caregiver (person responsible for care of child). The comparative group in the qualitative analysis were living under-five children who reside in the household of a kin caregiver. The sample of children was then restricted only to children who have both biological parents alive but who resided with a relative kin caregiver (Variable obtained in NIDS asks whether mother/father is alive and whether resident or not resident in the household). Lastly, children who have lost both parents to death, were dropped to yield results in line with the study objectives.

3.4.1. Quantitative sample design and size

In the year 2008, 10 368 households were chosen from 400 Primary Sampling Units across the South African region (Southern Africa Labour and Development Research Unit, 2016). Seven thousand two hundred and ninety-six (7 296) households were interviewed successfully out of the 10 858 households that were eligible (Southern Africa Labour and Development Research Unit, 2016). Within the households that were successfully interviewed, 31 144 individuals were

selected as participants**.** A total of 2 918 individuals were identified as individuals who were not residing in the households of the resident head and were thus excluded leading to the final count of 28 226 continuous sampling members (Southern Africa Labour and Development Research Unit, 2016)**.** A resident member was defined as an individual that lived in the household at least 4 nights a week. To follow the same individuals over time, each individual was assigned a unique person identifier code. This code was used to identify each individual across all five Waves.

The total weighted sample (*N*) of under-five children in Wave 4 was 2,071,084 (of which 1,738,806 were non-orphaned and 332,278 were orphaned). However, the sample was reduced and restricted only to non-orphaned under-five children who were living with a relative kin caregiver. The overall weighted sample size of under-five children (using appropriate NIDS sampling weights) who were living with a kin-caregiver in 2014/15 (Wave 4) was 126,859. This was the analytic sample used in the study. The overall distribution in 2014/15 (Wave 4) showed that most under-five children raised by kin caregivers in the year 2014/15 were non-orphaned. The large proportion of which were being raised by grandparents (74,283 children), followed by aunts or uncles (39,296 children). The lowest percentage of under-five children living in kinship care was observed among children raised by other family or relatives (13,280 children). These children were then followed to investigate their probability of dying in the year 2017 (Wave 5). The weighted sample size of under-five deaths obtained among children raised by kin in Wave 5 was 7 761. Overall, 5,616 children died while under the care of a grandparent, 1,895 died under the care of an aunt or uncle and the lowest proportion was observed among other family or relatives, where only 250 children died under their care.

3.4.2. Qualitative sample design and size

Overall, 24 in-depth interviews were conducted. Twelve (12) in-depth interviews were conducted in one rural and one urban community in each respective province. Of the 24 participants who were selected in this study, 12 were kin caregivers who had experienced an under-five death (6 from the Eastern Cape province and 6 from the KwaZulu-Natal province). The remaining 12 participants were kin caregivers who are still providing care to living under-five children (6 from the Eastern Cape province and 6 from the KwaZulu-Natal province) (See Table 3.1 for full details). This was done to make comparisons between the level of care

provided to children raised in urban settings and rural settings, and any other factors that could have contributed to differences. In addition, this made it possible to check for any provincial differentials. The reasons for this sample size were because the participants are not a homogenous group and the context in which they live, and work may differ (rural and urban differentials). Secondly, the sample size was derived taking into consideration issues of data saturation. Data saturation was assessed based on empirical evidence which found that the first five to six interviews produce the majority of new information and little new information is gained as the sample size approachs 20 to 30 interviews (Bernard & Ryan, 2010; Guest et al., 2012; Guest et al., 2020).

Qualitative data analyses often require a smaller sample size in relation to quantitative analysis. A very large sample often results in data saturation. In other words, any additional participants simply results in similar perspectives being heard. This does not improve the explanations of the themes that emerge in the findings and does not provide any additional or useful perspectives or information.

Further, given the in-depth nature of the interviews, the sample size was also selected taking into consideration the feasibility of the study. Feasibility was assessed as (1) time allotted to conduct this research, (2) the costs and resources available as well as (3) the objectives of the study. Additionally, the number of participants selected made it possible to engage with the participants intensively. This will most likely result in the generation of rich, dense, narrative findings that are sufficient to answer both the research questions and objectives (Creswell, 2014). Further, since the quantitative analysis constitutes the core component of the study, the qualitative inquiry only required a relatively small sample size. Therefore, a sample of 24 respondents was sufficient to offer complimentary data that will provide more depth to the quantitative findings that were obtained in the study. Qualitative data were collected from kin-caregivers who both experienced a child death as well as those caring for a surviving under-five child. In-depth interviews were conducted with these participants, with the aid of an audio recorder. The in-depth interviews were then later transcribed for analysis. The two selected research sites were the Eastern Cape and KwaZulu-Natal provinces. These provinces were selected as they have the highest recorded rates (> 34%) of children placed under the care of extended family members (Hall et al., 2014).

A non-probability purposive sampling technique was adopted in the study. The purposive sampling technique was suitable as it assisted in selecting participants who share similar

characteristics and meet the selection criteria of the study. In other words, those who have had under-five children placed under their care and have experienced under-five mortality.

Table 3.1: *Sample size of kin caregivers for each respective province*

Method	**Participants**	**Eastern Cape**			**Kwa-Zulu Natal**		
		Urban	**Rural**	**Total**	**Urban**	**Rural**	**Total**
In-depth Interviews	Grandmothers	3	3	**6**	3	3	**6**
In-depth Interviews	Other (aunts, uncles, cousins, siblings etc.)	3	3	**6**	3	3	**6**

3.5. Quantitative Variable Identification

3.5.1. Dependent variable

The dependent variable in this study was "Under-five mortality" and it was defined as a death that occurred between birth and the fifth birthday. To determine under-five mortality in the NIDS data the heads of households were first asked: "Has the household experienced a death in the past 24 months"? The responses have been captured as either "yes" or "no". Second, the age at the time of death of the child was used to indicate under-five mortality. Third, to determine whether the death occurred within a kinship care context, a question asking "Relationship of the deceased to the head of the household" was included in the survey. Fourth, deceased children who were nephews, nieces, grandchildren, siblings, or cousins by the head of household were treated as children who were raised by kin-caregivers. Then, an additional question asked if the deceased was a resident member in the resident head's household when they died. Furthermore, an additional question in the survey asked if the mother or father of the child is alive. To ascertain if these children are non-orphans, children who were reported to have lost both parents to death were dropped. Analysis was only restricted to children who had both parents still alive, but which were not resident in the resident head's household. Lastly, respondents were then followed from Wave 4 until Wave 5 to assess when the death of the child occurred.

3.5.2. Independent variables

The independent variables in this study were comprised of child and kin caregiver characteristics that were measured at an individual and household level. Most of the variables

selected for this study were selected on the basis of the reviewed literature and theoretical underpinnings. The child characteristics that were used in this study that possibly have an influence on child survival were child's sex, population group of the child, perceived health status of the child (reported by the person responsible for the child), child has clinic card, child has/had any illnesses or disabilities, number of times health professional was consulted, child covered by medical aid and child recipient of social grant (Table 3.2).

Table 3.2: *Characteristics of children used in the study and their descriptions*

Variable	**Definition**	**Coding**
Child's sex	Sex of the child	(1) Male (2) Female
Child's race	Population group of child	(1) Black African (2) Coloured (3) Asian/India (4) White *****Recoded***** (1) Black African (2) Others (combined Coloured, Asian/Indian and White)
Child's perceived health status	Indicator of child's overall health status	(1) Excellent (2) Very good (3) Good (4) Fair (5) Poor *****Recoded***** (1) Excellent and Very good (2) Good (3) Fair and Poor
Child has clinic card	Card that shows child's record of immunisations and child growth/development until child is 5 years old.	(1) Yes (2) No (3) Yes, but not available
Child has/had any illnesses or disabilities	Whether child has/had any chronic health conditions or impairments	(1) Yes (2) No
Number of times health professional consulted	The number of times a child has been taken for clinic or hospital visits	(1) Once (2) More than once (3) Never
Child covered by medical aid	Whether the child is covered by any health insurance	(1) Yes (2) No
Child recipient of social grant	Whether child receives money paid by government for social security	(1) Yes (2) No

Kin caregivers' Individual characteristics

The selected individual characteristics of the kin caregivers used in this study were as follows: Sex, population group, type of place of residence, marital status, employment status, highest level of education, income classification of household, perceived health status, last time consulted someone about health and age. These variables are explained in Table 3.3 below:

Table 3.3: *Characteristics of kin caregiver's individual characteristics used in the study and their descriptions*

Variable	**Definition**	**Coding**
Kin caregiver's sex	Sex of the kin caregiver	(1) Male (2) Female
Kin caregiver's race	Population group of kin caregiver	(1) Black African (2) Coloured (3) Asian/Indian (4) White *****Recoded***** (1) Black African (2) Others (combined Coloured, Asian/Indian and White due to small sample size)
Type of place of residence	Geographic area or locality in which the kin caregiver resides	(1) Traditional (2) Urban (3) Farms *****Recoded***** (1) Urban (2) Rural (combined traditional and farms)
Marital status	Distinct options that describe the kin caregiver's relationship with a significant other	(1) Never married (2) Married (3) Widow/widower (4) Divorced/separated
Employment status	Classification status of whether a kin caregiver is employed or unemployed	(1) Not economically active (2) Unemployed_discouraged (3) Unemployed_strict Employed (4) *****Recoded***** (1) Unemployed (combined unemployed, unemployed_discouraged and unemployed_strict) (2) Employed
Highest level of education	The highest level of education that a kin caregiver has successfully complete.	(1) Grade R/0 (2) Grade 1/Sub A/Class 1 (3) Grade 2/Sub B/Class 2 (4) Grade 3/ Std. 1 (5) Grade 4/Std.2 (6) Grade 5/Std.3 (7) Grade 6/Std.4 (8) Grade 7/Std.5 (9) Grade 8/Std. 6 (10) Grade 9/Std.7 (11) Grade 10/Std.8/ (12) Grade 11/Std.9 (13) Grade 12/Std.10 (14) NTC 1/NCV 2 (15) NTC 2/ NCV 3 (16) NTC 3 / NCV 4 (17) Certificate (18) Diploma (19) Bachelor's Degree (20) Bachelor's Degree & Diploma (21) Honours Degree (22) Higher Degree (Masters, Doctorate)

		(23) No schooling *****Recoded***** (1) No schooling (2) Primary (combined Grade 1 to 7) (3) Secondary (combined Grade 8 to 12) (4) Higher (combined NTC, Certificate, Diploma, Bachelor's degree, Bachelor's degree, and Diploma, Honours degree and Higher degrees).
Perceived health status	Indicator of kin caregiver's overall health status	(1) Excellent (2) Very good (3) Good (4) Fair (5) Poor *****Recoded***** (1) Excellent and Very good (2) Good (3) Fair and Poor
Last time consulted someone about health	The last time the kin caregiver visited a healthcare professional/clinic/hospital	(1) In the last 30 days (2) One to five months ago (3) Six to twelve months ago (4) More than one and less than two years ago (5) Two to four years ago (6) Five to ten years ago (7) More than 10 years ago (8) Never *****Recoded***** (1) Never (2) In the last 30 days (3) Six to twelve months ago (4) More than one and less than two years ago (5) Two to four years ago (Five to ten years ago and More than 10 years ago were dropped as there were no observations)
Age	Age of the kin caregiver	Numeric response in years *****Recoded***** (1) 15-19 (2) 20-24 (3) 35-39 (4) 40-44 (5) 45-49 (6) 50-54 (7) 55-59 (8) 60+

Kin caregivers' Household characteristics

The selected household characteristics of the kin caregivers that were used in this study were as follows: Household has electricity, household toilet facility type, main water source of the household, household source of energy for cooking and heating, access to media programmes (radio, television, computer, cellphone), number of household residents (family size), recipient of government housing subsidy, received government grant. These variables are explained in Table 3.4 below:

Table 3.4: *Characteristics of kin caregivers' household characteristics used in the study and their descriptions*

Variable	**Definition**	**Coding**
Household has electricity	Whether the kin caregiver has electricity in their household	(1) Yes (2) No
Type of toilet facility available to household	Type of toilet facility in the kin caregiver's household	(1) Flush toilet with onsite disposal (2) Flush toilet with offsite disposal (3) Chemical toilet (4) Pit latrine with ventilation pipe (5) Pit latrine without ventilation pipe (6) Bucket toilet (7) None (8) Other (specify) *****Recoded***** (1) None (2) Flush toilet (combined flush toilet with onsite disposal, flush toilet with offsite disposal) (3) Pit latrine (combined pit latrine with ventilation pipe and pit latrine without ventilation pipe) (4) Others (combined chemical toilet, bucket toilet and other)
Household's main water source	Main water source in the kin caregiver's household	(1) Piped (tap) water in dwelling (2) Piped (tap) water on site or on yard (3) Public tap (4) Water-Carrier/tanker (5) Borehole on site (6) Borehole off site/communal (7) Rain-water tank on site (8) Flowing water/stream (9) Dam/pool/stagnant water (10) Well (11) Spring (12) Other *****Recoded***** (1) Piped water (combined piped (tap) water in dwelling, piped (tap) water on site or on yard, public tap, (2) Others (combined water-carrier/tanker, borehole on site, borehole off-site/communal, rain-water tank on site, flowing water/stream,

		dam/pool/stagnant water, well, spring, other.
Household source of energy for cooking and heating	Source of energy that kin caregiver uses for cooking and heating	(1) Electricity from mains (2) Electricity from generator (3) Gas (4) Paraffin (5) Wood (6) Coal (7) Animal dung (8) Solar energy (9) Other (10) None *****Recoded***** (1) Electricity from mains (combined electricity from mains and electricity from generator) (2) Wood (3) Others (combined gas, paraffin, coal, animal dung, solar energy, other) None category dropped as there were no observations.
Access to media programmes	Whether kin caregiver has at least one television, radio, computer, and cellphone in the household	(1) Yes (2) No
Family size	Number of household members in kin caregiver's household	Numeric response *****Recoded***** (1) 1 (2) 2 (3) 3 (4) 4+
Recipient of government household subsidy	Whether kin caregiver received a housing subsidy from the government	(1) Yes (2) No
Household received government grant	Whether the kin caregiver's household received a government grant	(1) Yes (2) No

3.6. Steps in Data Analysis

3.6.1. Quantitative statistical analysis

The data was analysed in three phases namely univariate, bivariate, and multivariate. Phase 1 included an analysis of the variables at a descriptive level using several frequency tables and graphs. Phase two included an analysis of the variables at a bivariate level to examine whether each predictor variable had an influence on the outcome variable. Phase 3 included unadjusted and adjusted Cox Proportional Hazard regression tables of all the variables. A thorough explanation is provided below.

Examination of the data obtained from the 2014/15-2016 NIDS were used to address the two quantitative objectives as follows:

Objective 1: *To determine the level of under-five mortality among children raised in non-orphaned kinship care in South Africa.*

Direct estimation of mortality was assessed using household death information provided by a kin-caregiver. The direct estimation of mortality requires that researchers have data on the date of birth of the child, the status of survival of the child, and the date of death or age of death (Rutstein & Rojas, 2006). To address this objective, a bar graph showing the level of under-five mortality by type of kin-caregiver was created.

Further analysis was conducted as follows:

i. Mortality levels were examined by using "type of kin-caregiver" as a time-constant key predictor variable against under-five mortality. This was done to examine the effect of each individual type of kin-caregiver on child survival, over time.
ii. Each kin caregiver's characteristics were examined in relation to under-five mortality.
iii. The child's characteristics were examined by type of kin caregiver, in relation to under-five mortality.

To examine the relationship between these characteristics, a series of Kaplan-Meier graphs were utilised. These assisted in predicting the length of time it took for a child death (such as age at death) to occur while the child was raised in the specific caregiver's household. Participants who dropped out of the study during the time of the analysis or who had not experienced the event of interest at the end of the observation were censored. The equation of the Kaplan-Meier product limit estimator is as follows:

$$S(t_i) = \prod_{t_i \leq t} \left(1 - \frac{d_i}{n_i}\right)$$

Where:
$S(t_i)$ – estimated survival probability at time t
n_i – number of people at risk of the event of interest at the beginning of time t_i
d_i – number of deaths that occurred at time t_i

Source: Kaplan & Meier, 1958

Objective 2: *To determine the kin-caregiver's individual and household characteristics that influence under-five mortality among children raised in non-orphaned kinship care in South Africa.*

This study utilised Event History Analysis which is a form of survival analysis method that looks at the probability of an individual experiencing an event at time *t* given that the individual survives to a certain age (Steele, 2005). Thus, the probability of a child dying is referred to as the hazard. The Cox Proportional Hazard Regression Models were employed in this study. The Cox regression method is a survival analysis technique that examines thetime within which an event occurs relative to one or more covariates that may be linked with that time period (Steele, 2005). The Cox Proportional Hazard Regression models the probability that individual *i* has an event occurring at time *t*, depending that no event has occurred before the start of *t* (Berger & Schmid, 2018). Thus, the Cox Proportional Hazard Regression examines the probability of an event occurring at a specified time period if an individual survives up to a specific age. Incidents or events assessed in such a way can consist of birth, death, or matrimony. In this study, the Cox Regression was used to determine the hazard or likelihood of dying, before the age of five while living in the household of a kin caregiver. The dependent variable, under-five mortality, represents the hazard since it portrays the prospect of dying before the age of five provided that the child survives up to a specific age.

The final models for the analysis were selected based on the following reasons: Given that the outcome of the study was under-five mortality, it was appropriate to employ Event History Analysis as it a form of survival analysis method that looks at the probability of an individual experiencing an event at time *t* given that the individual survives to a certain age. Thus, the probability of a child dying is referred to as the hazard. Thus, this informed the selection of the Cox Proportional Hazard Regression model as the most appropriate model for final analysis. Secondly, there were two important variables in the study that warranted using Cox Proportional Hazards Regression models namely (1) Status variable (child alive "yes" or "no") and (2) Survival time variable (Age at death). Thirdly, the ratio of hazards for the two groups was constant over time which showed that the proportional hazards assumption was not violated (survival curves for two strata which are determined by particular options of values of the independent variables must have hazrd functions that are proportional (the same) over time).

The equation of the Cox Proportional Hazard Regression Model is as follows:

$$h_i(t) = h_o(t) \exp (B_I X_{I1} + B_2 x_{i2} + \ldots\ldots\ldots + B_n x_{in})$$

Where:
$h_i(t)$= hazard function for individual i
$h_o(t)$ = baseline hazard function
$X_{i1}, X_{i2}, \ldots\ldots\ldots, X_{in}$ =covariates
$B_1, B_2, \ldots\ldots\ldots, B_n$ =regression coefficients estimated from the data

Sources: Steele, 2005; Kim, 2014

Moreover, correlation matrices were employed in order to check for multicollinearity. The pairwise correlation efficients displayed in the correlation matrix did not show strong relationships between variables suggesting that there was no presence of multicollinearity and none of the independent variables were highly correlated with one another (see Appendix, pages 232-240 for correlation coefficients).

3.6.2. Qualitative analysis

Objective 3: *To investigate the health-seeking behaviours and challenges faced by kin-caregivers that influence under-five mortality among children raised in non-orphaned kinship care in South Africa.*

and

Objective 4: *To ascertain the effect of family functioning within the kin-caregiver's household on under-five mortality.*

Structured in-depth interviews were conducted with all kin-caregivers who were fully responsible for the care of a child prior to the child's death (please see appendix H). To obtain a sample of these participants, a list of households which have under-five children raised by kin-caregivers were obtained from the Department of Social Development. In-depth interviews were conducted to obtain credibly aggregated responses which would make it possible to make comparisons across the different types of kin-caregivers and across the two selected provinces of study. This assisted in further investigating specific themes that emerge from the respondents' discussions during the interview. The transcribed interviews were analysed using thematic content analysis which is a qualitative technique that involves transcribing the information obtained from the interviews into readable text (Kalemba, 2016). After thematic content analysis was carried out, transcripts were given case numbers and then imported into

NViVo version 11 for analysis and interpretation of the findings. Family functioning in the in-depth interviews was operationalised through examining interactions and relationships within the family, particularly levels of conflict and cohesion, adaptability, structure and organisation of the family which greatly determines the behaviour of family members and the quality of communication and how these characteristics contribute to the wellbeing of children.

Table 3.5: *Demographic Profile of interviewed kin caregivers*

Participant code	Relationship of kin caregiver to the child	Age of kin caregiver	Kin caregiver's level of education	Employment status of kin caregiver	Marital status of kin caregiver	Place of residence of kin caregiver	Living Status of child	Age of living/ deceased child	Cause of death of child OR current illness
Participant-1	Aunt	55 years old	Matric	Unemployed	Married	Urban Eastern Cape	Alive	4 years old (two identical twins)	Mental illness
Participant-2	Grandmother	80 years old	Grade 7	Unemployed	Widowed	Rural Eastern Cape	Alive	4 years old	Physically and mentally handicapped
Participant-3	Grandmother	59 years old	Matric	Recently stopped working as domestic worker	Widowed	Urban Eastern Cape	Alive	3 years old	HIV positive
Participant-4	Grandmother	78 years old	Grade 10	Unemployed	Widowed	Urban Eastern Cape	Alive	4 years old	Diarrhoea and vomiting
Participant-5	Aunt	49 years old	Matric	Employed	Single	Urban Eastern Cape	Alive	4 years old	No illness
Participant-6	Cousin	42 years old	Matric	Unemployed	Single	Urban Eastern Cape	Alive	4 years old (two fraternal twins)	Bronchiolitis and episodic seizures
Participant-7	Aunt	36 years old	Matric	Employed (casual work)	Single	Urban Eastern Cape	Dead	3 years old	Asthma
Participant-8	Aunt	40 years old	Matric	Unemployed	Married	Urban Eastern Cape	Dead	4 years old	Pneumonia
Participant-9	Grandmother	55 years old	Matric	Employed (casual work)	Married	Urban Eastern Cape	Dead	3 years old	Cardiovascular illness
Participant-10	Sister	29 years old	Grade 11	Unemployed	Married	Rural Eastern Cape	Dead	3 months	Pneumonia

Participant-11	Grandmother	78 years old	Grade 10	Unemployed	Widowed	Rural Eastern Cape	Dead	2 years old	HIV/AIDS
Participant-12	Grandmother	60 years old	Matric	Employed	Married	Urban Eastern Cape	Dead	3 months old	Meningeal infection
Participant-13	Aunt	47 years old	Matric	Employed	Cohabiting	Rural KwaZulu-Natal	Alive	4 years old	Recurrent diarrhoea
Participant-14	Grandmother	44 years old	Grade 11	Employed	Finalising process of divorce	Rural KwaZulu-Natal	Alive	2 years old and 4 years old (taking care of two children)	4-year-old suffers from asthma
Participant-15	Grandmother	51 years old	Grade 6	Unemployed	Single	Rural KwaZulu-Natal	Dead	4 years old	Epileptic seizures
Participant-16	Aunt	38 years old	Matric	Employed	Single	Urban KwaZulu-Natal	Alive	3 years old	No illness
Participant-17	Grandmother	56 years old	Grade 10	Self-employed	Single	Urban KwaZulu-Natal	Dead	3 years old	Tuberculosis
Participant-18	Grandmother	81 years old	Grade 7	Unemployed	Married	Rural KwaZulu-Natal	Dead	4 years old	Epileptic seizures
Participant-19	Aunt	41 years old	National Diploma	Employed	Single	Urban KwaZulu-Natal	Dead	2 years old	Asthma
Participant-20	Sister	20 years old	Matric	Unemployed	Single	Rural KwaZulu-Natal	Dead	3 years old	Severe malnutrition
Participant-21	Grandmother	65 years old	Grade 9	Unemployed	Widowed	Rural KwaZulu-Natal	Dead	11 months old	Bronchiolitis
Participant -22	Aunt	35 years old	Degree	Employed	Married	Urban KwaZulu-Natal	Alive	4 years old	No illness

Participant-23	Aunt	44 years old	Matric	Unemployed	Married	Rural KwaZulu-Natal	Dead	2 years old	Pneumonia
Participant-24	Sister	25 years old	Matric	Unemployed	Single	Rural KwaZulu-Natal	Alive	4 years old	Recurrent diarrhoea

3.7. Data management

3.7.1. Quantitative data management

The 2014/15-2016 NIDS data was downloaded from the DataFirst Research data repository, and the data was analysed using STATA version 15.

3.7.2. Qualitative data management

After in-depth interviews were conducted, the data was transcribed. Transcripts were then given case numbers and imported into NVivo version 11 for analysis and interpretation of the findings using thematic content analysis.

3.8. Ethical Considerations

3.8.1. Ethical approval

With regards to the quantitative data, the study utilised secondary data obtained from NIDS 2014/15-2016. The survey was conducted anonymously, and respondents were assigned unique person identifiers. As such, the names and other personal information of the respondents were not revealed in the datasets. With regards to the qualitative data, formal ethical clearance and approval was sought from the Human Research Ethics Committee (HREC) based at the University of the Witwatersrand (HREC NUMBER H18/10/38) and the DSD's Research Ethics Committee. Participants were requested to sign an informed consent form which stipulated the aims of the study, guaranteed confidentiality and indicated that the study is voluntary.

3.8.2. Protection of participants

Since this study focused mainly on kin-caregivers who are bereaved and have experienced an under-five death, much consideration was given to the ethics of the research. The primary

concern of this research was to try and ensure that harm and distress to the participants was minimised as far as possible (please refer to sub-section 3.8.6 below). In this study, the ethics principles of informed consent and voluntary participation were adhered to and the kin-caregivers who were participating in the in-depth interviews were protected with informed consent, voluntary participation, and confidentiality (please refer to sub-sections 3.8.3, 3.8.4 and 3.8.5 below).

3.8.3. Informed consent

In terms of recruiting participants who have experienced a death, care was taken in identifying the potential participants. Furthermore, the time in which the research was undertaken with reference to the loss and awareness of the circumstance surrounding the loss was also important (MsCosker et al., 2001). Potential participants were first provided with a participant information sheet that explained the nature and aim of the study (please see appendix E and F). Participants who were recruited in this study were provided with an informed consent form which stipulated the aims of the study, guaranteed confidentiality. The informed consent form also provided information on who would have access to the participants' information, indicated that the study was voluntary, and provided information on the storage of data, recording of data and the dissemination of the findings (please see appendix G).

In addition, the participants were provided with the contact details of the researcher and those of the research supervisors in the event they had any enquiries or concerns pertaining to the study. Verbal consent was then sought from participants who were willing to participate voluntarily and fully acknowledged that they understood the purpose of the research. Before participants could sign the informed consent, they were given the opportunity to ask any questions they may have had or to receive clarity on certain issues pertaining to the study. The participants were then requested to sign the informed consent form.

3.8.4. Voluntary participation

Individuals who were willing to participate in the study were granted the right to withdraw from participating in the study at any time if they felt the need to do so. Withdrawal or non-

participation from the study did not affect the individuals' access to any services or place them at any disadvantage. The assistance of a bereavement counselling organisation was sought to provide services to participants in the event of potential distress while recalling the sad event of the child's death.

3.8.5. Confidentiality

The identity of participants was protected by providing each participant with a participant number. The anonymity of the participants was respected, and the transcriptions contained ID numbers that represented each participant's responses. Although the information provided by the participants was captured on an audio recorder, the recordings have been securely stored in a password-protected computer in a secure locked cabinet. The recordings and the transcriptions will be disposed of five years after the completion of the study.

3.8.6. Potential distress to participants

With regards to potential distress to the participants, there is a possibility that the in-depth interviews aroused potential feelings of distress, painful thoughts and sad memories while recalling the experience of the child's death. The assistance of a bereavement counselling organisation was sought prior to conducting the interviews to ensure that participants who experience any distress during the interviews could receive assistance from trained bereavement counsellors. The trained professionals provided the participants with grief support services that allowed them to discuss the issues that arose during the interview and caused them to remember the traumatic event. The services also assisted in the avoidance of potential adverse psychological and emotional health outcomes.

CHAPTER FOUR
QUANTITATIVE RESULTS

4.1. Introduction

The demographic and socio-economic characteristics of children as well as those of their caregivers play a significant role in determining overall child health and wellbeing. This section focuses on the results obtained in the study. The analysis was conducted in the following order:

- A frequency table was employed to show the percentage distributions of the characteristics of non-orphaned under-five children raised in kinship care in South Africa.
- Second, the individual and household characteristics of the grandparents, aunts or uncles and other family were also computed with the aim of observing the background profile of the respondents.
- Third, the outcome variable was also examined, in relation to all the characteristics of non-orphaned children, grandparents, aunts or uncles and other family.
- Fourth, Kaplan-Meier Survival curve estimates were presented to (1) observe the levels of under-five mortality by type of kin caregiver and (2) levels of under-five mortality by all the characteristics.

Presenting a demographic profile of the various kin caregivers assisted in gaining a comprehensive insight on the findings that were obtained in the subsequent chapter (Chapter 5: Qualitative findings). Overall, the background characteristics were presented using descriptive statistics. The characteristics were divided into three sections namely (1) Child characteristics, (2) Individual characteristics of various kin caregivers and (3) Household characteristics of kin caregivers.

Table 4.1: *Weighted percentage distribution of the characteristics of under-five non-orphaned children by type of kin caregiver at baseline, Wave 4 (2014/15)*

Child characteristics	**Type of kin caregiver**			
	Grandparent (n=74,283)	**Aunt/uncle (n=39,296)**	**Other family (n=13,280)**	**Total (n=126,859)**
	N (%)	**N (%)**	**N (%)**	**N (%)**
Sex				
Male	31,911 (43.0)	26,910 (68.5)	5,363 (40.4)	64,184 (50.6)
Female	42,373 (57.0)	12,385 (31.5)	7,917 (59.6)	62,575 (49.4)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**126,859 (100.0)**
Population group				
Black African	73,539 (99.0)	37,723 (96.0)	9,230 (69.5)	120,492 (88.2)
Other	745 (1.0)	1,572 (4.0)	4,049 (30.5)	6,366 (11.8)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**126,859 (100.0)**
Perceived health status				
Excellent and Very good	56,193 (75.6)	26,980 (68.7)	13,280 (100.0)	96,453 (81.4)
Good	17,621 (23.7)	10,402 (26.5)	0	28,023 (16.7)
Fair and Poor	469 (0.6)	1,914 (4.9)	0	2,383 (1.8)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**126,859 (100.0)**
Child has clinic card				
Yes	42,275 (56.9)	25,752 (65.5)	7,714 (58.1)	75,741 (60.2)
No	5,771 (7.8)	2,997 (7.6)	0	8,768 (5.1)
Yes, but not available	26,237 (35.3)	10,546 (26.8)	5,566 (41.9)	42,349 (34.7)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**126,859 (100.0)**
Child has/had any illnesses or disabilities				
Yes	2,685 (3.6)	4,397 (11.2)	0	7,082 (4.9)
No	71,598 (96.4)	34,899 (88.8)	13,280 (100.0)	117,777 (95.1)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**126,859 (100.0)**
Number of times health professional consulted				
Once	17,811 (24.0)	19,722 (50.2)	5,554 (41.8)	43,087 (38.7)
More than once	20,640 (27.8)	8,462 (21.5)	902 (6.8)	30,004 (18.7)
Never	35,832 (48.2)	11,111 (28.3)	6,823 (51.4)	53,766 (42.6)
Total	**74,832 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**126,859 (100.0)**
Child covered by medical aid				
Yes	577 (0.8)	2,823 (7.2)	0	3,400 (2.7)
No	73,706 (99.2)	36,472 (92.8)	13,280 (100.0)	123,458 (97.3)
Total	**74,832 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	126,859 (100.0)
Child recipient of social grant				
Yes	65,040 (87.6)	22,215 (56.5)	12,090 (91.0)	99,345 (78.4)
No	9,243 (12.4)	17,080 (43.5)	1,189 (9.0)	27,512 (21.6)
Total	**74,832 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**126,859 (100.0)**

Table 4.1 shows the weighted percentage distribution of the characteristics of under-five non-orphaned children by type of kin caregiver in 2014/15 (Wave 4). Overall, the percentage distributions show that the highest percentage of under-five children raised in non-orphaned kinship care were male children (68%) who were raised by aunts or uncles. An analysis of the

child's population group shows that majority of children in all kin caregiver categories are Black African (99%). Most children were raised by grandparents (99%) and aunts/uncles (96%). Table 4.1 further shows that all children raised by other kin caregivers (100%), and 76% of children raised by grandparents were reported to have been in excellent or very good health. However, 11% of the children raised by aunts or uncles were reported to have or have had a serious illness or disability. This is even though two-thirds of children raised by aunts and uncles (65%) had a clinic card, while only 58% of children who are raised by other extended kin caregivers had the same. Additionally, 50% of children who are raised by aunts or uncles have been taken to a healthcare professional once.

Interestingly, slight percentage differences are observed in the utilisation of healthcare services among children raised by grandparents and other extended kin caregivers. Around half (51%) of the children raised by extended kin caregivers have never been taken to a healthcare professional, followed by 48% of children raised by other extended family members. A distinctive feature emerging from the results shows that 100% of children raised by grandparents and other extended kin caregivers do not have medical aid cover. Lastly, over 90% of children raised by other extended kin caregivers are recipients of a social grant, followed by 88% of children raised by grandparents. The lowest percentage distribution of children who are recipients of a support grant is observed among children who are raised by aunts or uncles (56%).

Table 4.2: *Baseline (Wave 4) individual characteristics of kin caregivers providing care to non-orphaned under-five children in South Africa, 2014/15*

Kin caregivers' individual characteristics	**Type of kin caregiver**			
	Grandparent (n=74,283)	**Aunt/uncle (n=39,296)**	**Other family (n=13,280)**	**Total (n=126,859)**
	N (%)	**N (%)**	**N (%)**	**N (%)**
Sex				
Male	32,475 (43.7)	17,743 (45.1)	4,242 (31.9)	54,460 (40.2)
Female	41,808 (56.3)	21,552 (54.8)	9,038 (68.1)	72,398 (59.7)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**126,859 (100.00**
Population group				
Black African	50,428 (67.9)	22,379 (56.9)	10,658 (80.3)	83,465 (68.4)
Other	23,855 (32.1)	16,917 (43.0)	2,621 (19.7)	43,393 (31.6)
Total	**74,283 (100.0)**	**39,296 (100.0.)**	**13,280 (100.0)**	**126,859 (100.0)**
Type of place of residence				
Urban	40,342 (54.3)	23,007 (58.5)	10,182 (76.7)	73,531 (63.2)
Rural	33,941 (45.7)	16,289 (41.1)	3,098 (23.3)	53,328 (36.7)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**126,859 (100.0)**

Marital status				
Never married	14,715 (19.8)	16,284 (41.4)	9,228 (69.5)	40,227 (43.6)
Married	50,552 (68.0)	13,230 (33.7)	2,621 (19.7)	66,403 (40.5)
Widow/widower	5,048 (6.8)	9,781 (24.9)	1,430 (10.8)	16,259 (14.2)
Divorced/separated	3,969 (5.3)	0 (0.0)	0	3,969 (1.8)
Total	**74,283 (100.0.)**	**39,296 (100.0)**	**13,280 (100.0)**	**126,859 (100.0)**
Employment status				
Unemployed	47,645 (64.1)	29,331 (74.6)	10,130 (76.3)	87,106 (71.7)
Employed	26,639 (35.9)	9,965 (25.4)	3,149 (23.7)	39,753 (28.3)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**126,859 (100.0)**
Highest level of education				
No education	11,853 (16.0)	2,624 (6.7)	902 (6.8)	15,379 (9.8)
Primary	28,289 (38.1)	10,106 (25.7)	1,189 (9.0)	39,584 (24.3)
Secondary	21,119 (28.4)	21,354 (54.3)	10,788 (81.2)	53,261 (54.6)
Higher	13,022 (17.5)	5,212 (13.3)	400 (3.0)	18,634 (11.3)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**126,859 (100.0)**
Perceived health status				
Excellent and Very good	44,786 (60.3)	23,775 (60.5)	10,658 (80.3)	79,219 (67.0)
Good	27,017 (36.4)	11,488 (29.2)	2,621 (19.7)	41,126 (28.4)
Fair and Poor	2,480 (3.3)	4,032 (10.3)	0	6,512 (4.5)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**126,859 (100.0)**
Last time consulted healthcare professional				
In the last 30 days				37,506 (33.7)
One to five months ago	22,007 (29.6)	15,105 (38.4)	4,394 (33.1)	37,714 (33.3)
Six to twelve months ago	22,779 (30.7)	8,671 (22.1)	6,264 (47.2)	41,126 (28.4)
More than one and less than	27,017 (36.4)	11,488 (29.2)	2,621 (19.7)	6,512 (4.5)
two years ago	2,480 (3.3)	4,032 (10.3)	0	**126,859 (100.0)**
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	
Current age				
15-19	0	297 (0.8)	1,585 (11.9)	1,882 (4.2)
20-24	0	917 (2.3)	5,425 (40.8)	6,342 (14.4)
25-29	0	3,182 (8.1)	0	3,182 (2.7)
30-34	0	3,259 (8.3)	0	3,259 (2.8)
35-39	0	4,090 (10.4)	1,960 (14.8)	6,050 (8.4)
40-44	4,350 (5.90	6,204 (15.8)	661 (5.0)	11,215 (8.9)
45-49	13,757 (18.5)	8,581 (21.8)	1,895 (14.3)	24,233 (18.2)
50-54	14,900 (20.1)	5,525 (14.1)	324 (2.4)	20,749 (12.2)
55-59	19,522 (26.3)	5,276 (13.4)	528 (4.0)	25,326 (14.6)
60+	21,754 (29.3)	1,963 (5.0)	902 (6.8)	24,619 (13.7)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**126,859 (100.0)**

The general observation that can be made from Table 4.2 is that many of the under-five children were raised by other extended kin caregivers who are Black African (80%) females (68%), who reside in urban settings (77%) and have never been married (69%). The proportion of children who are raised by aunts or uncles and other extended kin caregivers who are unemployed, was almost the same (75% and 76%, respectively). With respect to the highest level of education, results showed that over 80% of extended caregivers had a secondary education, followed by

54% aunts or uncles. Contrary to these results, Table 4.2 further showed that 38% of children were raised by grandparents who only had a primary education.

Moreover, 80% of children were raised by other extended kin caregivers who perceived their health to be excellent or very good. No percentage differences were observed among children who were raised by grandparents and aunts or uncles who also perceived their health to be excellent or very good (60% each). Additionally, almost half the children were raised by other extended kin caregivers who had consulted a healthcare professional in the last one to five months. Conversely, 38% of children were raised by aunts or uncles who reported visiting a healthcare professional in the last 30 days, while 36% of children were raised by grandparents who reported visiting a healthcare professional some six to twelve months ago. Moreover, 41% of children are raised by other extended kin caregivers who are between the age groups 20-24, while 22% of children are raised by aunts or uncles who are between the age groups 45-49. Conversely, close to a third (29%) of children are raised by grandparents who are over the age of 60.

Table 4.3: *Baseline (Wave 4) household resources of kin caregivers providing care to non-orphaned under-five children in South Africa, 2014/15*

Kin caregiver household-level characteristics	**Type of kin caregiver**			
	Grandparent (n=74,283)	**Aunt/uncle (n=39,296)**	**Other family (n=13,280)**	**Total (N=126,859)**
	N (%)	**N (%)**	**N (%)**	**N (%)**
Household has electricity				
Has electricity	62,044 (83.5)	35,680 (90.8)	11,716 (88.2)	109,440 (87.5)
No electricity	12,240 (16.4)	3,616 (9.2)	1,564 (11.8)	17,420 (12.5)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**126,859 (100.0)**
Type of household toilet facilities				
None	5,641 (7.6)	559 (1.4)	0	6,200 (3.0)
Flush toilet	42,915 (57.8)	13,575 (34.5)	4,383 (33.0)	60,873 (41.8)
Pit latrine	21,871 (29.4)	13,709 (34.9)	8,897 (67.0)	44,477 (43.8)
Others	3,856 (5.2)	11,452 (29.1)	**0**	15,308 (11.4)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**128,859 (100.0)**
Household's main water source				
Piped water	68,035 (91.6)	37,111 (94.4)	10,136 (76.3)	105,146 (62.0)
Others	6,249 (8.4)	2,184 (5.6)	3,143 (23.7)	11,576 (12.6)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**128,859 (100.0)**
Household source of energy for cooking and heating				
Electricity from mains	55,980 (75.4)	27,672 (70.4)	6,678 (50.3)	90,330 (65.4)
Wood	12,288 (16.5)	9,294 (23.6)	4,045 (30.5)	21,987 (20.2)
Others	6,015 (8.1)	2,329 (5.9)	2,556 (19.2)	10,900 (11.1)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**128,859 (100.0)**

Access to media programmes				
Yes	65,804 (88.6)	33,658 (85.6)	13,280 (100.0)	112,742 (91.4)
No	8,479 (11.4)	5,638 (14.3)	0	14,117 (8.6)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**128,859 (100.0)**
Family size				
1	10,200 (13.7)	3,693 (9.4)	4,071 (30.7)	17,964 (17.9)
2	12,183 (16.4)	5,622 (14.3)	902 (6.8)	18,707 (12.5)
3	28,637 (38.5)	6,745 (17.2)	8,306 (62.5)	43,688 (39.4)
4+	23,263 (31.3)	23,235 (59.1)	0	46,498 (30.1)
Total	**74,283 (100.0)**	**39,296 (100.0.)**	**13,280 (100.0)**	**128,859 (100.0)**
Recipient of government household subsidy				
Yes	12,655 (17.0)	4,726 (12.0)	0	17,381 (9.7)
No	61,629 (83.0)	34,569 (88.0)	13,280 (100)	109,478 (90.3)
Total	**74,283 (100.0)**	**39,296 (100.0)**	**13,280 (100.0)**	**128,859 (100.0)**
Household received government grant				
Yes	47,258 (63.6)	16,572 (42.2)	2,797 (21.1)	66,627 (42.3)
No	27,026 (36.4)	22,723 (57.8)	10,482 (78.9)	60,231 (57.7)
Total	**74,283 (100)**	**39,296 (100)**	**13,280 (100)**	**128,859 (100.0)**

Table 4.3 shows the percentage distributions of the kin caregivers' household characteristics in 2014/15 (Wave 4). Overall, the results in Table 4.3 show that all the various kin caregivers have electricity in their households. The majority (91%) of children being raised by aunts or uncles had electricity in their households. Two-thirds (67%) of children raised by other extended kin caregivers used pit latrine facilities in their households. In addition, 58% of children were raised by grandparents who use flush toilets in their households. There were slight percentage differences among children who were raised by aunts or uncles who use flush toilet facilities and pit latrines in their households (34% and 35%, respectively). Table 4.3. further showed that there were also slight percentage differences in the percentage of children who were raised by aunts or uncles and grandparents who had piped water in their households (94% and 92%, respectively).

More than 70% of children were raised by grandparents and aunts or uncles who use electricity as the main source of energy, compared to 50% of children who are raised by other extended kin caregivers. An astounding 100% of children raised by other extended kin caregivers have access to media programmes. Over 60% of children raised by other extended kin caregivers had a family size of 3. In contrast, 59% of children raised by aunts or uncles had a family size of 4 or more. Furthermore, most children raised by kin caregivers are not recipients of the government household subsidy. Whilst 100% of extended kin caregivers did not receive a government household grant, close to 80% of the same group were also not recipients of a

government grant. Conversely, more than 60% of children were raised by grandparents who reported being recipients of a government grant.

4.2. Levels of under-five mortality by type of kin caregiver, Wave 5

The first part of objective one was to examine the levels of under-five mortality by type of kin caregiver at the end of observation period (Wave 5; 2017). A bar graph indicating these levels has been shown below.

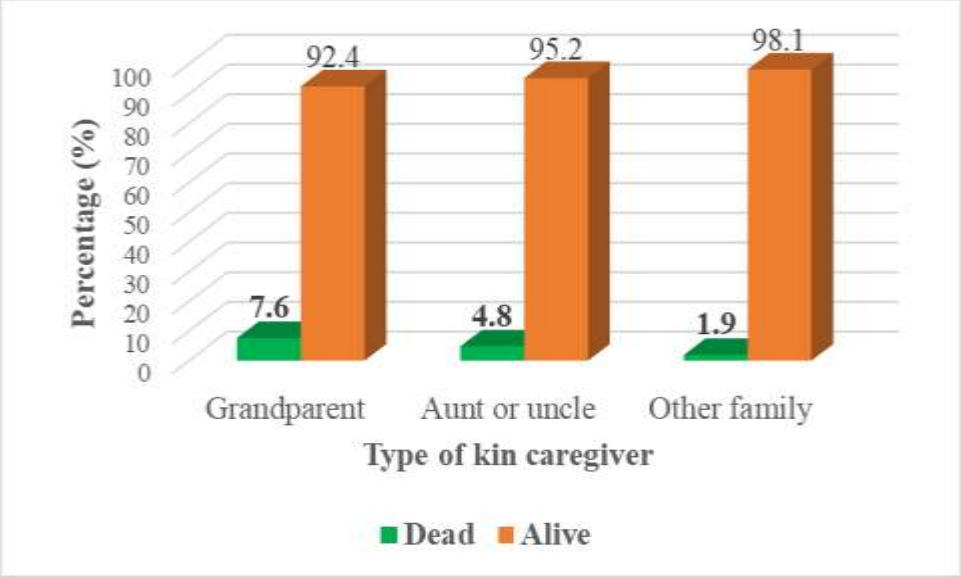


Figure 4.1: *Level of under-five mortality by type of kin caregiver, 2017 (Wave 5) (N=7,761)*

Figure 4.1 above shows the levels of under-five mortality by type of kin caregiver in Wave 5. The total sample sizes of children who were alive in Wave 5 by type of kin caregiver were as follows: grandparents (N=68,667); aunts or uncles (n=37,401) and other family (N=13,030). Overall, out of the total sample of children who were raised in non-orphaned kinship care, 8% (N=5,616) of under-five children died while under the care of a grandparent, followed by 5% (N= 1,895) of under-five children who were raised by aunts/uncles. The lowest percentage of under-five deaths was observed among 2% (N= 250) of children who were raised by other relative kin caregivers.

Table 4.4: *Bivariate association between under-five deaths (Wave 5; 2017) and individual level characteristics of children by type of kin caregiver at Baseline (Wave 4; 2014/15)*

Child Characteristics	**Grandparent**			**Aunt/uncle**			**Other family**		
	Alive (n=68,667)	**Dead (n=5,616)**	**P-value (χ^2)**	**Alive (n=37,401)**	**Dead (n=1,895)**	**P-value (χ^2)**	**Alive (n=13,030)**	**Dead (n=250)**	**P-value (χ^2)**
	%	**%**		**%**	**%**		**%**	**%**	
Sex									
Male	84.2	15.8	0.629	91.1	8.9	0.619	50.0	50.0	0.171
Female	92.3	7.7		87.8	12.2		100.0	0.0	
Population group									
Black African	86.7	13.3	0.762	90.2	9.8	0.239	66.7	33.3	0.361
Other	100.0	0.0		77.8	22.2		100.0	0.0	
Perceived health status									
Excellent and Very good	95.4	4.5	0.086	89.5	10.5	0.826	75.0	25.0	0.576
Good	75.0	25.0		88.5	11.5		100.0	0.0	
Fair and poor	50.0	50.0		100.0	0.0		80.0	20.0	
Child has clinic card									
Yes	84.6	15.4	0.566	91.5	8.5	**0.002**	100.0	0.0	0.361
No	100.0	0.0		66.7	33.3		85.0	15.0	
Yes, but not available	90.1	9.1		88.3	11.7		66.7	33.3	
Child has/ had any illnesses or disabilities									
Yes	100.0	0.0	0.238	85.7	14.3	0.545	86.0	14.0	0.214
No	90.0	10.0		89.7	10.3		80.0	20.0	
Number of times health professional consulted									
Once	77.8	22.2	**0.004**	91.5	8.5	**0.003**	100.0	0.0	0.576
More than once	88.2	11.8		94.1	5.9		65.0	35.0	
Never	100.0	0.0		85.1	14.9		75.0	25.0	
Child covered by medical aid									
Yes	90.0	10.0	0.250	85.7	14.3	0.644	90.0	10.0	0.353
No	50.0	50.0		89.9	10.1		80.0	20.0	
Child recipient of social grant									
Yes	96.0	4.0	**0.025**	91.7	8.3	0.132	66.7	33.3	0.361
No	57.1	42.9		82.0	17.9		100.0	0.0	

Table 4.4 shows the under-five mortality levels and the individual level characteristics of children by the type of kin caregiver. Overall, the results show that over 50% of male children who were Black African (33%) died while under the care of other extended kin caregivers. The results showed that 25% of under-five children who were reported to have been in excellent and very good health at the time of their death, died while under the care of other relative kin caregivers. Over 50% of children who died while under the care of grandparents were reported to be in fair or poor health at the time of their death. Interestingly, similar percentage distributions were observed among children who were still alive and were in the care of a grandparent, but were reported to be in fair or poor health. In addition, 25% of children who died while under the care were reported to be in good health at the time of their death. Furthermore, more than one-third (33.3%) of children eho died while under the care of an aunt or uncle had no clinic card at their time of death, while the same proportion was observed among children who were reported by other family members to have had a clinic card though it was not available. In contrast, 15.4% of children who had a clinic card died while under the care of a grandparent.

Interestingly, slight percentage differences were observed among children who died under the care of an aunt or uncle (14.3%) and among those who died under the care of other family members (14.0%) and were reported to have had any illnesses or disabilities at their time of death. Conversely, no deaths were observed among children who were reported to have had any illnesses or disabilities by their grandparents. More than a third (35%) of children who had been taken to a healthcare professional more than once died while under the care of other family members, while 22% of children who had been taken to a healthcare professional once died under the care of a grandparent. Additionally, 15% of children who had never been taken to a healthcare professional died under the care of an aunt or uncle. Moreover, 50% of children who did not have medical aid coverage died while under the care of a grandparent, with no percentage differences observed among children who are alive and do not have medical coverageMoreover, 20% of children who did not have medical aid coverage died while under the care of other extended kin caregivers, followed by 10% of children who died while under the care of an aunt or uncle. Lastly, over 40% of children who were not recipients of a child support grant died while under the care of grandparents followed by 18% of children who died while under the care of an aunt or uncle. Contrary to these findings, 33.3% of children who were recipients of a child support grant died while under the care of other family members.

Table 4.5: *Bivariate association between under-five deaths (Wave 5) and kin caregivers' individual-level characteristics at Baseline (Wave 4)*

Kin caregiver Individual Characteristics	**Grandparent**			**Aunt/uncle**			**Other family**		
	Alive (n=68,667)	**Dead (n=5,616)**	**P-value (χ^2)**	**Alive (n=36,757)**	**Dead (n=2,539)**	**P-value (χ^2)**	**Alive (n=12,385)**	**Dead (n=895)**	**P-value (χ^2)**
	%	**%**		**%**	**%**		**%**	**%**	
Sex									
Male	92.9	7.1	0.613	85.7	14.3	0.589	100.0	0.0	0.576
Female	75.0	25.0		83.3	16.7		92.3	7.7	
Population group									
Black African	80.0	20.0	0.285	81.2	18.7	0.521	93.0	7.0	0.576
Other	93.7	6.2		83.3	16.7		75.0	25.0	
Type of place of residence									
Urban	80.0	20.0	0.271	55.0	45.0	0.653	50.0	50.0	0.1717
Rural	30.0	70.0		91.7	8.3		100.0	0.0	
Marital Status									
Never Married	93.3	6.7	0.459	90.9	9.1	0.711	66.7	33.3	0.659
Married	83.3	16.7		75.0	25.0		100.0	0.0	
Widow[er]	66.7	33.3		100.0	0.0		100.0	0.0	
Divorced/Separated	100.0	0.0		100.0	0.0		100.0	0.0	
Employment Status									
Unemployed	94.1	5.9	0.319	92.9	7.1	0.521	66.7	33.3	0.361
Employed	83.3	16.7		80.0	20.0		100.0	0.0	
Highest Level of Education									
No education	73.7	26.3	0.079	100.0	0.0	0.774	100.0	0.0	0.421
Primary	75.0	25.0		100.0	0.0		100.0	0.0	
Secondary	95.4	4.5		90.0	10.0		66.7	33.3	
Higher	66.7	33.3		80.0	20.0		100.0	0.0	
Perceived Health Status									
Excellent/Very Good	66.7	33.3	**0.000**	85.0	15.0	**0.002**	90.0	10.0	0.432
Good	71.4	28.6		100.0	0.0		100.0	0.0	
Fair/Poor	80.0	20.0		80.0	20.0		100.0	0.0	
Last Time Consulted Someone About Health									
In the last 30 days	100.0	0.0	**0.004**	60.0	40.0	0.147	100.0	0.0	0.082
2-5 months ago	90.0	10.0		100.0	0.0		100.0	0.0	
6-12 months ago	71.4	28.6		100.0	0.0		100.0	0.0	
1-2 years ago	80.0	20.0		100.0	0.0		95.0	5.0	
2-4 years ago	100.0	0.0		100.0	0.0		100.0	0.0	
Age									
15-19	0	0	0.094	100.0	0.0	0.818	100.0	0.0	0.287

20-24	0	0		100.0	0.0		90.0	10.0	
25-29	0	0		100.0	0.0		100.0	0.0	
30-34	0	0		100.0	0.0		100.0	0.0	
35-39	0	0		100.0	0.0		100.0	0.0	
40-44	96.8	3.2		66.7	33.3		80.0	20.0	
45-49	96.8	3.2		100.0	0.0		100.0	0.0	
50-54	77.4	22.6		66.7	33.3		100.0	0.0	
55-59	67.7	32.3		100.0	0.0		100.0	0.0	
60+	33.3	66.7		100.0	0.0		100.0	0.0	

Table 4.5 shows the distribution of child deaths by kin caregiver's individual characteristics. Overall, under five mortality rates were highest among children who were raised by female kin caregivers, particularly grandmothers (25%) followed by aunts (16.7%). The lowest under-five mortality rates were observed among children who were raised by other female kin caregivers (7.7%). A consideration of the kin caregivers' population group showed that under-five mortality was highest among children who were raised by Black African grandmothers (20%), followed by 18% of Black African aunts but only 7.0% of children who were raised by other Black African kin caregivers. Furthermore, 70% of child deaths occurred among children who were raised by grandmothers who resided in rural areas. However, nearly half (45%) of child deaths occurred among children who were raised by aunts who reside in urban areas. Furthermore, 25% of child deaths occurred among children who were raised by aunts who were married and 33% occurred among grandparents who were widowed. A third (33%) of child deaths occurred among children who were raised by other kin caregivers who have never been married. Additionally, 33% of child deaths occurred among children raised by other kin caregivers who are unemployed. Close to a quarter (20%) of child deaths occurred among children who were raised by aunts who were employed. There were slight differences in the percentage of child deaths that occurred among children who were raised by grandmothers with no educational qualification (26%) and grandmothers with a primary education (25%) and children who were raised by aunts with a tertiary qualification (20%). More than one-third (33.0%) of deaths occurred among children who were raised by grandparents who perceived their health to be excellent or good at their time of death, followed by 29% of deaths that occurred among children whose grandparents perceived their health to be good. Additionally, 20% of child deaths occurred among chidren who were raised by aunts who perceived their health to be fair or poor. Moreover, over 40% of child deaths occurred among children who were raised by aunts who reported consulting a healthcare worker in the last 30 days and close to 30% of child deaths occurred among children whose grandparents last consulted a healthworker 6-12 months ago. Lastly, two thirds (67%) of child deaths occurred among children who were raised by grandmothers aged 60 and

above and 20% of child deeaths occurred among other family members who are aged 40-44 years old. No percentage differences in child deaths that occurred among children who were raised by aunts who are aged 40-44 and 50-54 (33.0%c each respectively).

Table 4.6: *Bivariate association between under-five deaths (Wave 5) and kin caregivers' household-level characteristics at Baseline (Wave 4)*

Kin caregiver Household Characteristics	**Grandparent**			**Aunt/uncle**			**Other family**		
	Alive (n=68,667)	**Dead (n=5,616)**	**P-value (χ^2)**	**Alive (n=36,757)**	**Dead (n=2,539)**	**P-value (χ^2)**	**Alive (n=12,385)**	**Dead (n=895)**	**P-value (χ^2)**
	%	**%**		**%**	**%**		**%**	**%**	
Household has electricity									
Has electricity	88.9	11.1	0.512	86.7	13.3	0.849	75.0	25.0	0.576
No electricity	80.0	20.0		100.0	0.0		100.0	0.0	
Type of toilet facilities									
None	100.0	0.0	0.560	100.0	0.0	0.641	100.0	0.0	0.361
Flush	85.7	14.3		90.9	9.1		66.7	33.3	
Pit latrine	92.3	7.7		75.0	25.0		100.0	0.0	
Other	66.7	33.3		100.0	0.0		100.0	0.0	
Household's main water source									
Piped water	90.0	10.0	0.238	88.2	11.8	0.889	80.0	20.0	0.323
Other	50.0	50.0		100.0	0.0		100.0	0.0	
Household's source of energy for cooking and heating									
Electricity	92.3	7.7	0.150	93.7	6.2	0.216	100.0	0.0	0.171
Wood	75.0	25.0		50.0	50.0		100.0	0.0	
Other	50.0	50.0		100.0	0.0		50.0	50.0	
Access to media programmes									
Yes	87.1	12.9	0.875	85.7	14.3	0.716	80.0	20.0	0.140
No	100.0	0.0		100.0	0.0		100.0	0.0	
Family Size									
1	80.0	20.0	0.244	100.0	0.0	0.086	100.0	0.0	0.361
2	100.0	0.0		100.0	0.0		66.7	33.3	
3	80.0	20.0		33.3	66.7		100.0	0.0	
4+	100.0	0.0		100.0	0.0		100.0	0.0	
Recipient of government household subsidy									
Yes	100.0	0.0	0.488	100.0	0.0	0.743	100.0	0.0	0.447
No	85.2	14.8		84.6	15.4		80.0	20.0	
Household receives government grant									
Yes	90.0	10.0	0.620	50.0	50.0	**0.057**	100.0	0.0	**0.025**
No	83.3	16.7		100.0	0.0		100.0	0.0	

Table 4.6 shows the distribution of child deaths by kin caregiver's household characteristics. Overall, the results show that a large proportion of child deaths occurred among children who were raised by other kin caregivers with electricity in their households, compared to children raised by grandmothers or aunts. A further observation shown in the results showed that there were no differences in the percentage of child deaths that occurred among children raised by grandmothers who had other household toilet facilities and children who were raised by other kin caregivers who had flush toilets in their households (33% each). Approximately 50% of child deaths occurred among children raised by grandmothers who use other water sources in their households. No differences were observed in the percentage of child deaths that occurred among children who were raised by grandmothers and other family members who use other sources of energy for cooking and heating and children who were raised by aunts who used wood as a source of energy for cooking and heating in their households (50% each).

There were no differences in the percentages of child deaths that occurred among children who were raised by grandmothers who had a family size of 1 and a family size of 3 (20% each), while close to 70% of child deaths occurred among children whose aunts or uncles had a family size 3. Moreover, 20% of child deaths occurred among children who were raised by other kin caregivers who were not recipients of a child support grant, compared to children raised by grandmothers and aunts. In addition, half (50%) of child deaths occurred among children who were raised by aunts who have received a government grant. No deaths were observed among children who were raised by other kin caregivers, whether they received a government grant or not.

4.4. Kaplan-Meier Curves

4.4.1. Kaplan-Meier estimates of the level of under-five mortality by type of kin caregiver, Wave 5, 2017

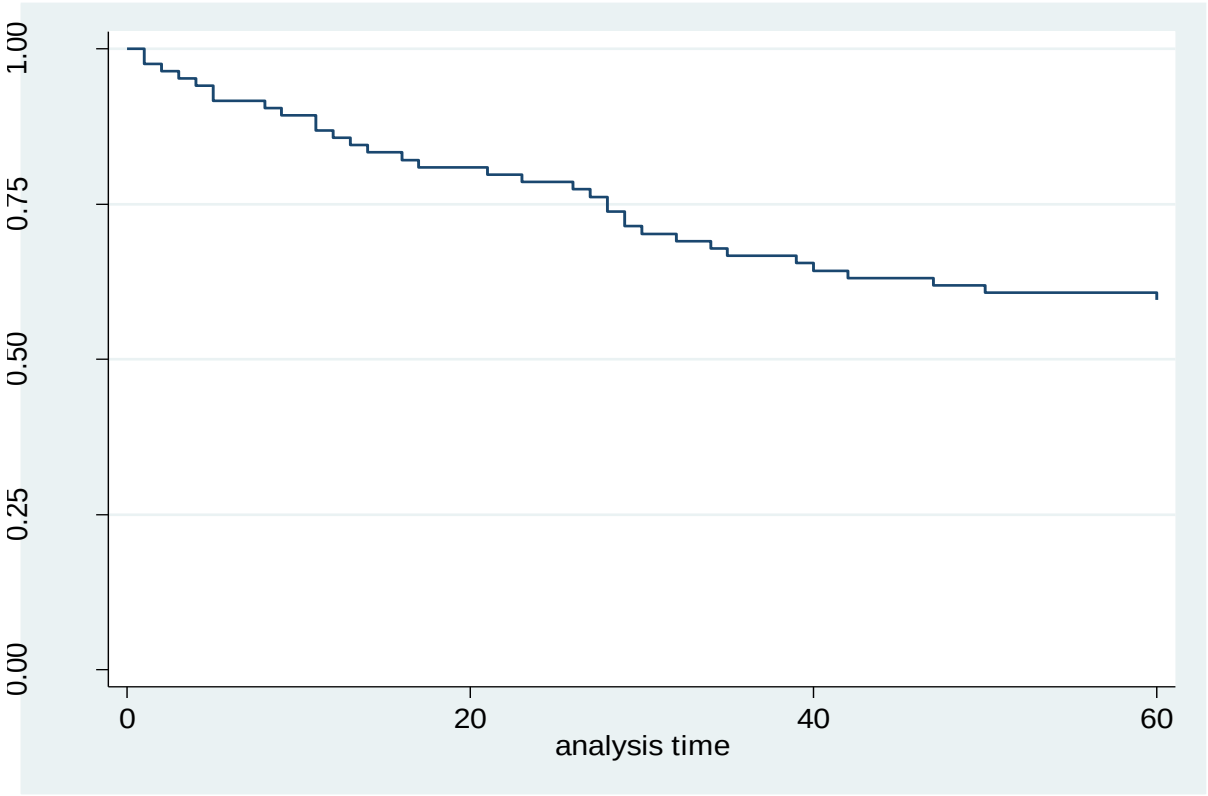


Figure 4.2: *Kaplan Meier U5-mortality estimate of children raised by grandparents, Wave 5 (2017)*

The Kaplan Meier survival curve reveals marked differences in the risk of dying before the age of five. The survival curve in figure 4.2 indicates that under-five mortality is highest among children aged 0-20 months (80%) who were raised by grandparents. Thereafter, the risk of death is observed to decrease with an increase in the child's age, although it can be observed that the risk is still above 50% among children who have advanced to their 4th year of life.

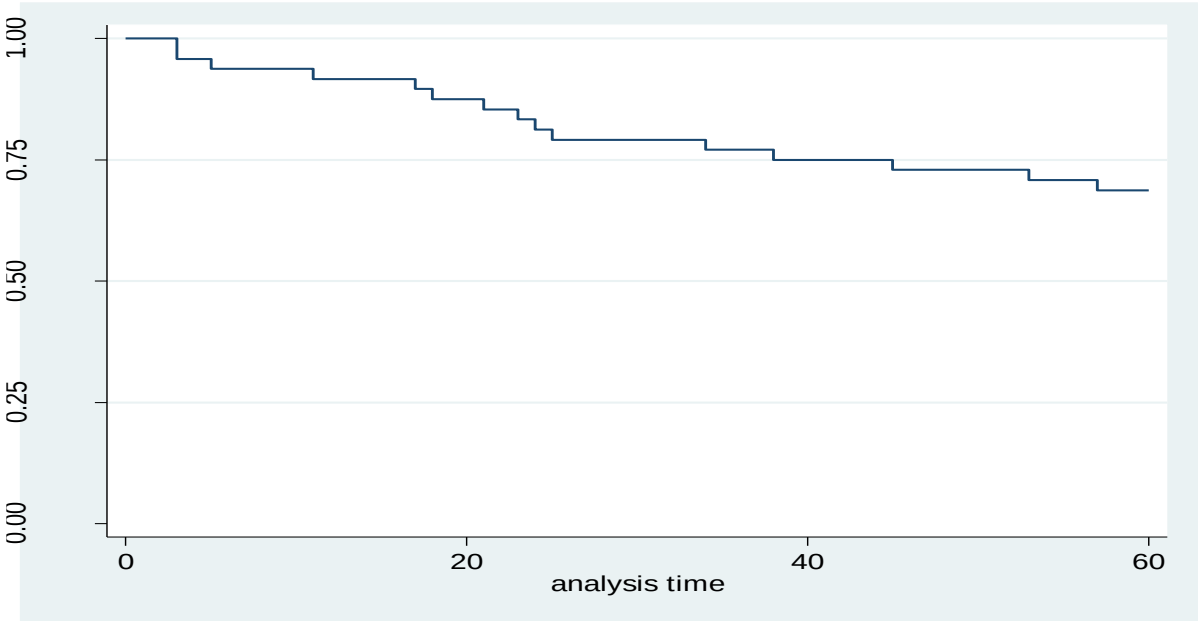


Figure 4.3: *Kaplan Meier U5-mortality estimate of children raised by aunts or uncles, Wave 5 (2017)*

Figure 4.3 above also shows that over 75% of children who were raised by aunts or uncles died before the age of 5 (particularly around the age groups 18-24 months). It can further be observed that the mortality risks of children who are younger than 18 months and older than 24 months are lower or slightly non-existent among children who are raised by aunts or uncles.

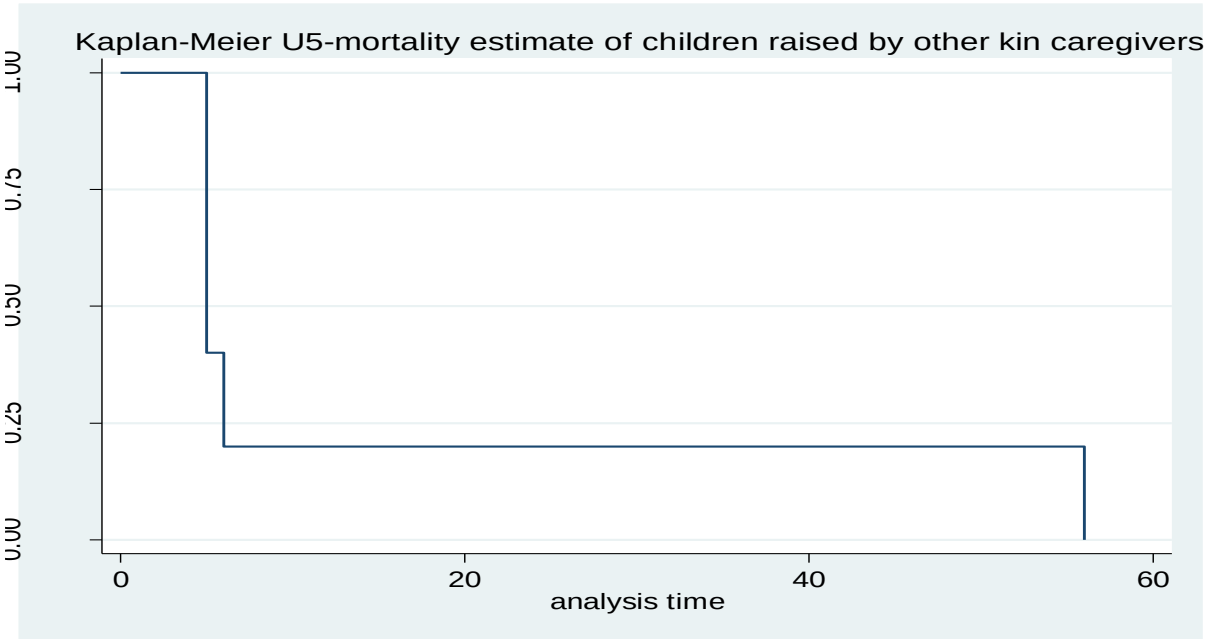


Figure 4.4*: Kaplan Meier U5-mortality estimate of children raised by other kin caregivers, Wave 5 (2017)*

Lastly, Figure 4.4 shows that the mortality risk of children who were raised by other kin caregivers is significantly lower compared to children who were raised by grandmothers and

aunts as the survival curves only indicate that death occurred on slightly over 25% of children who were still in infancy. No deaths were observed from ages 0-11 months and from ages 11 months up to 59 months as the survival curve indicates that the event of interest did not occur.

4.4.2. Kaplan-Meier estimates of the level of under-five mortality by selected grandparents'individual and household characteristics, Wave 5, 2017

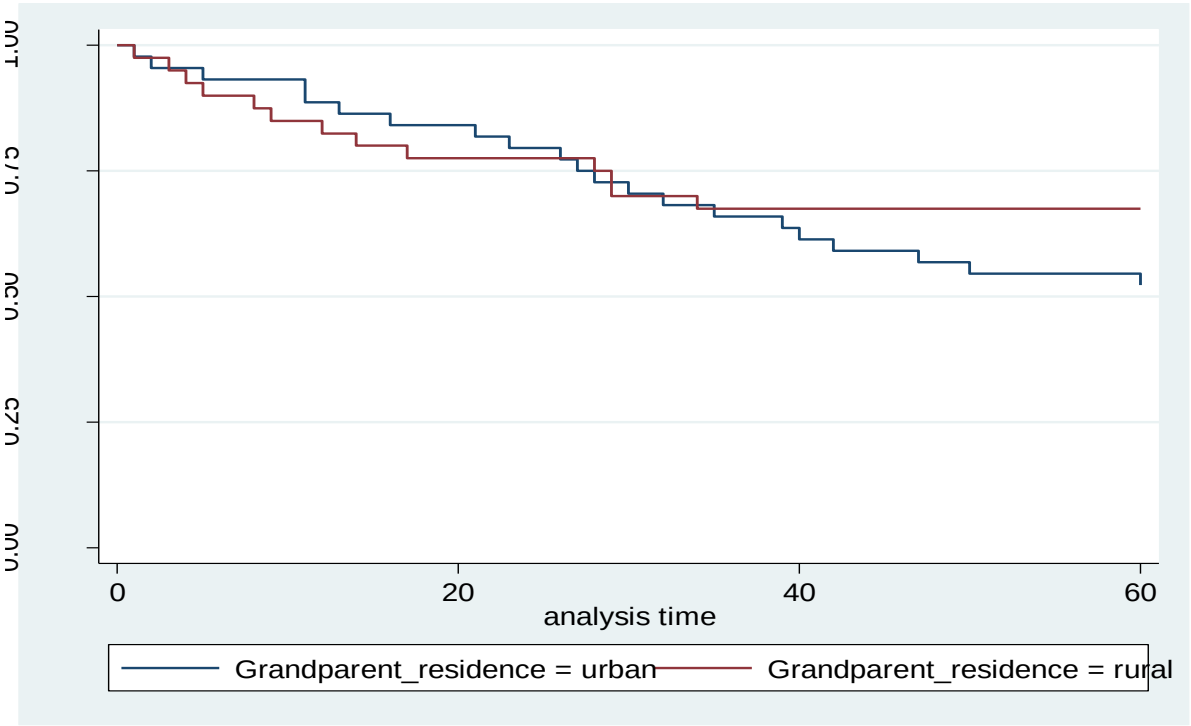


Figure 4.5: *Kaplan Meier survival estimates, by Grandparent residence, Wave 5 (2017)*

The results depicted in figure 4.5 show that under-five mortality is highest among children who were raised by grandparents who reside in rural areas compared to those who reside in urban areas. The risk is highest among children between age 0-15 months. This is mainly because the survival curves indicate that the endpoint of interest (under-five mortality), occurs much earlier for children who were raised by grandparents who reside in rural areas. Surprisingly, the mortality risk of children is the same among 80% of children who are in infancy (5 months) and those who are between 25 to 35 months who were raised both in rural and urban settings. This is evident from how the survival curves have converged. No deaths are observed among children who were raised by grandparents who reside in rural areas after 35 months of age, while deaths are still observed among children raised by grandparents residing in urban areas, with the risk being over 50% between the ages 40-45 months.

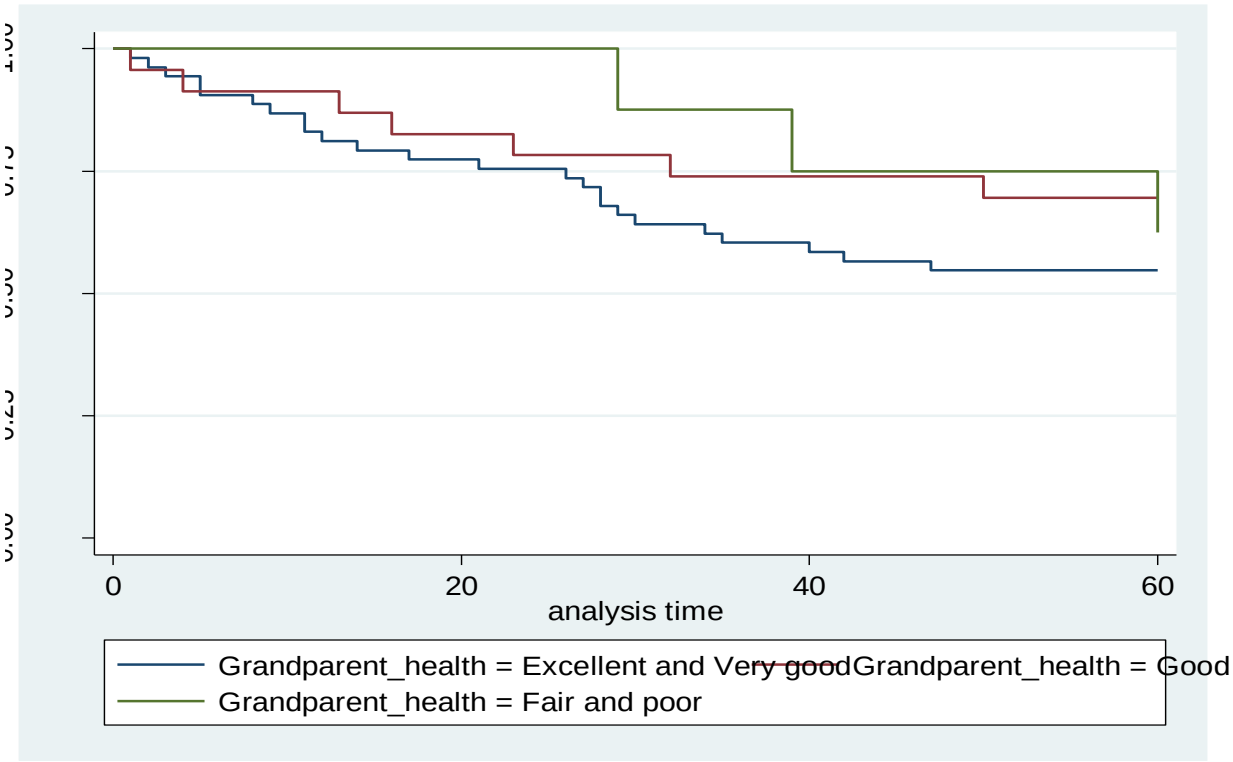


Figure 4.6: *Kaplan Meier survival estimates, by Grandparent perceived health status, Wave 5 (2017)*

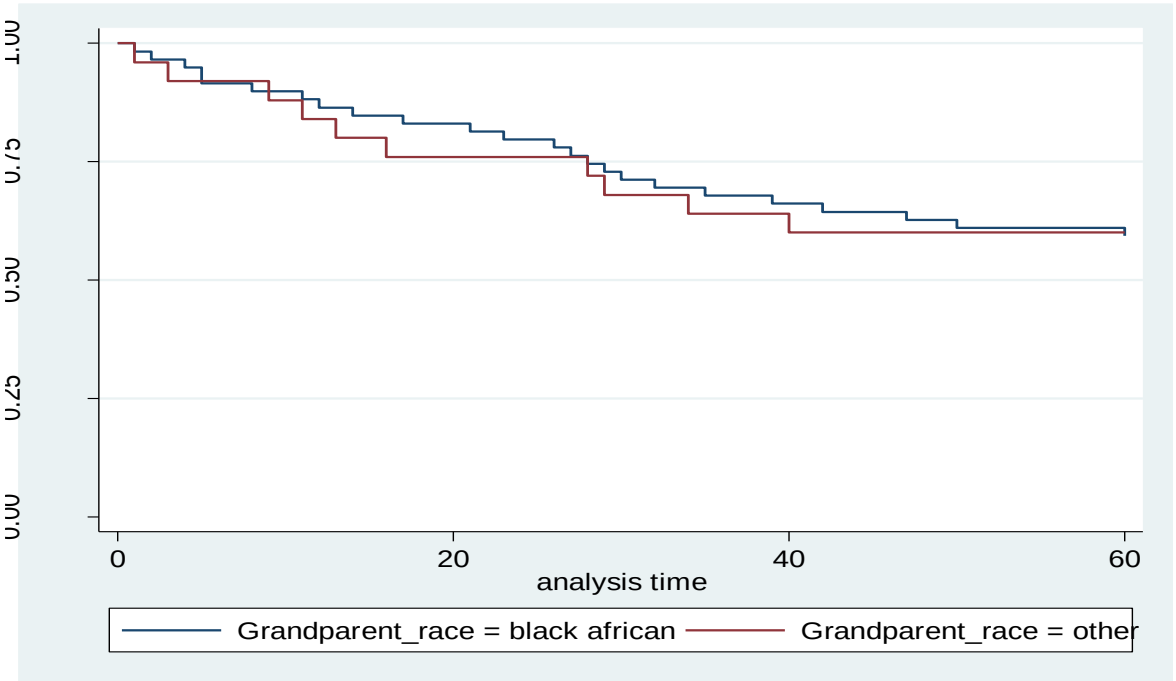


Figure 4.7: *Kaplan Meier survival estimates, by Grandparent population group, Wave 5 (2017)*

An astounding finding emerging from figure 4.6 shows that under-five mortality is highest among close to 80% of children who were raised by grandparents who perceived their health status to be either excellent or very good, with the risk decreasing with an increase in age. However, the mortality risk is still above 50% between the ages 25 to 40 months. Hazards of

death were observed to be lower among children whose grandparents perceived their health to be good and fair or poor.

Additionally, figure 4.7 shows the under-five mortality estimates by grandparents' population group. The survival curves show that under-five mortality is slightly higher among children who were raised by Black African grandparents (particularly close to 100% in infancy) with the hazards dropping slightly as children advance to ages 20 months. Increased mortality risks are observed among children who were raised by grandparents of other race groups (particularly between the ages 20-45 months). However, generally, the mortality risks seem to be the same as the survival curves converge at various time points for both population groups.

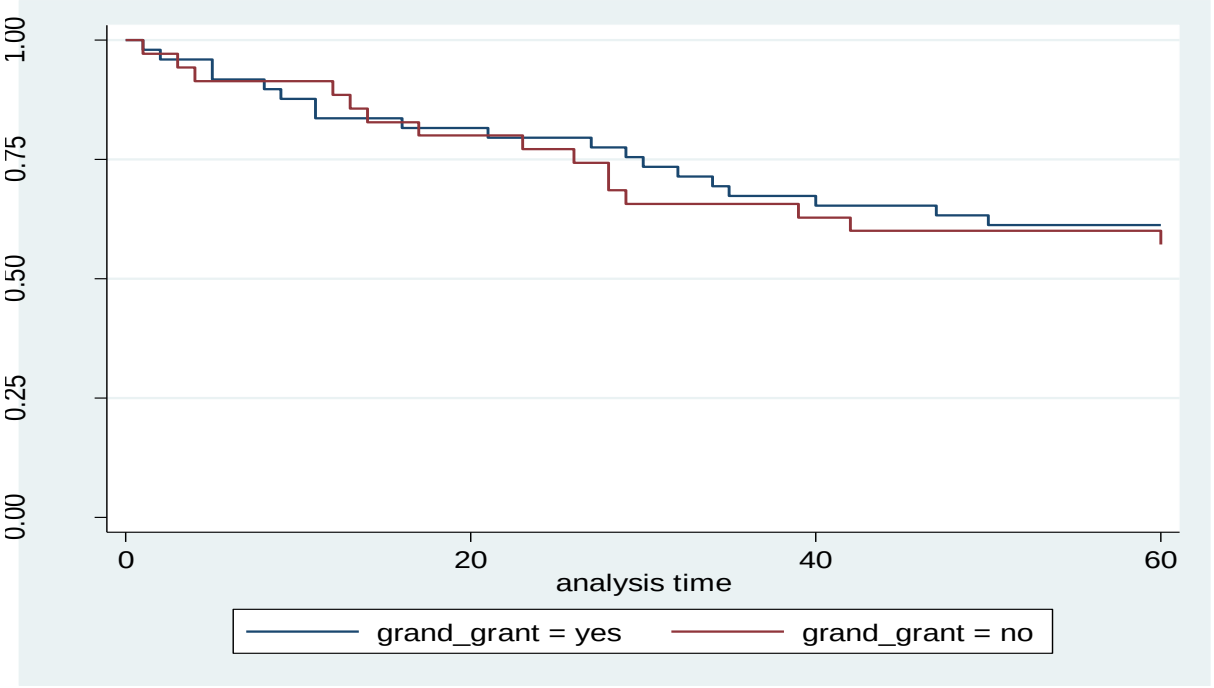


Figure 4.8: *Kaplan Meier survival estimates, by Grandparent recipient status of social grant, Wave 5 (2017)*

Figure 4.8 shows that the risk of under-five mortality is the same for both grandparents who received a social grant on behalf of the child and those who were not recipients. This is particularly the case during infancy (0-5 months) with the risk being close to 100%. This is evident from how the curves converge. Thereafter, the mortality of children whose grandparents are recipients of a social grant decreases between 10-15 months. The mortality risk of children whose grandparents are not recipients of a social grant is slightly higher in the same age group. Conversely, the risk of death for children were not recipients of a social grant

decreases between ages 20 to30 months. However, it increases for children whose grandparents were recipients of a social grant in the same age group.

4.4.3. Kaplan-Meier estimates of the level of under-five mortality by aunts or uncles selected individual and household characteristics, Wave 5, 2017

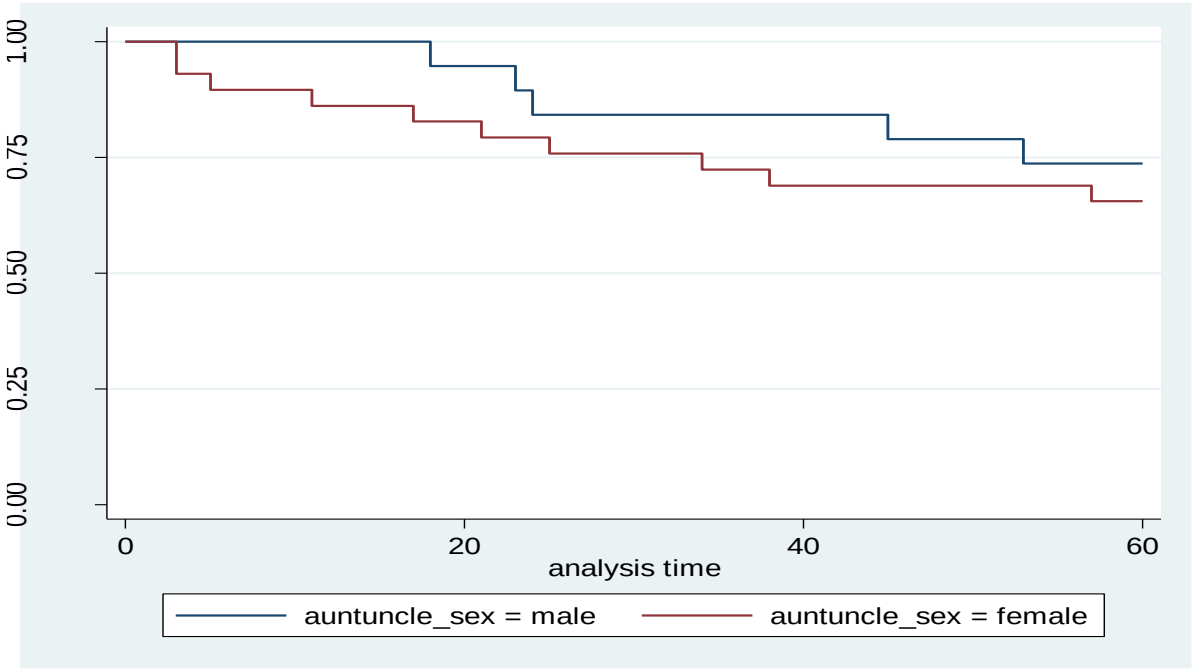


Figure 4.9: *Kaplan Meier survival estimates, by aunt or uncle sex*

With regards to sex, figure 4.9 shows that the hazard of under-five mortality is highest among children who were raised by aunts compared to uncles. This is shown by how the survival curves diverge. Mortality risks are highest between 2-18 months (over 75%) and start to decrease from age 20 months onwards.

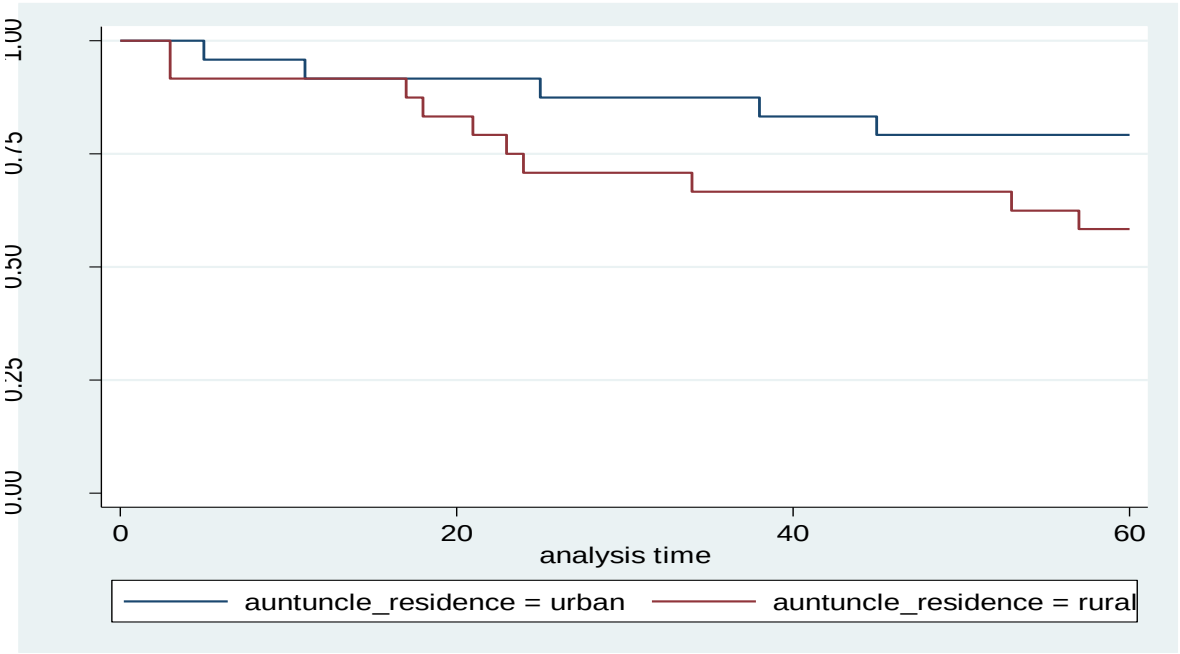


Figure 4.10: *Kaplan Meier survival estimates, by aunt or uncle residence*

In terms of residence, under-five mortality is highest among children who were raised in rural areas by their aunts or uncles with the hazard of death being over 75% for children who are between 18-20 months (Figure 4.10). Mortality rates start to decrease from age 20-25 months. An interesting observation is that there are close to zero mortality risks for children who are between 25-59 months, as it can be observed from the figure that the event of interest (death) has not occurred - which is a similar case with children whose aunts or uncles reside in urban areas.

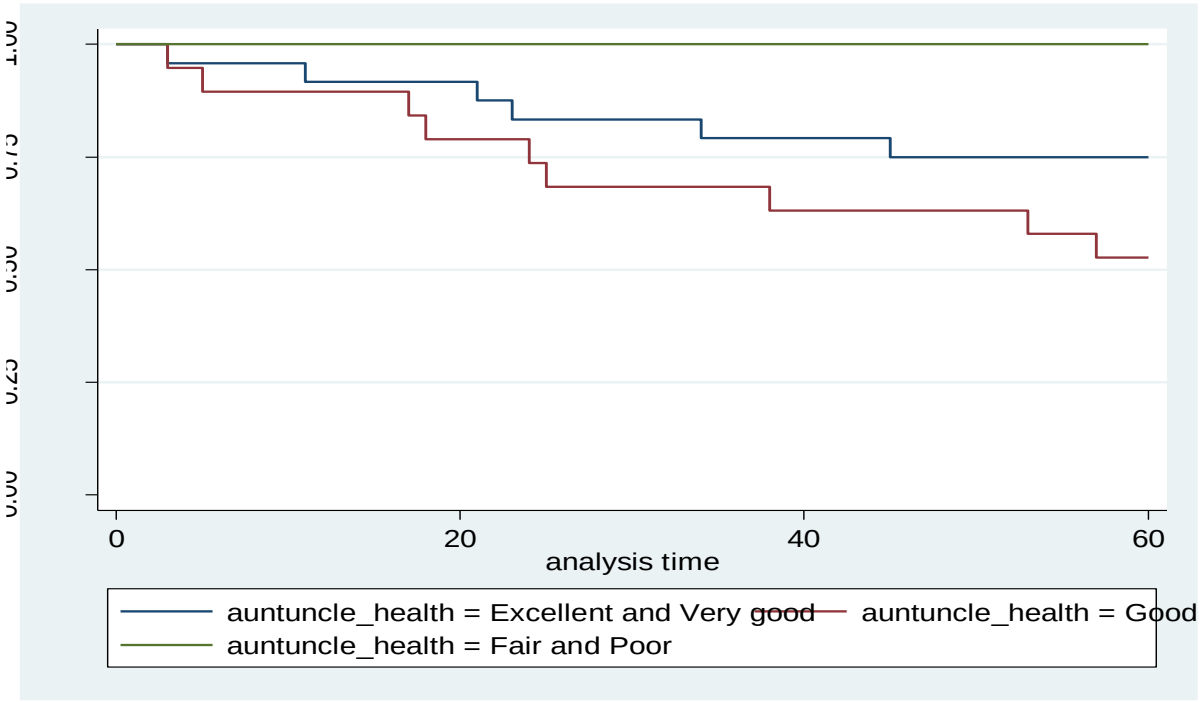


Figure 4.11: *Kaplan Meier survival estimates, by aunt or uncle perceived health status*

Figure 4.11 shows that the hazard of under-five mortality is highest among children whose aunts or uncles were in excellent or very good health. This is particularly the case at age 20-22 months, as the hazard is close to 80%. It can further be observed that this is followed by children whose aunts or uncles were in good health, as the hazard of death is over 75% for children who are 17-19 months. No deaths are observed among children who are between 20-24 months who were raised by aunts or uncles who were in good health. The hazard of death then decreases to less than 75% for children who are between 26-28 months.

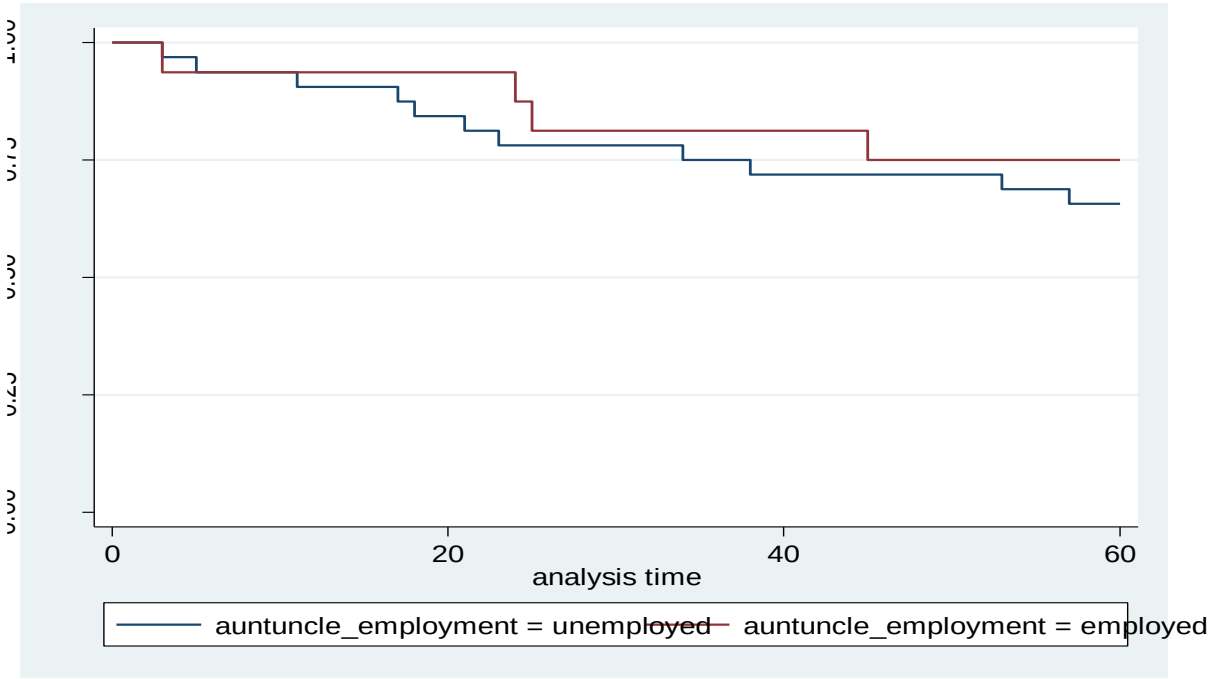


Figure 4.12: *Kaplan Meier survival estimates, by aunt or uncle employment status*

Overall, figure 4.12 shows that under-five mortality is highest among children whose aunts or uncles were unemployed, with the hazard of death being highest among children aged 18-22 months (hazard of death over 75% and starts to decrease from age 22 months onwards).

4.4.4. Kaplan-Meier under-five mortality estimates of children raised by grandparents by the children's selected characteristics, Wave 5, 2017

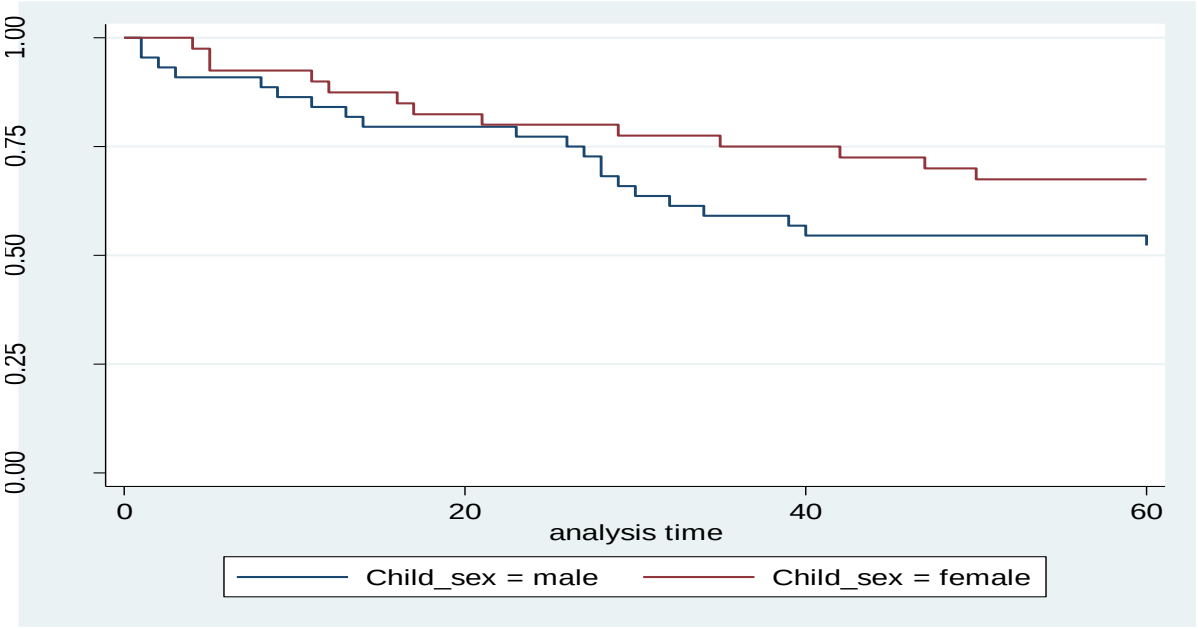


Figure 4.13: *Kaplan Meier survival estimates, by sex of the child*

Figure 4.13 above shows that the hazard of under-five mortality is highest among male under-five children raised by grandparents, with the hazard of death being highest at 1-3 months (over 80%). No deaths are observed between ages 4-10 months. Thereafter, mortality is observed at ages 11-18 months, although the risk begins decreasing - even though it is still above 75%. Mortality risks are further observed at ages 24-36 months, with the risk being less than 75% although it is still slightly high (over 50%) Overall, it can be observed that mortality decreases with an increase in age.

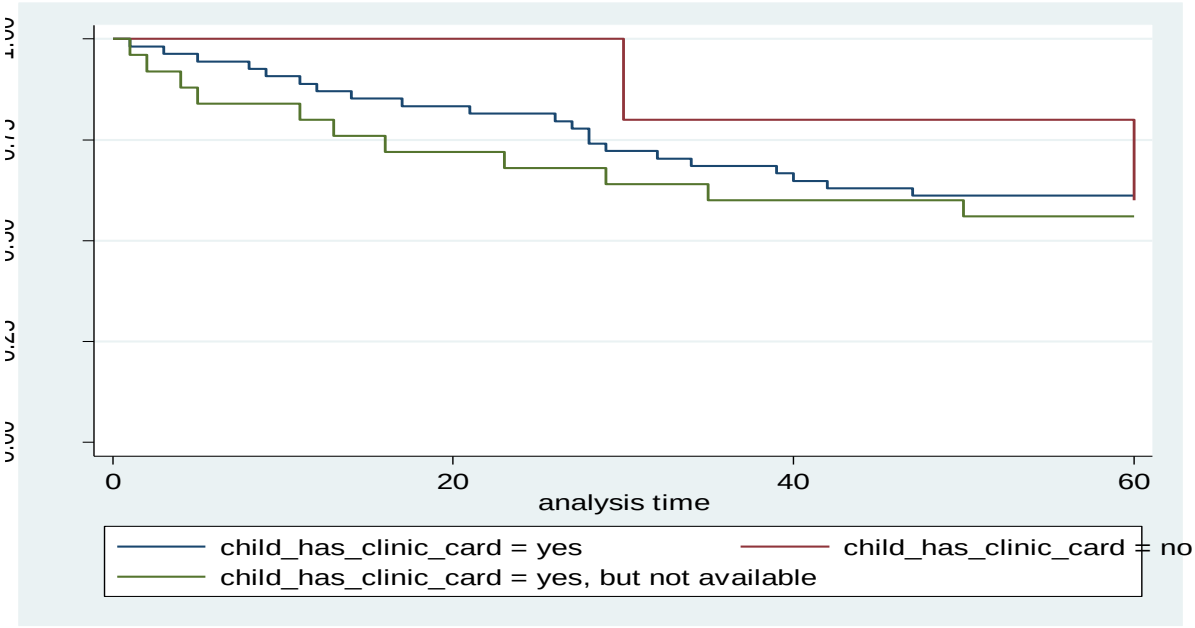


Figure 4.14: *Kaplan Meier survival curve estimates, by child has a clinic card*

The results above (Figure 4.14) show that under-five mortality is slightly higher among children whose grandparents reported that the children had a clinic card though it was not available (> 75% for children aged 1-5 months), and much higher among children whose grandparents reported that the child had a clinic card. Overall, the risk of mortality is observed to be highest among children aged 1-20 months whose grandparents reported that they had a clinic card (>75%). The risk of death is still above 75% between ages 25-30 months for children whose grandparents reported that they have a clinic card. Thereafter, the risk of death starts to decrease up to 41 months where the risk is below 75%, though greater than 50%.

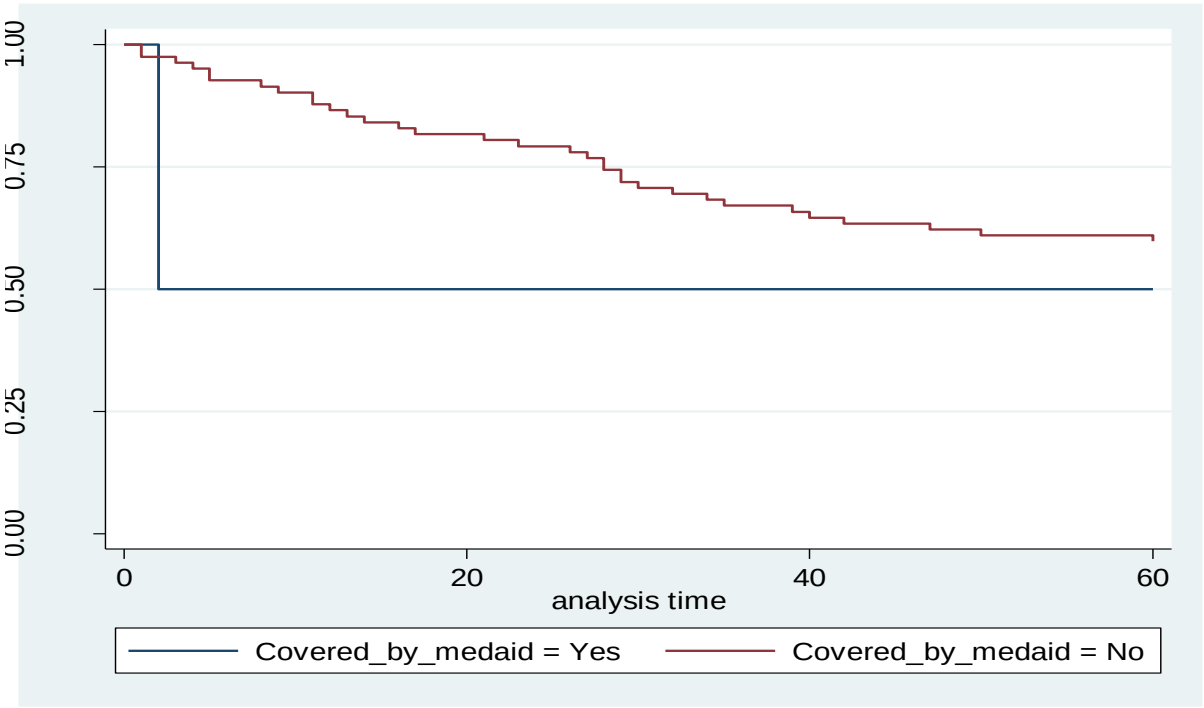


Figure 4.15: *Kaplan Meier survival curve estimates, by child covered by medical aid*

Figure 4.15 shows that the risk of under-five mortality is highest among children who were not covered by medical aid while under the care of a grandparent. The Kaplan Meir curves shows that no deaths were recorded for children who were covered by medical aid. This is observed from how the event of interest has not occurred. Conversely, the risk of death is observed to be highest between age 0-22 months (>75%). Thereafter, the risk of death decreases up to 40 months, though the risk of death is still over 50% for children whose grandparents reported that they were not covered by medical aid.

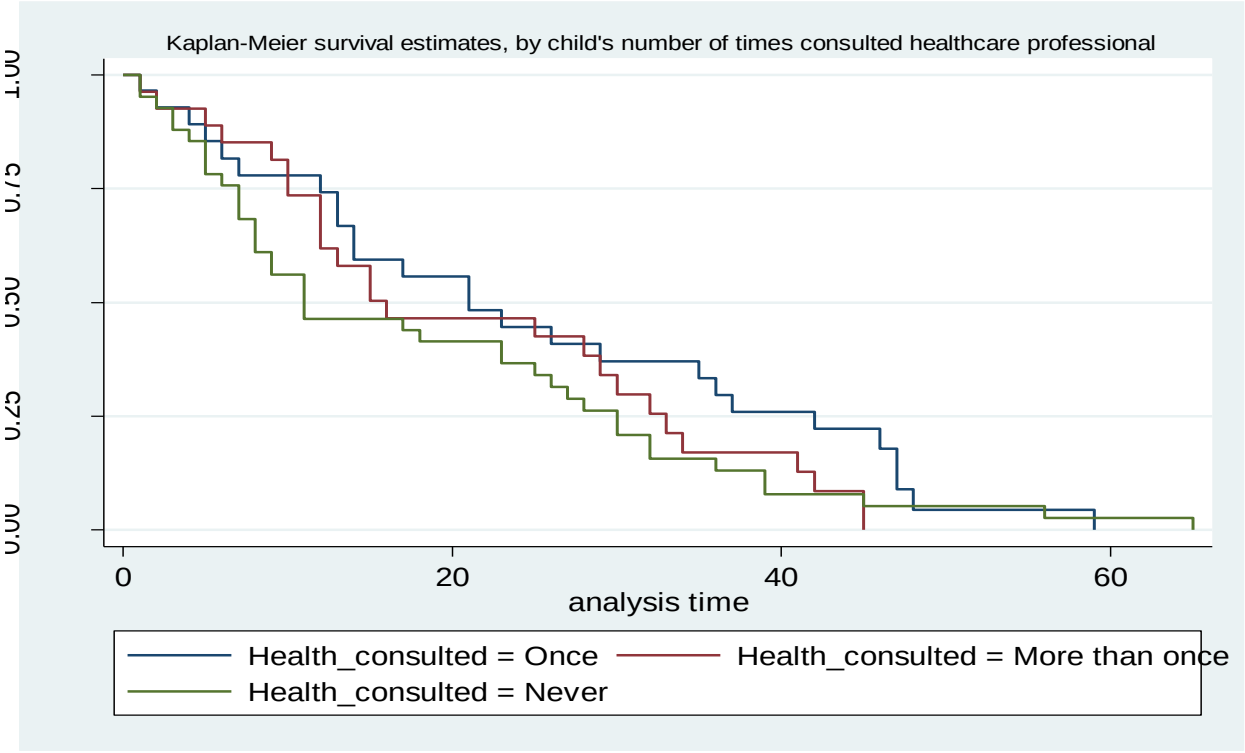


Figure 4.16: *Kaplan Meier survival estimates of the number of times a healthcare professional was consulted for the child*

The results above show that the risk of under-five mortality is highest among children whose grandparents reported that they had taken the child to a healthcare professional once, followed by grandparents who reported that they had consulted a healthcare professional for the child under their care more than once. Surprisingly, the hazard of death was slightly lower among children whose grandparents reported that they had never taken the children under their care to a healthcare professional. A distinctive feature emerging from the results showed that the hazard of death is the slightly the same for all the children between 1-3 months and this is evident from how the Kaplan Meier graphs converge. Thereafter, the hazard of death decreases for children who have never been taken to a healthcare professional (around 4-15 months) and slightly drops to just over 50%. Furthermore, a slightly similar mortality pattern is observed among children who have never been taken to a healthcare professional and children who have been taken to a healthcare professional more than once by their grandparents (23-38 months), as mortality risks are over 25%. This is observed from how the curves are slightly converging towards each other.

4.4.5. Kaplan-Meier under-five mortality estimates of children raised by aunts/uncles by selected children's characteristics, Wave 5, 2017

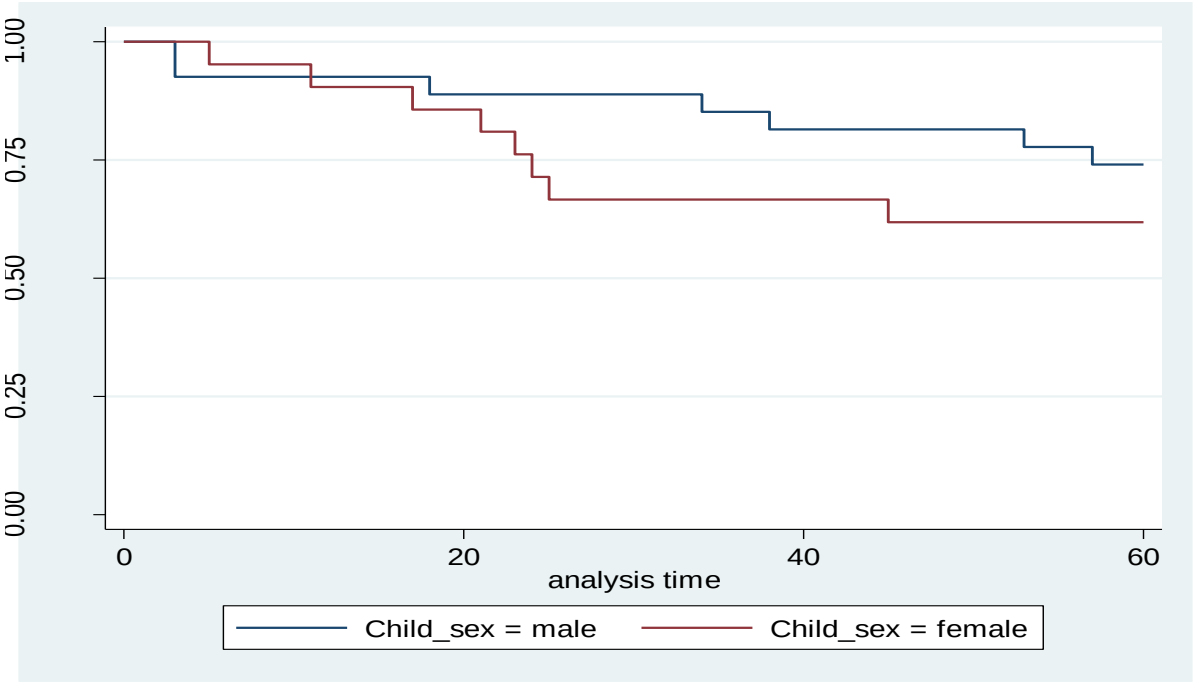


Figure 4.17: *Kaplan Meier survival estimates by sex of the child*

Figure 4.2.12 above shows that the hazard of under-five mortality is highest among female under-five children raised by aunts or uncles with the hazard of death being highest between 20-25 months. The hazard is above 75% at 20 months and decreases to just over 50% at 25 months. Conversely, almost no deaths were observed among male children who were raised by aunts or uncles.

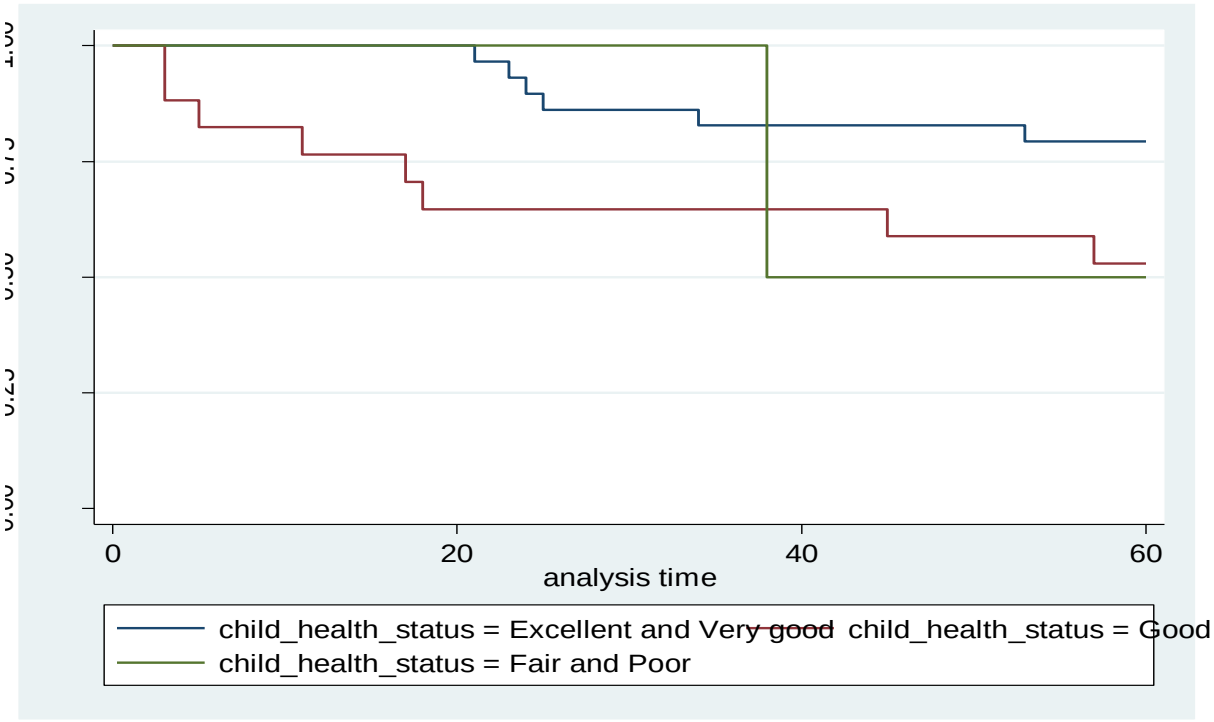


Figure 4.18: *Kaplan Meier survival estimates by Child's perceived health status*

An astonishing finding emerging from figure 4.2.17 shows that the risk of mortality is highest among children whose aunts or uncles reported them to be in excellent or very good health. The hazard of death is observed to be above 75% at 22-25 months.

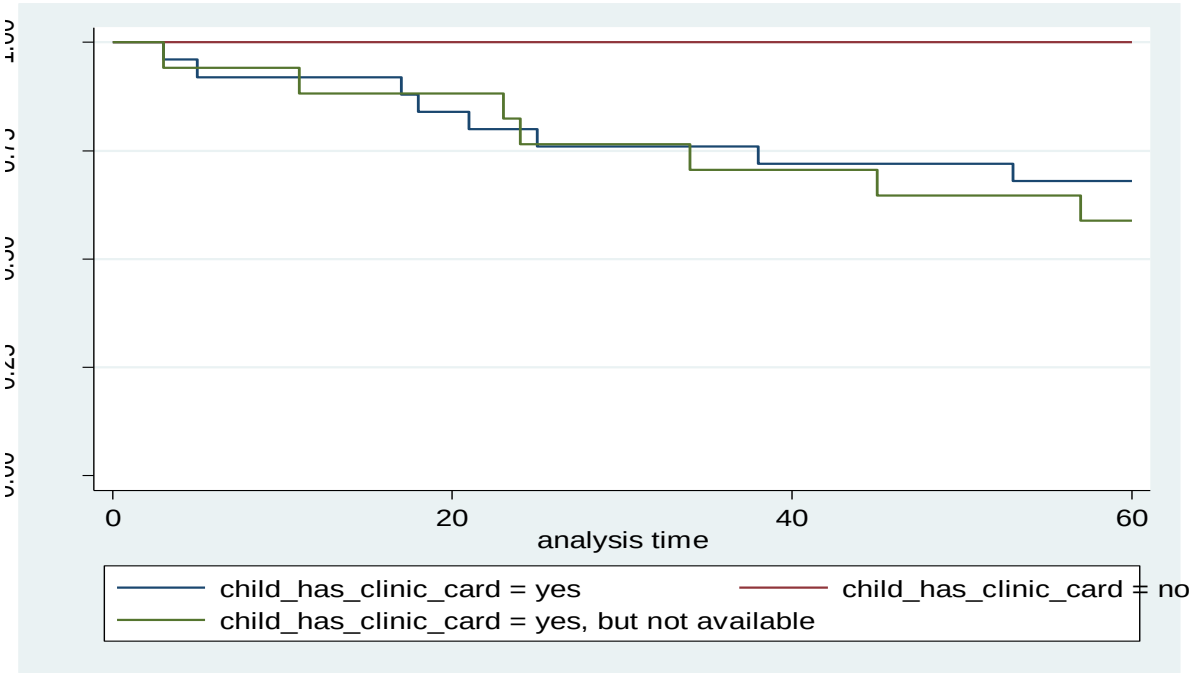


Figure 4.19: *Kaplan Meier survival estimates, by child has a clinic card*

The results above show that under-five mortality is highest among children whose aunts or uncles reported that they had a clinic card (around 18-20 months) with a hazard of above 75%. However, the risk of mortality starts to decrease.

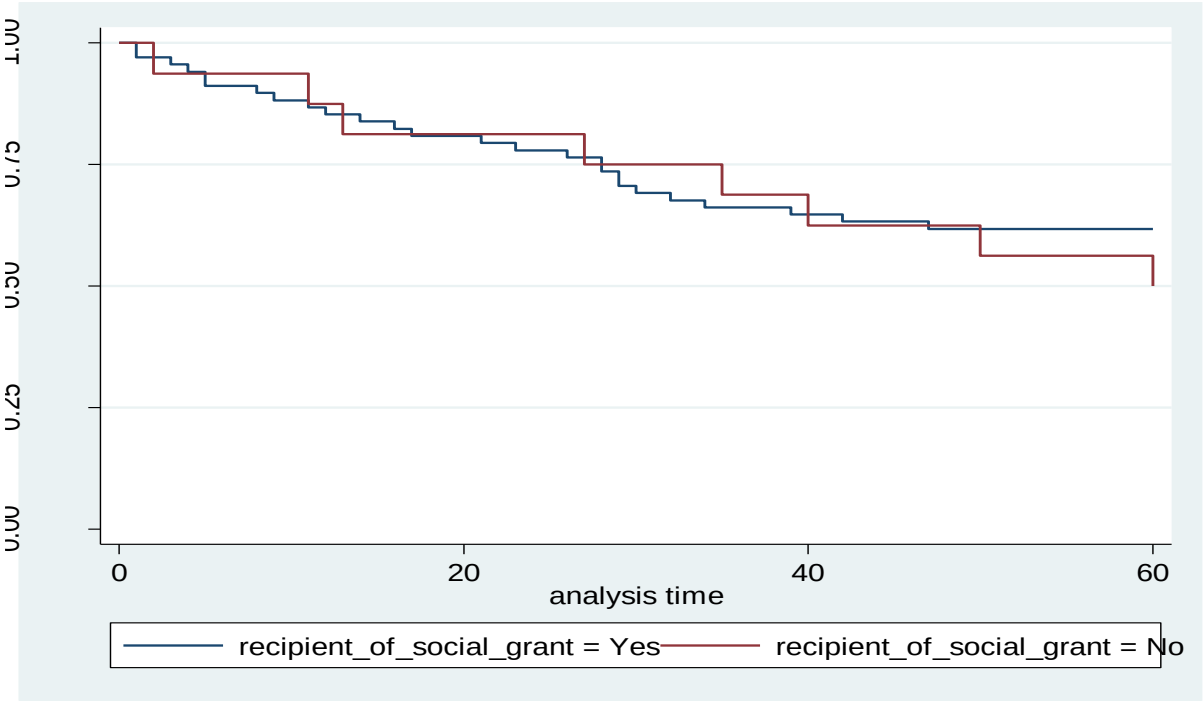


Figure 4.20: *Kaplan Meier survival estimates, by child recipient of social grant*

Figure 4.2.18 shows that under-five mortality is highest among children whose aunts or uncles were receiving a social grant on their behalf. Overall, the results show that the risk of mortality

is above 75% between 0-18 months. Thereafter, the risk starts to decrease between 20-35 months, although mortality risks are still just above 50%.

4.5. Inferential Results

Table 4.7: *Effects of children's characteristics (Wave 4) on under-five mortality among children who died under the care of various kin caregivers in Wave 5, 2017*

	Type of kin caregiver					
	Grandparent		**Aunt/Uncle**		**Other family**	
Children's characteristics	**Model 1 (UHR)**	**Model 2 (AHR)**	**Model 3 (UHR)**	**Model 4 (AHR)**	**Model 5 (UHR)**	**Model 6 (AHR)**
Sex						
Male	1	1	1	1	1	1
Female	1.04	0.77	1.56	0.18	2.23	3.41
Population group						
Black African	1	1	1	1	1	1
Others	0.76	0.51	0.22	0.35	0.33	0.82
Perceived health status						
Good	1	1	1	1	1	1
Excellent and Very good	2.04*	22.9*	1.54	1.48*	0.87	0.67
Fair and Poor	1.26	10.3	1.53	1.45	1.12	1.04
Child has clinic card						
Yes	1	1	1	1	1	1
No	0.38	0.14*	0.29	0.18	0.20	0.35
Yes, but not available	1.26	1.47*	0.78	0.68	0.33	0.33
Child has illness/disabilities						
No	1	1	1	1	1	1
Yes	1.12	44.9	1.53	1.09	1.15	1.35
Number of times health professional consulted						
Once	1	1	1	1	1	1
More than once	1.33	1.67*	0.89	1.51	1.20	1.32
Never	1.49	1.52*	0.93	1.11*	1.15	2.41
Child covered by medical aid						
Yes	1	1	1	1	1	1
No	1.54	1.53	1.17	0.19	1.30	1.52
Child recipient of social grant						
Yes	1	1	1	1	1	1
No	0.72	0.96	0.37	1.03*	1.36	3.82*

UHR=Unadjusted hazard ratios; AHR=Adjusted hazard ratios; *p<0.05

Table 4.7 shows the unadjusted and adjusted hazard ratios or risks of under-five mortality by the characteristics of children who were raised by various kin in South Africa. Overall, only the perceived health status of children who were raised by grandparents, had a significant influence on under-five mortality in the unadjusted models. This was 2.04 times higher for children whose health was perceived to be excellent or very good in relation to children who were perceived to have good health. Furthermore, results in the adjusted model showed that

perceived health status had a significant influence on under-five mortality. These results were 22.9 times higher among children raised by grandparents, and 48% higher among children raised by aunts or uncles who perceived the children's health to be excellent or very good).

In addition, the adjusted hazard ratios showed that children who were reported by their grandparents to have been taken to a healthcare professional more than once had 67% increased hazards of dying before age 5. On the other hand, those who were reported to have never been taken to a healthcare professional had 52% increased hazards, compared to those who were taken once. Conversely, children who had never been taken by their aunts to a healthcare professional had 11% increased hazards of dying before age 5. Moreover, the adjusted model showed that under-five mortality was highest among children whose grandparents reported that the child had a clinic card although it was unavailable (47% increased hazard). Lastly, the results showed that under-five mortality is highest among children whose aunts or uncles (3% increased hazard) and other family (3.82 times higher hazard of death) were not recipients of a social grant. Thus, the availability of a clinic card, number of times a healthcare professional was consulted, and social grant recipient status were factors that had an influence on under-five mortality in the adjusted model.

Table 4.8: *Effects of various kin caregivers' individual characteristics (Wave 4) on under-five mortality in Wave 5, 2017*

	Type of kin caregiver					
	Grandparent		**Aunt/Uncle**		**Other family**	
Kin caregivers' individual characteristics	**Model 1 (UHR)**	**Model 2 (AHR)**	**Model 3 (UHR)**	**Model 4 (AHR)**	**Model 5 (UHR)**	**Model 6 (AHR)**
Sex						
Male	1	1	1	1	1	1
Female	0.74	0.62	1.46	1.33	0.05	0.29
Population group						
Black African	1	1	1	1	1	1
Others	0.98	0.95	0.80	2.58	2.00	2.41
Type of place of residence						
Urban	1	1	1	1	1	1
Rural	1.57*	2.47*	1.11	0.82	2.23	3.41
Marital status						
Never married	1	1	1	1	1	1
Married	1.14	1.65	31.9*	55.9*	2.0	0.01
Widow/widower	1.07	0.77	11.4*	46.9*	1.00	0.41
Divorced/separated	2.11	5.22	1.07	1.42	1.13	1.09
Employment status						
Unemployed	1	1	1	1	1	1
Employed	0.81	1.45	0.85	0.72	1.36	0.02
Highest level of education						
No education	1	1	1	1	1	1
Primary	1.03	1.20	2.43	10.1	1.23	1.55

Secondary	0.85	0.52	0.24	0.04	0.74	0.71
Higher	0.70	0.36	0.22	0.00*	0.30	0.80
Perceived health status						
Good	1	1	1	1	1	1
Excellent and Very good	1.22*	1.65*	5.85	1.10*	6.66	6.66
Fair and Poor	0.98	0.08*	0.58	0.89*	2.0	2.2
Number of household members						
1	1	1	1	1	1	1
2	0.20	0.56	1.76	3.44	2.22	1.30
3	1.56	1.80	3.52	9.33	0.74	0.85
4+	3.91	4.20	2.87	10.7*	3.21	1.55
Last time consulted about health						
Never	1	1	1	1	1	1
Over two to five months ago	1.22	1.08*	5.85	1.09*	6.66	5.54
Six to twelve months ago	0.97	1.12*	0.58	1.38*	2.0	3.30
More than 1 and less than 2 years ago	0.50	1.18*	2.13	1.43	1.13	1.40
Two to four years ago	0.46	1.24*	1.46	1.55	1.53	1.59
Age						
15-19	-	-	1	1	1	1
20-24	-	-	0.10*	0.01	0.06	0.75
25-29	-	-	0.03*	0.22	0.55	0.42
30-34	-	-	6.87*	0.00	0.0	0.9
35-39	1	1	2.92*	0.00	2.22	2.67
40-44	0.29*	0.09*	0.03	0.00	1.11	1.05
45-49	0.09*	0.02*	0.61	0.12	1.75	1.25
50-54	0.24*	0.04*	4.20*	0.28	0.19	0.75
55-59	0.66*	0.20*	4.20	0.14	1.32	1.50
60+	1.22*	1.07*	2.05	0.98	0.78	0.62

UHR=Unadjusted hazard ratios; AHR=Adjusted hazard ratios; *p<0.05

Table 4.8 shows the unadjusted and adjusted effects of various kin caregiver's individual characteristics on under-five mortality. Overall, only the age of the grandparent and aunts or uncles had a significant influence on under-five mortality in the unadjusted model. Children whose grandparents were 60 years and above had 22% increased hazard of dying before age 5 while children whose aunts or uncles were between the age groups 30-34 had a 6.87 times higher hazard of death. Moreover, the grandparents' place of residence had a significant influence on under-five death - 57% increased hazards of death among children raised by grandparents residing in rural areas compared to children raised in urban areas. Furthermore, the marital status of aunts or uncles had a significant influence on under-five mortality in the unadjusted model. This result was 31.9 times higher hazard of death among children whose aunts or uncles were married).

The perceived health status among children raised by aunts and uncles (10% increased hazards) and the last time grandparents consulted someone about their health (24% increased hazards) were characteristics that had an influence on under-five mortality, in the adjusted model. Additionally, the marital status of aunts or uncles and number of household members residing

in the aunts or uncles' households, had a significant influence on under-five mortality. Children who were raised by aunts or uncles who were married had increased hazards (55.9 times) of dying before the age of 5. Additionally, children whose aunts or uncles lived in a household that had 4 or more household members had 10.7 times higher hazards of dying before age 5. None of the other kin caregiver characteristics had a significant influence on under-five mortality.

Table 4.9: *Effects of various kin caregivers' household characteristics (Wave 4) on under-five mortality in Wave 5, 2017*

	Type of kin caregiver					
	Grandparent		**Aunt/Uncle**		**Other family**	
Kin caregivers' individual characteristics	Model 1 (UHR)	Model 2 (AHR)	Model 3 (UHR)	Model 4 (AHR)	Model 5 (UHR)	Model 6 (AHR)
Household has electricity						
Has electricity	1	1	1	1	1	1
No electricity	0.61	1.15	0.05	0.20	0.02	0.50
Type of household toilet facilities						
None	1	1	1	1	1	1
Flush toilet	0.63	0.27	0.49	0.19	0.31	0.45
Pit latrine	0.58	0.28	0.85	4.01	1.01	1.04
Others	0.41	0.10	0.10	5.16	0.38	0.50
Household's main water source						
Piped water	1	1	1	1	1	1
Others	1.68	1.81	1.97	1.80	1.11	1.30
Household's source of energy for cooking or heating						
Electricity	1	1	1	1	1	1
Wood	0.87	2.02	4.92	3.61	2.58	1.29
Others	0.64	1.08	3.37	4.95	2.20	1.36
Access to media programmes						
Yes	1	1	1	1	1	1
No	0.66	0.62	0.50	0.67	0.30	0.25
Recipient of government household subsidy						
Yes	1		1	1	1	1
No	0.76	0.81	0.29	0.05	0.45	0.80
Household received government grant						
Yes	1	1	1	1	1	1
No	0.66	0.66	0.74	0.96	0.77	0.65

UHR=Unadjusted hazard ratios; AHR=Adjusted hazard ratios; *p<0.05

Table 4.9 shows the unadjusted and adjusted effects of various kin caregiver's household characteristics on under-five mortality. An astonishing finding that emerged in the results is

that none of the other extended kin individual and household characteristics, as well as grandparent and aunt/uncle household characteristics, had a significant influence on under-five mortality.

CHAPTER FIVE
QUALITATIVE FINDINGS

5.1. Introduction

Given that an explanatory sequential mixed-methods approach was employed in this study, the second phase of the study involved the collection of qualitative in-depth interviews. The main aim was to assist in the provision of clear explanations of the quantitative results obtained in the first phase, in greater depth. The third objective of this study was to investigate the health-seeking behaviours and challenges faced by kin caregivers that influence under-five mortality among children raised in non-orphaned kinship care in South Africa. This objective was guided by the question: How do sociodemographic factors and health-seeking behaviours of kin caregivers influence under-five mortality among children raised in non-orphaned kinship care in South Africa? The qualitative component of the study was informed by the quantitative results obtained in the first phase of the analysis in that it assisted in explaining and building upon the initial quantitative results i.e. following from (or connecting to) the results of the quantitative phase. Thus, the qualitative component helped explain why certain child and kin caregiver characteristics identified in the quantitative phase were significant predictors of under-five mortality in non-orphaned kinship care.

Several themes emerged in the in-depth interviews that adequately helped explain the quantitative results obtained in chapter 4. The themes in the qualitative analysis were drawn inductively using the actual data to derive the structure of the analysis. There was no predetermined structure or framework thus the themes were strongly linked to the data since they emerged from it. Another reason for using this approach was that little was known about the phenomenon under study i.e. under-five mortality in non-orphaned kinship care. Major findings from the in-depth interviews that helped expand on the quantitative results revealed that poor health-seeking practices are significant impediments that contribute to kin caregivers not accessing healthcare services for the children under their care. These were in the form of poor visits to the clinic or hospital, kin caregivers' beliefs about overall health and illness and the kin caregivers' physical abilities. The four themes and sub-themes that explained the quantitative results acquired in this study follow.

5.2. Health-Seeking Behaviour

Table 5.1: *Themes focusing on health-seeking behaviour*

THEMES	SUB-THEMES
5.1.1 Service dissatisfaction	5.1.1.1 Lack of medical attention 5.1.1.2 Clinic management and operations
5.1.2 Medication administration errors	5.1.2.1 Dosage and Drug dispensing
5.1.3 Belief systems	5.1.3.1 Cultural basis of health and illness (Healthcare beliefs)
5.1.4 Caregiver's physical abilities	5.1.4.1 Old age and frailty 5.1.4.2 Additional childrearing responsibilities 5.1.4.3 Health status of kin caregivers

5.2.1. Service dissatisfaction

Lack of medical attention

The narratives of the participants in this section indicated a general dissatisfaction with utilising healthcare services. Most of the participants reported that they had often taken the child placed under their care to a healthcare professional more than once. However, what contributed greatly to the participants seeking regular medical assistance is largely attributed to poor quality of care in clinics. This is despite the ongoing health issues of the children placed under their care and the requirement to visit a healthcare provider regularly. The participants held the common view that although free primary healthcare is largely initiated in their areas of residence, healthcare professionals show reduced responsiveness, and largely neglected and undermined the healthcare needs of children. This has posed a serious threat to the health of children placed under their care.

To indicate this outcome, Participant 1 argued that the service that she had received for her niece in the clinic was ineffective. This is because the healthcare workers had been very unhelpful and constantly provided her with inappropriate treatments - suggesting that they do not understand the child's condition. Her dismay and dissatisfaction are reflected in the excerpt below:

> "*Going to the clinic repulses me. I have completely stopped taking this child to the clinic. Sometimes you arrive at the clinic and they tell you that there is no medication. Given the mental illness that this child suffers from, you are given Panado. She has a stomach-ache, she has a headache she has anything, she is given Panado. Next thing they tell you to go to this clinic and that clinic where there is no care or assistance.*"
>
> *(Aunt, 55 years old: urban Eastern Cape).*

Participant 2 shared similar sentiments as Participant 1 by indicating that there is a lack of sufficient access to professional healthcare support and medication in her area. Such support and medication were required for her physically and mentally handicapped grandchild. This has resulted in her resorting to unconventional measures to relieve the child in times of illness.

She argued:

> *"This child has episodic seizures where he loses consciousness frequently, his body jerks, saliva accumulates in his mouth, he has difficulty breathing and his eyes roll back into his head. I used to take him to the clinic regularly to seek assistance every time this happens, but I was told by the nurses that "no a person that is disabled will always be disabled. There is nothing we can do". So, since that day, I have never taken him back to the clinic. I simply blow air on his body whenever he has a seizure or put a spoon inside his mouth to prevent him from biting his tongue or even worse, swallowing his tongue, until he gets better"*
>
> *(Grandmother, 80 years old, urban Eastern Cape)*

Participant 2 further added that the clinics in her area have shortages in sufficient healthcare infrastructure and lack specialised healthcare services to attend to the special needs' children. This is reflected in the following quote:

> *"I also used to take him for physiotherapy until I had a problem at the clinic. I was told that he is too old for physiotherapy. I was told that I need to familiarise myself with stretching him and doing physio on him, myself.*

A major deduction that can be drawn based on what has been observed from these two narratives is that medical services, particularly primary care settings, are not adequately addressing the complex challenges of mental health disorders.

Participant 10 explained that her main reason for seeking less regular medical care and treatment for her deceased younger brother than she did previously was that:

> *"It was not easy to take the child to the clinic because we hardly received any medical attention. Even if the nurses arrived in the morning, they would attend to their own business first while we are waiting anxiously for them to assist us. They do not attend to patients on time. If you leave the house in the morning, you will only come back in the evening"*
>
> *(Sister, 29 years old, rural Eastern Cape)*

The experiences of participants who had experienced a child death were not any different to those of caregivers who still had children alive. They also faced similar health-seeking barriers which unfortunately were adverse in their situation. Participant 21 had a different narrative from all the other participants concerning her health-seeking behaviour towards her deceased

grandchild. Participant 21 confirmed that there is poor quality of care in most clinics in her community. However, the lack of medical attention that is often experienced in the clinics in her community is not necessarily what inhibited her from seeking medical care for the child. She explained that the mother of the child had brought the infant to visit her for a few days. However, she was woken up by the sound of a crying baby in the morning only to come to the realisation that the mother had ran away and abandoned the child. She narrates further:

> "*I took over and provided care to the child whilst trying to locate the mother's whereabouts. I discovered that the child was ill, but I perceived the child's symptoms to be mild and thus decided to treat the child by giving the child some cough medication and pain medication that she had in the house".*
> *"I decided not to take the child to the clinic as I once heard a group of women who had taken their children to the clinic for their clinic visits informing a lady with a new-born child that she had to produce her Road to Health Card to healthcare workers each time she brought the child to the clinic"*
> *(Grandmother, 65 years old, rural KwaZulu-Natal)*

Participant 21 further mentioned that given that she did not have the child's Road to Health Card, which she believed provided a sufficient medical record of the child's health. This card would have been useful to the nurses and doctors, she assumed that the healthcare workers would thus not attend to the child's healthcare needs. Given this circumstance, she decided to treat the child herself. Whilst trying to locate the mother's whereabouts to obtain this important document, the child's condition further deteriorated, and the child died in his sleep. This is a finding that greatly explains the quantitative result obtained in this study which indicated that the hazard of under-five death was highest among grandparents who reported that the child had a clinic card but were not in possession of the child's clinic card.

Clinic management and operations

Participants further highlighted a poor focus on patient needs - particularly clinical care - and poor human resource management as major problems that contribute to the failure of good clinical practices and operations. The participants described (1) waiting time for consultation and overcrowding (2) inconsistent clinic operating hours and (3) shortage of healthcare workers as the major factors that contributed to the kin caregivers seeking less regular medical care and treatment for the deceased children that had been placed under their care.

Participant 12 reported that it was very easy to access the clinic as the clinic is not that far from her house. She further asserted that she took the child for medical care and treatment on several occasions, even just for routine check-ups. However, clinical staff in her area play a very poor

role in sustaining hospital services and providing an enabling environment that caters to the healthcare needs of all patients. This is the main factor that resulted in her eventually adopting a poor health-seeking attitude. She argued:

> *"When you arrive, people are giving birth and all the nurses are attending to all these women that are giving birth. You do not get attention immediately. You will wait for a period of about 4 to 5 hours only to be told by the nurses that they are only accepting 30 patients and that time, you are far behind in the queue and end up not being attended to…"*
>
> *(Grandmother, 60 years old, rural Eastern Cape)*

Participant 8 also held similar sentiments as Participant 12:

> *"We would arrive at the clinic at 7am and only leave the clinic at 4pm when the nurses knock off from work because it would be so overcrowded"*
>
> *(Aunt, 40 years old, urban Eastern Cape)*

Participant 19 stated that the main factor that ultimately hindered her from seeking regular medical attention for the child placed under her care was that the clinic in her area was experiencing service provider issues. The provision of clinic services in her area were and are still inconsistent. This then translates into poor use of services. She further mentioned that her niece had started to be a very sickly child and she experienced so many challenges in seeking medical assistance for her. She argued:

> *"The clinic does not operate on a regular basis. When we arrived at the clinic, the clinic was not opened to our horror yet the previous day it was opened at the very same time as the one in which we had come to urgently seek medical assistance for the child. Before we could even seek alternative assistance, my niece unfortunately lost her battle to asthma right there and then outside a clinic with closed doors. A place that everyone calls a place of refuge and lifesaver became a place of peril and a death trap for my niece (sigh)"*
>
> *(Aunt, 41 years old, urban KwaZulu-Natal)*

Participant 20 also held a similar sentiment:

> *"It was not easy to take the child to the clinic because you can go to the clinic and not get any medical attention and then we are told to come back tomorrow because the nurses say that they are short-staffed. You lose hope and don't know what to say"*
>
> *(Sister, 20 years old, rural KwaZulu-Natal)*

However, despite these narratives, a distinctive feature that emerged in two of the narratives of the caregivers revealed some unanticipated findings. For instance, Participant 14 narrated that there are no issues with shortage of healthcare workers in clinics. She argued that there are enough healthcare workers who are allocated to assist patients in various clinics. However, the

main issue is that these healthcare workers attend to their own needs and businesses while ignoring patients. She recalls a day when she took one of her grandchildren for her routine check-up. Participant 14 claimed that there was a large proportion of people in the clinic waiting to receive medical attention and only two nurses and one doctor were on duty. She decided to go further in the clinic premises to investigate what was happening and she found a large group of nurses having breakfast while others were engaging in deep conversations over a cup of tea. When she enquired about this type of behaviour she was simply told:

> *"We are currently having breakfast. Everyone is entitled to their break. If you cannot wait in the queue like everyone else to receive assistance when it is your turn, then leave this clinic now and go find assistance elsewhere"*
>
> *(Grandmother, 44 years old, rural KwaZulu-Natal)*

In contrast, Participant 16 held similar views as all the other participants that the clinics have issues concerning shortages of clinic staff as well as long waiting times for consultation and overcrowding. However, she argued that these factors should not by any means prevent one from seeking medical attention for a child. She argued that a caregiver who holds such an attitude comes across to her as irresponsible, uncaring, and not responsive to a child's needs. She said:

> *"When you are a caregiver, irrespective of whether the child was placed under your care voluntarily or involuntarily, it is your duty to ensure that you look after the wellbeing of that child. This whole thing of long queues, overcrowding and long waiting times for consultations in South African public hospitals is not something new. When you are a caregiver, you need to make sacrifices to sustain the life of your child…"*
>
> *(Aunt, 38 years old, urban KwaZulu-Natal)*

5.2.2. Medication administration errors

Dosage and drug dispensing

The narratives of the caregivers in this section indicated medication administration errors such as (1) wrong dosage of medication and (2) inappropriate drug dispensing as the key factors that hindered them from seeking ongoing medical attention for the children placed under their care. To illustrate this outcome, Participant 17 reported that her grandson fell sick while under her care. She mentioned that she used to take the child to the clinic regularly and was given medication which she had to be administered at certain intervals of the day. However, the

child's condition deteriorated and when she took the child back for a review, she was simply accused by healthcare workers of incorrect administration of medication. This occurrence discouraged her from ever taking the child back to that clinic, but this was to the detriment of the child:

> *"The child was given medication to treat his Tuberculosis. I then went back to the hospital the following month to report that ever since he has been taking this medication, he is losing weight day by day. The nurse told me that it is because he has just started taking this medication and I accepted that response. In June, this year (2019), he was getting worse throwing up almost every hour each day and when I went to report this, I was accused of not giving him his medication in a proper manner. Yet I followed their instructions that I should give him his medication 3 times a day…". That simply put me off from taking the child back to that clinic for regular check-ups*
>
> *(Grandmother, 56 years old, urban KwaZulu Natal)*

Similarly, Participant 6 reported that the nurses in the nearby clinic that she used to visit regularly, once prescribed wrong medication for her to give to her little cousin which caused serious health hazards for the child:

> *"I realised that she had been constantly given medication that is meant for adults. They changed her medication and antibiotics. At 4 years, a child cannot just start taking medication meant for adults. I realised that I will no longer take this child to that clinic although I know that she needs medication to sustain her life"*
>
> *(Cousin, 42 years old, urban Eastern Cape)*

Likewise, Participant 17 held similar sentiments as Participant 6 with regards to the prescription of wrong medication, in addition to the fact that she was accused by healthcare workers of incorrect administration of medication. She narrated further:

> *"The child was initially reported to have Cancer and was put on Cancer medication. However, instead of getting better, the child was just getting worse. The doctor later discovered that what the child is suffering from is not Cancer but TB. That whole situation made me decide not to take the child there anymore because I was not even sure if he had TB or they just did not know what the actual problem was. Little did I know that my boy would die".*
>
> *(Grandmother, 56 years old, urban KwaZulu-Natal)*

5.2.3. Belief systems

Perceptions of health status and illness (healthcare beliefs)

The perceptions of kin caregivers regarding the health and illnesses of the children placed under their care served as another factor that influenced under-five mortality. An unanticipated

finding which emerged in the quantitative results indicated that under-five mortality hazards were highest among children whose caregivers perceived their health to be very good. The narratives of the kin caregivers further corroborated and explained this quantitative outcome in detail.

Overall, the healthcare seeking behaviours and poor use of healthcare services of the caregivers in this section were largely influenced by their notions and perceptions of health and illness. The notions and perceptions that the caregivers hold about the health statuses of the children placed under their care and illness were found to be largely culturally determined and largely influenced by preconceptions and certain healthcare beliefs.

Some caregivers reported traditional herbs and herbalists as trusted sources of healthcare. This increased reliance in traditional medicine has served as a key factor in caregivers having misconceptions about the children's actual health status. This has translated into these caregivers seeking less regular medical care from professional healthcare providers. Secondly, the lack of adherence to regular clinic visits was also largely observed to be attributable to low levels of trust in conventional medicine and perceived minimal benefits. Participant 3 narrated that she assumed full responsibility of her grandson when he was only 3 months old. She notes that the mother of the child left her with the child who was in poor health upon his arrival and she was involuntarily forced to take care of this child. She reports that she used to frequently visit the clinic to collect medication that would control the child's chronic illness, but it simply made him "sicker" as opposed to making him better. She then decided to terminate the use of this medication and resorted to making her own herbal concoction that has "proved" to have made a significant improvement in the child's health as the child is currently presenting with "very good health". For Participant 3, western medicine lacks effectiveness while traditional medicine strengthens the immune system and enhances overall physical wellbeing. This is evident in the following extract:

> *"My herbs help him a lot and actually suffice. He does not need anything else. He is in perfect health. Even when you look at him now, you can also confirm what I am talking about"*
>
> *(Grandmother, 59 years old, urban Eastern Cape)*

Participant 15 also showed increased reliance in traditional healers and misconceptions about health status. This reliance has played a major role in her health-seeking behaviours as she had hardly ever taken the child for any clinic and hospital visits. She argued that her daughter, who

is also a traditional healer, was later committed into a mental institution left her child under her care. The child's health suddenly deteriorated following the mother's institutionalisation. Participant 15 narrated that the child was in very good health, but his health "appeared" to deteriorate due to the occurrence of a dark entity that affected the child. Given this circumstance, Participant 15 perceived the child's illness as "not requiring medical attention" as it was more "spiritual" and required her to consult a traditional healer that would save the child's spirit from this dark entity:

> *"My grandchild was suddenly experiencing epileptic seizures. When I took him to a traditional healer, the healer told me that we had to buy 4 goats or a cow. So, we went back to the healer with the 4 goats and he performed that ritual so that he could chase away the evil spirits that were attacking the child. He got a whole lot better but later died. It is the evil spirits nothing else"*
>
> *(Grandmother, 51 years old) rural KwaZulu Natal)*

Another respondent, Participant 7 also shared similar sentiments as Participant 3. She argued that conventional medicine presented several side effects which altered the child's health which she perceived to be in very good health, while traditional medicine contains essential herbs that assist in promoting healing. She argued:

> *"I have never believed in Western medicine. When the child was ill, I would not even bother giving her any medication or those western pills. I feel that they are the ones that exacerbate any illness. I would just administer an enema on the child or use the sage wood tree when the child has flu. Those are treatments that we were brought up with"*
>
> *(Aunt, 36 years old, urban Eastern Cape)*

The second health belief that emerged as a key factor that has resulted in poor health-seeking behaviour among caregivers is the notion of witchcraft. Some participants held the belief that the children under their care were in optimal health. However, the shift from good optimal health to poor health was largely attributed to spellcasting and witchcraft. Participant narrated that her daughter who is a Sangoma (traditional healer) had gone for initiation to practice as a traditional healer and left the child under her care. Upon completion, the mother never returned. Participant 18 further narrated that she had heard rumours that her daughter had been against other initiates and now there has been a longing grudge among them regarding power relations. She added that her daughter's son soon fell ill following this altercation and would just suffer from seizures where the child would experience temporary confusion, a staring spell, lose consciousness and have uncontrollable jerking movements of the arms and legs. She argued that these experiences were all supernatural and the unaccountable misfortune that had befallen

the child can be ascribed to the evil influence and practice of sorcery by one or more of the initiates that were against the child's mother, in order to pay revenge to the mother. She argued:

> *"I truly believe that there was some element of witchcraft to get back at the mother and merely no medical condition. This child has never been sick under my care, nor required me to take him to the clinic for any condition. Ja, witchcraft is real my child. To think they could just choose to hurt the child and not its mother"*
>
> *(Grandmother, 81 years old, rural KwaZulu-Natal)*

The third healthcare belief that emerged as a key factor and has translated into increased mortality among children raised by kin caregivers is the belief in the sovereignty of God. The narratives of some caregivers showed that religion and spirituality play a pivotal role in the notions that the kin caregivers hold, as well as the medical decisions that they take. The narratives of the caregivers showed that the caregivers relied on faith healing. This is a practice that has been adopted in many churches where prophets or prayer healers lead the congregation through prayer. The caregivers further narrated that healing from any form of illness can only be cured by prayer rather than western medicine or even traditional healers and it brings greater optimal health. They also argued that the power of God is greater than anything that exists on this Earth and is very important in healing and achieving very good health in a spiritual, physical, and mental form. This view is illustrated in some narrative accounts below:

Participant 9

> *"Prayer and Faith is everything my child. I have witnessed people first-hand who arrived in wheelchairs getting up and walking while one arrives blind and leaves the church seeing once again. Although the child did not survive, she was confirmed to have healed by the prayer warriors at church. I just think that the child's death was simply God trying to show me that the time that we had been borrowed to spend with my grandchild had come to an end and the child had to return home (Heaven)"*
>
> *(Participant 9, Grandmother, 55 years old: urban Eastern Cape)*

Participant 4:

> *"I often pray and say, God this day has come, and this child is still alive. Then, I also have hope that the next day, the Lord will see me through and see what should happen and how with this child. Yes, my child, the Lord will see this child through, and through his grace and mercy, she will be healed from this illness. In fact, I believe that she is healed as she is very healthy and in very good health"*
>
> *(Grandmother, 78 years old: urban Eastern Cape)*

5.2.4. Caregiver's physical abilities

The placement of a child under the care of a kin caregiver can present overwhelming challenges for the caregiver. The quantitative results further showed that the kin caregiver's age and health also influenced child health significantly. The narratives of some of the kin caregivers illustrated this outcome greatly in the in-depth interviews. These were illustrated in the following sub-themes: (1) Old age and frailty (2) Health status and lastly, (3) Additional childrearing responsibilities which can ultimately influence child health.

Old age and frailty

Old age and frailty were also a factor that was reported as a physical obstacle that prevented some caregivers from seeking regular medical care for children placed under their care. Excerpts on this include:

> *"The main reason for not taking this child to the clinic frequently as I used to before is because I am very old now. I cannot take care of this child adequately. It gets really hard that sometimes when I need to take the child to the clinic, I end up deciding that I am not taking him for his check-up today when I wake up with sore knees and joints…"*
>
> *(Participant 4, Grandmother, 80 years old: rural Eastern Cape)*

Participant 2 also held similar sentiments as Participant 4 as she maintained how worse it is for her given that she is taking care of a child with a disability. She maintained that there are daily physical care requirements that she needs to undertake. These included positioning the child, transferring him from the bed to a chair when she needs to feed him, carrying him to the bathroom as well as dressing him after bathing him:

> *"Just as you can see how old I am, my knees, my arm which is very painful right now, my arms are very painful and won't let me do most work. I am tired. I am old. There is not even one person that helps me. My body just makes it very difficult for me to even take the child for a check-up".*

Additional childrearing responsibilities

Some caregivers posed the argument that they were providing care to more than one child, which has often resulted in them being unable to go anywhere. In turn this affected their ability

to take the child for regular clinic visits, as well as consulting healthcare professionals for their own health. Therefore, they could not fulfil all other aspects of their caregiving roles and looking after their own health. For instance, Participant 11 reported that she has 6 grandchildren that are under her care due to some of their parents being incarcerated and two abandoned their children. One was cohabiting with her a partner about three streets away from her house but made no effort to take care of the child. The additional childrearing responsibilities made it difficult for her to attend fully to all the needs (including the healthcare needs) of all the children that are under her care. Her argument was as follows:

> *"It was not easy to just up and go to the clinic for regular check-ups. If you are a person that is taking care of additional children, then it is not easy. Yes, when you are taking care of a child, you also have to make sure that you prepare the other children to go to school and crèche, then it's not easy because I had to wake up early and prepare these children. By the time I have to take the child to the clinic, I already know that it is packed and there is a long queue, and the nurses tell you that they only attend to those with high blood pressure."*
>
> *(Grandmother, 78 years old, rural Eastern Cape)*

The last objective of this study was to ascertain the effect of family functioning within kin caregivers' households on under-five mortality in South Africa. This objective was guided by the broad question: How do familial characteristics and family functioning of kin caregivers influence under-five mortality among children raised in non-orphaned kinship care in South Africa? This part of the qualitative analysis was guided by the Family Systems Theory. The Family Systems Theory provides comprehensive insight on how the family context, degree of connectedness and general functioning of a family play a crucial role in predicting whether various family members will have positive or negative outcomes.

Although the findings obtained in this section do not directly explain the quantitative results that were obtained in this study, it is vital to gain an understanding of kinship care as it constitutes a family institution. Secondly, the characteristics of an individual (in this case, children placed in kinship care) cannot be examined in isolation of their kin caregivers' familial characteristics. This is because the family environment needs to be observed to gain an understanding of the child's health outcomes. Thirdly, the characteristics of families are largely deemed to be important determinants of health. Thus, it is pivotal to study how the quality of the relationships between members constituting that kinship unit is. It is also important to study the way the family functions and the support and care, or lack thereof, that family members

provide to each other. This can ultimately influence the families' subsequent life course outcomes, in particular, those of children raised in such a family institution.

The major findings obtained from the caregivers' narratives in this chapter were that the kin caregiver's family environment can serve both as a (1) protective barrier and a (2) risk factor for poor child health outcomes (mortality). The factors that emerged as the key themes that explained the effect of the kin caregiver's family functioning on child survival were as follows:

1. Family Cohesion
2. Family attachment and communication

The 2 themes and their sub-themes are shown in the Table below:

5.3. Family Cohesion

Table 5.2: *Themes focusing on family functioning*

THEMES	SUB-THEMES
5.2.1. Family Cohesion	5.2.1.1 Relationship with immediate family
5.2.2 Family attachment and communication	5.2.1.2 Collaboration and Involvement (Material, physical and emotional support)

5.3.1. Family cohesion

Relationship with immediate family

Some of the participants reported that the relationship with the immediate family of the child influenced the child's overall wellbeing. The participants reported that their families (including themselves) had good relationships with the birth parents of the children under their care and had felt a sense of connectedness with them. This was irrespective of the fact that some had simply abandoned their children without providing an explanation for doing so. Others reported that they had even decided as a family to voluntarily take over and provide primary care to the children under their care. This, they believe, contributed positively to the child's wellbeing. An example of an excerpt is shown below:

"My daughter gave birth to her children when she was very young. She sat us down one day and told us that she does not have any physical and financial capabilities to care for her children and thus she is asking us to assist in this regard. We as a family made the decision that she should go to Johannesburg, study, and then find work once she has completed her studies so that she can assist with raising her children
(Participant 14, Grandmother, 44 years, rural KwaZulu-Natal).

Contrary to these findings, other participants reported that their families had poor relationships with the immediate parent(s) of the child which somehow influenced the children's wellbeing. Given that most of the children were placed under the care of the participants involuntarily, this created conflict within some of the caregivers' homes and affected their relations with their families, as such changes were highly unexpected. For instance, Participant 11 recalls the day she took over the care of her grandson. She recalls that that day changed the nature of her relationship with her sister and brother. She argues that her siblings had always had issues with her children as they believed that Participant 11's children had not been brought up well given that they engaged in substance abuse and did not provide care to their children. They also felt they had no sense of responsibility given that they had even abandoned their children and left them under Participant 11's care. When her grandson, who died from HIV, was abandoned into her care this created even more tension between her and her siblings to the point that they cut all forms of communication with her and told her to "deal" with her own issues. She narrates:

"My siblings, particularly my sister was not happy at all when she heard that I had additionally taken over the care of another grandchild. She asked "why don't you take this child, including all the other children to a Social worker who will organise for them to be taken to alternative care homes? What are you going to do with this child? I told her that I cannot do that to my grandchildren. She then said "I see you have made a decision. We are not going to be responsible for these problems that you are creating for yourself. You are on your own from now on. You will see how you deal with this issue".

Participant 11 further narrates how this affected her tremendously as she had no support from her siblings (who are her only family). This affected her ability to provide adequate and comprehensive care for the child given the additional responsibility she had of looking after 6 other children.

A distinctive feature that emerged in one narrative showed how previous painful experiences can result in the development of generational grudges. Participant 19 recalls taking over the care of her cousin's child and bringing the child home where she lived together with her 5 siblings. She maintains that she was not working at the time. She recalls how two of her siblings' demeanour changed towards her following the child's placement with her. She argues

that the child fell ill after a few months. However, the two siblings who were working would not assist her in giving her money to take the child to the doctor given her serious condition. The lack of support that she witnessed in her home infuriated her to the point that she eventually confronted her siblings to find out why it was difficult for them to assist her with this child. She provided a narrative account of one of her sibling's response to her:

> *"You seem to have forgotten that this child's grandmother treated us very badly when we were growing up. There were days we would go to bed hungry, go to school barefoot and even fall sick without her giving us anything to treat our condition. Now, you expect us to take responsibility for this child. This is your burden to bear not ours".*
>
> *(Aunt, 41 years old, urban KwaZulu-Natal)*

5.3.2. Family attachment and communication

Collaboration and Involvement (Material, physical and emotional support)

The narratives of the participants in this section highlighted how collaboration and involvement of various family members, in the form of material, physical and emotional support influenced the child's wellbeing. Several participants argued that the family environment in which they were providing care to the children was a conducive one as all the members of the family played a key role in taking care of the children and displaying increased receptiveness to the children's needs. To illustrate these outcomes, Participant 5 narrates how she was so overwhelmed with witnessing how the members of her family were so receptive to her 4-years-old niece whom she assumed full responsibility for. She argues that the members of her family displayed so much support for her and have portrayed nothing but love, care, and protection towards the child. This has contributed immensely to the child's wellbeing because the child has assimilated very well in the family and generally presents with positive developmental outcomes. An excerpt of her narrative is shown below:

> *"My children are playing a very active role in this child's life. My eldest daughter, she is the one who prepares this child every morning for crèche when I go to work, she accompanies her and takes her to her school transport and helps her get inside the transport. My second daughter works together with my third daughter and they help each other bathe her……"*
>
> *(Aunt, 49-years-old, urban Eastern Cape)*

Participant 13 also shared similar sentiments as Participant 5:

> *"Firstly, with my mother, she was in such a hurry for this child to arrive because I had told her that she is coming. I remember her calling her brother asking "Brother, when is the child going to arrive? I am waiting eagerly for her…Secondly, I can say that my son has also taken after me. Being a boy as he is, he bathes this child, he feeds her, he puts her to sleep. He does everything for her. So, I can say my family has accepted this child……."*
>
> *(Aunt, 47-years-old, urban Eastern Cape).*

Participant 2 also shared similar sentiments as Participant 5 and 13 explaining how the members of her family have shown so much involvement in helping her raise her grandson, by providing her with both physical and emotional support. She narrates:

> *"My sister's child (aunt to my grandson) has been so supportive, caring and loving towards this child. She was sent by my sister to come and live here with me and help me with taking care of the child. She is the one who takes the child to crèche, sometimes bathes him, prepares food for him, and even feeds him. She comes in handy when she sees that I am not fine. You know, diabetes has its days……..".*

Despite these narratives, in two of the narratives of the caregivers some unanticipated findings were revealed. The narrative accounts of the two participants indicated that the members of their families blatantly refused to collaborate with them in providing care to the children under their care particularly through lack of physical and emotional support. This has resulted in insecure attachments and poor communication between the caregivers and their families. For instance, Participant 3 recalls the physical condition the child was in when the child first arrived. She maintains that the members of her family displayed so much fear given the child's condition. He was bony, his ribs and outer limbs stuck out and his face and buttocks had so many sores. She recalls one of the family member's saying:

> *"Sister, this child is going to die here in this house. What are you going to bury him with?"*

Instead of receiving her family's support and involvement in providing care to the child, her relationship with her family changed instead and she lost all form of attachment to them. She maintained that they held that they would not be able to live like this given that they could also see that this child was not going to live. So, they left her to face this situation on her own since she had taken the decision to take care of this child and not make means to find his parents and return him back to them.

Participant 3 concluded her narrative with a very distinctive statement:

> *"There is even a social worker that I once spoke to when I was sick and bedridden for 5 months, in the previous year (2018). I asked her that should I die, please find my*

grandson the best care possible because my own family does not want to take over the care of a sickly child, who needs constant attention and care. So that shows that they will not treat this child well. So, it is much better if he is under the care of a Social worker".

Conversely, Participant 4 narrated that the other members of the family were not happy at all when she assumed care for the child as they felt that she is old. They maintained that she is supposed to be resting and taking care of her own health, not adding a burden to her life and that of her other family members. She said that one of the family members said:

"Now we need to be responsible for the care of this child. What are we going to do with this child"?

He said, angrily.

She further recalls how she had gone to the clinic for her routine check-up and had left the child with other older members of the family. When she came back, she was horrified at what she witnessed. She said:

"I found out that one of the children had twisted his ankle and no one knew because they had not been paying attention to the child. In the second instance, I left him once and when I came back, I found out that he had been rushed to hospital because he had fallen from the chair and no one had been paying attention to him. The child honestly almost died that day. So, my family has never been good to this child. That is why I am raising him by myself. To protect him from them".

CHAPTER SIX
DISCUSSION

6.1. Introduction

This chapter provides a discussion and interpretation of the results obtained in this study by assimilating the results and findings (chapters four to five) with the existing literature. The quantitative results and qualitative findings are integrated to answer the central research question. Possible explanations for the observed results and findings are also provided. This study emanated against the backdrop of the practice of kinship care being the most prevalent out-of-home care option in South Africa for children who lack parental care. The impetus behind conducting a study that measured and explored the effect of kin on under-five mortality was driven mostly by the fact that scholarly and public discourses have sparked debates on the nature of this family practice and the effect it may have on child health outcomes. Given this background, summaries of all the findings obtained in the results and findings chapters are integrated and discussed considering the existing literature.

6.2. Under-five mortality by type of kin caregiver

This study was conducted to investigate how sociodemographic factors, health-seeking behaviours, and familial characteristics of kin caregivers influence under-five mortality among children raised in non-orphaned kinship care in South Africa. Overall, the results of this study showed that there are marked differences in the risks of under-five mortality among children raised in non-orphaned kinship care, with the effect of different kin types varying significantly on child survival. The mortality risks of children who were raised by grandparents were highest compared to children raised by aunts or uncles and other kin. Furthermore, although mortality risks of children raised by aunts or uncles were lower than those of children raised by grandparents, the hazards were significantly higher in relation to children who were raised by other extended family members. These findings suggest that different kin have varying effects on child survival across the 5-year life course with these effects being noticeably evident in different ages. This finding is supported by previous studies which found that the risk of under-five death is highest among children who are raised by grandparents in relation to children who

are raised by other kin (West et al., 2008; Bradshaw, 2010; Livingston & Parker, 2010; Kelch-Oliver, 2011; Billing et al., 2012; Tanskanen & Danielsbacka, 2012; Tang et al., 2015; Bradshaw, 2016; Mid-Yunus, 2017). It was established in both the quantitative and qualitative analysis that most grandparents had incomplete or no medical records of the ongoing issues of children placed under their care nor did they have any access to medical aid coverage which often resulted in them resorting to various home remedies to treat the children under their care.

The findings of this study thus suggest that children who are raised by grandparents have increased likelihoods of experiencing adverse health outcomes relative to children who were raised by other extended kin and other children in the general population. This can be attributed to the grandparent kin caregiver's challenge of lacking adequate knowledge about availability of specific or specialised services and also participating in health promotion activities partly as a result of their own physical health and other additional childrearing activities which may significantly affect their caregiving ability as well as lead to possible medical delays resulting in intensification of symptoms associated with the child's illness. This is also reflected by previous studies which have suggested that the survival of a child is highly dependent on a caregiver's ability to identify adverse symptoms that may be associated with the child's illness. This subsequently affects the caregiver's decision to seek medical assistance (Olenja, 2003; Chandwani & Pandor, 2015). Secondly, perceptions on the severity of a child's illness are strongly correlated with the caregivers' decisions to take medical action (Wambui et al., 2015). This may present challenges for the primary kin caregiver and subsequently have adverse effects on the health of children. It can thus be concluded that exposure of a primary caregiver to misinformation pertaining to healthcare practices, using inappropriate home remedies to treat child illnesses, undermining the severity of an illness, or having poor knowledge on life-threatening illnesses ultimately results in poor health-seeking behaviours which may lead to adverse health outcomes or mortality.

The study further showed that the mortality risks of children raised by aunts or uncles are slightly lower than those of children who are raised by grandparents. Although mortality risks were lower compared to children raised by grandparents, an important observation to take note of was that the mortality risks of children raised by aunts or uncles were higher than those of children raised by other extended kin. This quantitative result was corroborated by the qualitative finding which showed that mortality risks were higher among children raised by aunts or uncles compared to other extended family members due the provision of care to more

than one child. The findings of this study give rise to the notion that even though aunts or uncles may be in a better position compared to grandparents to provide care to additional children, their care may not be adequate as the children who are under their care may have an increased likelihood of competing with the biological children of aunts and uncles for resources, who are also resident in the household. This is also a notion that is supported by a previous study which found that most aunts are reproductive-aged adults and are thus more likely to divert their attention to the wellbeing of their own children (Sear & Mace, 2008). Thus, the implications of these findings could be that greater childcare responsibilities may compromise a kin caregiver's ability to adequately fulfil several childcare needs including accessing healthcare services for the children placed under their care, which may subsequently influence under-five mortality significantly. This can be greatly attributed to the fact that as the size of the household increases with additional members, kinship care effects on under-five mortality may become more significant (Nielsen, 1994; Case, 2004; Madhavan & Townsend, 2007; Hosegood, 2009). This is because kin caregivers do not provide primary care to the children placed under their care in isolation from other roles and responsibilities. Therefore, the increasing scope of caregivers' responsibilities and caregiving demands may be overwhelming which may then affect the caregivers' ability to successfully fulfil all aspects of their caregiving. Subsequently, the health and wellbeing of children who are placed under the care of the respective caregivers may be significantly affected.

Lastly, lower mortality risks were observed among children raised by other extended family members in this study. This finding is strongly reflected in literature which has shown that the presence of older siblings or cousins, particularly sisters, increases the survival of children between ages 2 to 5 years (Sear et al., 2000; Sear, 2002). Reasons for the low mortality risks among other extended kin could be attributed to the fact that grandparents and reproductive-aged aduts such as aunts or uncles are usually the main kin who are most likely to provide primary care to children who are placed in kinship care contexts, thus this gives rise to the argument that most children are seldom raised by other extended kin (sometimes unrelated), which may thus contribute greatly to the lower mortality risks.

6.3. Under-five mortality and kin caregiver individual characteristics

The study further identified grandparent type of place of residence, perceived health status, the last time the grandparent consulted someone about his/ her health and age, as key characteristics that have an influence on under-five mortality. Additionally, the study further indicated aunt or uncle marital status, perceived health status, last time the aunt or uncle consulted someone about his or her health and age as key characteristics that influence under-five mortality significantly. The key quantitative results emanating from the study that were greatly fortified and corroborated by the qualitative findings showed that (1) perceived health status and (2) age of grandparents and uncles or aunts were characteristics that predominantly influenced under-five mortality. None of the other extended kin characteristics were found to significantly influence under-five mortality. The non-significant results obtained for other kin caregivers are reflected in a study which indicated that other extended kin, play a less important role to childcare which subsequently results in them having no impact on child survival (Lahdenpera et al., 2004; Sear & Mace, 2008).

The mortality risk of children whose grandparents and uncles or aunts reported their health to be excellent or very good was slightly higher compared to children whose kin caregivers reported themselves to be in good health. Literature has provided inconclusive findings that support these study findings. Some literature has shown that poor health outcomes are higher among children whose kin caregivers have perceived their health as poor, particularly with regards to physical functioning (Bucki et al., 2016; Bouldin et al., 2018). However, other previous literature supports the findings of this study as it has shown that kin caregivers tend to present with good health (Cao, 2006; Albertini et al., 2007; Leek & Smith, 2017). The finding obtained in this study is highly unanticipated given that it is expected that excellent or very good health should have also translated into good health and wellbeing, and reduced mortality risks among the children under their care. This can be largely ascribed to the fact that the overall health of kin caregivers significantly influences the wellbeing of all household members.

The quantitative and qualitative findings further showed that the kin caregiver's age is a factor that has served as a physical obstacle in the ability of kin caregivers to adequately fulfil the caregiving role and needs of the children under their care as hazards of death increased with each successive age of the kin caregiver (mortality risks being higher in older age groups).

These findings imply that the caregiving role of older caregivers may be compromised as they also tend to experience several health problems which then subsequently affects their caregiving including accessing healthcare services regularly for these children, given their ongoing health problems, which subsequently impacts a child's health outcomes. This could be because demands that the caregiving responsibilities bring often come at a time when the caregiving role is physically challenging for the older kin. This then impacts negatively on child health outcomes. Although, caregivers may have comprehensive knowledge about providing adequate care to children placed under their care or knowledge about the benefits of accessing medical care to support the health challenges of the children placed under their care, they may lack the physical ability to access these medical services due to physical constraints. The quantitative and qualitative findings are thus corroborated by a study which found that the advancing age of some kin caregivers may therefore accelerate their susceptibility to caregiving difficulties (Harden et al., 2004). The implications of this are that this may thus affect health-seeking behaviour, translating into poor child health outcomes.

6.4. Child characteristics and kin caregiver health-seeking behaviours

The presence or non-presence of a child's clinic card, the perceived health status of the child and number of times a healthcare professional was consulted are characteristics that significantly influenced under-five mortality among children raised by grandparents. In addition, the social grant recipient status of the child, perceived health status of the child and the number of times a health professional was consulted are characteristics that significantly influenced under-five mortality among children raised by aunts or uncles. The only factor that was found to significantly influence under-five mortality among children raised by other extended family members was social grant recipient status of the child. Overall, a prominent finding that emerged from the results that was largely explained by the qualitative findings showed that the perceived health status of non-orphaned under-five children is a child characteristic that had a significant influence on under-five mortality among children raised by grandparents and aunts or uncles. The results showed that the mortality risks were highest among children who were perceived to have excellent or very good health by their grandparents and aunts or uncles. This finding is in sharp contrast to previous literature which showed that

children who are raised in kinship care often present with various mental, physical, emotional and behavioural needs (Galehouse et al., 2010; Hamilton & Landsverk, 2010; Raghavan et al., 2010; Kelley et al., 2011; Blythe, 2012; Bramlett et al., 2017; Lee et al., 2020; Stene et al., 2020).

A distinctive feature that emerged from the qualitative findings showed that 7 children died from respiratory tract infections (pneumonia, bronchiolitis, tuberculosis, and asthma), 2 died from epileptic seizures, 1 from HIV/AIDS, 1 from a cardiovascular illness, 1 from severe malnutrition and 1 from a meningeal infection. Furthermore, 6 of the living children currently suffer from respiratory tract infections, 2 suffer from epileptic seizures, 1 is infected with HIV and 1 suffers from stunting. This finding is consistent with past research which showed that children who are raised in kinship foster care have increased exposure to chronic and acute health conditions in relation to children who are raised by their biological parents (Hansen et al., 2004; Jaudes et al., 2004; Ringeisin et al., 2008; Steele & Buchi, 2008). Furthermore, the finding showing that all the children raised under such care had ongoing health issues gives rise to the argument that access to healthcare services is essential to this population of children as it can be deduced that the children lack health coverage, regular source of care and are in comparatively poor health. Additionally, the quantitative results obtained on the perceived health status of under-five children can be largely explained by the findings obtained in the in-depth interviews. When the qualitative analysis was further explored to identify factors that explain how the child's perceived health status has served as a characteristic that influenced under-five mortality, interesting perceptions emerged which helped support the quantitative finding greatly.

Certain beliefs related to health and illness came out strongly in the qualitative phase, which helped explain the quantitative results. The qualitative findings showed that majority of the kin caregivers held certain misperceptions about the health statuses of children who were under care and these misperceptions strongly influenced their beliefs about health. A historical review indicated that to understand an individual's health-seeking behaviour, it is imperative to first gain a comprehensive understanding of the individual's perception of illness (Rivers, 1924). This literature strongly affirms the qualitative findings obtained in the narratives of some kin caregivers that pertain to perceived health. Findings of the study showed that kin caregivers have increased reliance in the use of traditional herbs as they perceived traditional herbs and herbalists as trusted sources that promote optimal health. This is due to the fact that the use of

traditional herbs significantly improves health and this can be largely attributed to the misperceptions that people hold about health and medical conditions. This increased reliance in traditional medicine has served as a key factor in caregivers having misconceptions about the children's actual health status.

Despite the effectiveness of western medicine in treating various health conditions, traditional practices and beliefs have been found to be commonly prevalent in some communities (Shaikh & Hatcher, 2005). Thus, it can be argued that the phenomenon of under-five mortality was highest among children whose kin caregivers perceived their health to be excellent or very good due to the fact that caregivers who utilise traditional herbs perceive traditional herbs as strengthening the immune system and translating into optimal health. Consequently, they are more likely to delay seeking medical attention or not seeking any medical attention for the children under their care at all. This then often results in increased levels of mortality even for health conditions that can be easily managed. The finding of this study is supported by a study which showed that child mortality is significantly correlated with use of traditional herbal concoctions (Eseigbe et al., 2012).

Furthermore, a second misperception of health or factor emerging from the qualitative findings that explained the quantitative result obtained in the study is the notion of witchcraft. Some participants held the belief that the children under their care were in optimal health. However, the shift from optimal health to poor health was largely attributed to spellcasting and witchcraft. It has been documented in South Africa that witchcraft is a significant cause of disease and misfortune (Ashforth, 2005). This gives rise to the argument that health-seeking behaviour is strongly influenced by local notions of health within certain communities, in particular rural communities, with illness or disease being perceived to be largely the result of supernatural phenomena, caused by a curse or witchcraft Thus, the beliefs that people hold about witchcraft and its influence on health, have adverse effects on health-seeking practices. This in turn, perpetuates the increased reliance in traditional healers who are believed to provide remedies that counteract these supernatural forces. Therefore, this translates into reduced use of conventional healthcare services and ultimately adverse health outcomes.

Additionally, a third misperception of health emerging from the qualitative findings was the belief in the sovereignty of God. There is also a growing utilisation of faith healing services for curative purposes and health promotion, particularly in various sub-Saharan African regions (Kar, 2008; Levin, 2009). The findings of this study showed that the caregivers relied on faith

healing and that healing from any form of illness can only be cured by prayer and the power of God rather than western medicine or traditional healers and it brings greater optimal health. This finding implies that kin caregivers' religion and spirituality plays a pivotal role in the notion that kin caregivers hold about illness and this significantly influences the medical decisions that they take. This could be because kin caregivers consider faith healers as the first port of call for preventing illnesses and fostering healing. Thus, religion is viewed as an energising and healing force which restores greater strength through divine healing.

6.5. Family functioning and child survival

The last part of this study entailed ascertaining the effect of family functioning within kin caregivers' households on under-five mortality in South Africa. Although family functioning could not be examined quantitatively, it was examined qualitatively by engaging in in-depth conversations with the kin caregivers. This was done to determine how their familial characteristics and family functioning could have influenced under-five mortality. Overall, the major findings obtained from the caregivers' narratives on family functioning were that the kin caregiver's family environment can serve both as a (1) protective mechanism and a (2) risk factor for poor child health outcomes (mortality). The findings of this study showed that factors such as family functioning as well as interactions and relationships that exist among family members within and outside the primary home significantly influence the physical and psychosocial functioning of children who suffer from illness. Also, some families respond positively to challenges while other families who suffer similar challenges respond negatively.

Most importantly, kin caregivers who live in an emotionally safe environment are more likely to have an increased urge to provide adequate care and protection to the children under their care. This is all the while ensuring that children have adequate access to resources, with the assistance of other fellow family members. This study finding is supported by previous research which showed that safe environment is said to be characterised by peace, harmony, respect, teamwork, and resilience (Wakhweya et al., 2008). Thus, it can be argued that family cohesion and the positive relationships that exist among family members have a protective effect on child wellbeing and development.Additionally, good family attachment and communication, collaboration and involvement of various family members, in the form of material, physical and emotional support influenced the child's wellbeing positively results in a conducive family

environment in which all members of the family play a key role in taking care of children placed under the main kin caregiver. The increased receptiveness to the child's needs thus contributes greatly to positive health outcomes. In contrast, Thus, families that have good communication and clearly defined roles and responsibilities, which are equally shared, are most likely to foster health functioning among the members of that family, including children.

Contrary to these findings, the findings of this study also showed that the family environments of other kin caregivers served as a risk factor that resulted in poor child health outcomes. It was noticed from the narratives that family environments and relationships of other kin caregivers who assume parental responsibility for children are often strained, resulting in increased likelihoods of breaking down following the placement of the child with the primary kin caregiver. This can be attributed to the fact that an addition to the family creates competition for resources, which then translates into conflict, poor altruistic behaviour, poor familial cooperation and increased competitive behaviour among kin, resulting into poor child health outcomes. This observation is also supported by previous literature which showed that households that have a large family size have increased odds of having fewer resources, particularly resources that are related to childcare (Brannan et al., 2006). Thus, this can translate into inequities with respect to obtaining resources in the household as well as hostility among members of the primary kin caregiver's family.

Moreover, even though primary kin caregivers may reside with other extended kin in the same household, they are more likely to be the sole caregiver due to the fact the family environment may be characterised by hostility and competition. In addition, conflicts that families of kin caregivers have with the birth families of children contribute greatly to the emotional distress that kin caregivers face given that they are also more emotionally involved in the issues of the birth parents. Thus, the need for other family members to cooperate in providing care to children who are not biologically their own, increases the likelihood of conflict which may have adverse effects on a child's health and wellbeing.

6.6. Hypotheses testing

6.6.1 Hypothesis one

The study proposed 6 hypotheses. These hypotheses will be confirmed or refuted based on the results obtained in the study. The 6 proposed hypotheses were as follows:

1. **H_0:** Children who are raised by grandparents have a higher probability of dying before age 5.

   H_1: Children who are raised by grandparents have a lower probability of dying before age 5.

This hypothesis was tested using the Kaplan-Meier survival curve estimates. This hypothesis was tested based on reviewed literature which showed that grandparents (particularly grandmothers) are the most dependable kin to provide adequate care to children under their care, thus improving their wellbeing and survival (Hawkes, 2003; Hawkes, 2004; Hrdy, 2006; Mace & Sear, 2005; Robson et al., 2006; Crittenden & Marlowe, 2008; Euler & Michalski, 2008; Sear & Mace, 2008; Hrdy, 2009; Coall & Hertwig, 2010; Kaptijn et al., 2010; Strassmann & Gerrard, 2011; Sear & Coall, 2011; Waynforth, 2012; Coall et al., 2014; Tanskanen et al., 2011; Meehan et al., 2014; Snopkowski & Sear, 2015; Sheppard & Sear, 2016). Literature further found that grandparents have the strongest positive effect on child survival compared to children who are raised by other kin. However, results obtained from the Kaplan Meier survival curve estimates which treated "type of kin caregiver" as a time-constant variable, showed findings that did not provide evidence that would enable the acceptance of the research hypothesis.

The results showed marked differences in the risk of dying before the age of five, with the survival curve indicating that under-five mortality is highest among close to 80% of children aged 0-20 months (hazard of death is highest in infancy) who were raised by grandmothers. Thereafter, the risk of death is observed to decrease with an increase in the child's age, with the lowest mortality risk of less than 25% being observed among children who have advanced to their 4th year of life. These results thus refuted the research hypothesis, and this leads to the acceptance of the null hypothesis.

6.6.2 Hypothesis two

2. **H_0:** Children who are raised by other relatives have a lower probability of dying before age 5.

   H_1: Children who are raised by other relatives have a higher probability of dying before age 5.

This hypothesis was also tested using the Kaplan-Meier survival curve estimates. This hypothesis was tested based on reviewed literature which showed that although reproductive-aged adults (such as aunts/uncles), particularly aunts, may be in a position to assist with childcare, the mortality risks of children placed under the care of these adults is likely to be higher (Campbell & Lee, 2002). This was attributed to the fact that reproductive-aged adults are more likely to divert their attention to the wellbeing of their own young children (Sear & Mace, 2008) and these children are more likely to compete with other children in the household for resources (Campbell & Lee, 2002). Although the results obtained in the Kaplan Meier survival curve estimate showed that the risk of death for children who were raised by aunts or uncles was over 75% (particularly around age groups 12-20 months), the risk was slightly lower compared to children who were raised by grandmothers. Given these outcomes, the results refute the research hypothesis and thus lead into acceptance of the null hypothesis.

6.6.3 Hypothesis three

3. **H_0:** The kin-caregivers' level of education has no influence on under-five mortality among children raised in non-orphaned kinship care in South Africa.

   H_1: The kin-caregivers' level of education has an influence on under-five mortality among children raised in non-orphaned kinship care in South Africa.

This hypothesis was tested using both unadjusted and adjusted Cox Proportional Hazard Regression models. The significance of this relationship was tested by examining the p-value corresponding to the estimated hazards ratios, with the p-value set at 95% significance level (α=0.05). This hypothesis was tested based on the assumption that the level of education that a kin caregiver possesses, will significantly influence a caregiver's behavioural factors (in

particular, health-seeking behaviours), which will ultimately influence child health outcomes (under-five mortality). This is on the basis that kin caregivers who are more knowledgeable about appropriate healthcare practices and disease are more likely to contribute positively to child survival whereas caregivers who lack knowledge are more likely to have an adverse effect on child survival. The results obtained in the multivariate (adjusted) Cox Proportional Hazard Regression model confirmed that a kin caregiver's level of education does indeed have a significant influence on under-five mortality among children raised in non-orphaned kinship care in South Africa. Mortality risks are lower among children whose caregivers had a tertiary qualification, followed by those whose caregivers had a secondary school qualification. This result was however significant for aunts or uncles. The relationship was however insignificant in the unadjusted model but became significant after adjusting for the effect of other individual characteristics of the aunt or uncle. The highest mortality risks were observed among under-five children whose caregivers only had a primary school qualification. Based on these findings, this leads to the rejection of the null hypothesis and acceptance of the research hypothesis.

6.6.4. Hypothesis four

4. **H_0:** Healthcare-seeking behaviours of kin-caregivers have no influence on under-five mortality among children raised in non-orphaned kinship care in South Africa.

   H_1: Healthcare-seeking behaviours of kin-caregivers influence under-five mortality among children raised in non-orphaned kinship care in South Africa.

This hypothesis was tested using both unadjusted and adjusted Cox Proportional Hazard Regression models. The significance of this relationship was tested by examining the p-value corresponding to the estimated hazards ratios, with the p-value set at 95% significance level (α=0.05). This hypothesis was tested based on literature which showed that kin caregivers do not use healthcare services because of inadequate information and poor access to resources make it easier to assume the full role of providing care to children (Patton, 2003). Additionally, other literature showed that kin caregivers are less likely to refer children to healthcare services and often expose children to less extensive services (Harden et al., 2004; Fernandez & Maplestone, 2006). The results indicating the last time a healthcare professional was consulted (child characteristics) were not significant in the unadjusted model. However, they became

significant in the adjusted model after controlling for the effect of other covariates. The results showed that mortality risks were highest among children who had been taken to a health consultant more than once, for both children who were raised by grandparents and aunts. In addition, with respect to the kin caregivers' characteristics, the results showed that the last time a kin caregiver had consulted someone about his or her health, also had a significant influence on under-five mortality, both in the unadjusted and adjusted Cox Proportional Hazard Regression models. Given these outcomes, these results lead to the confirmation of the research hypothesis and the null hypothesis is thus refuted.

6.6.5. Hypothesis five

5. **H_0:** The kin caregivers' type of place of residence has no influence on under-five mortality among children raised in non-orphaned kinship care in South Africa.

   H_1: The kin caregivers' type of place of residence has an influence on under-five mortality among children raised in non-orphaned kinship care in South Africa.

The hypothesis was tested based on the assumption children who are raised in rural areas are more likely to have increased mortality risks compared to children who are raised in urban areas. The significance of this relationship was tested by examining the p-value corresponding to the estimated hazards ratios, with the p-value set at 95% significance level (α=0.05). This is due to the fact there are several structural differences such as accessing healthcare, availability of specialized healthcare services, food, and material resources such as food. The adjusted Cox Proportional Hazard regression models showed that place of residence has a significant influence on under-five mortality particularly among children who are raised by grandparents. This finding was also supported by literature which showed that children who are raised in urban kin caregiver households are more likely to benefit in terms of health and wellbeing compared to children who are raised in rural kin caregiver households (Eloundou-Enyegue & Stokes, 2002; Zimmerman, 2003; Akresh, 2004). In addition, kin caregivers tend to reside in neighbourhood environments that are characterised by poor quality resources and poverty (Aber et al., 2001). Based on these findings, the results lead to confirmation of the research hypothesis and rejection of the null hypothesis.

6.6.6. Hypothesis six

6. **H_0:** The kin caregivers' employment status has no influence on under-five mortality among children raised in non-orphaned kinship care in South Africa.

   H_1: The kin caregivers' employment status has an influence on under-five mortality among children raised in non-orphaned kinship care in South Africa.

This hypothesis was guided by literature which held that most kin caregivers are unemployed and lack adequate economic resources (Aber et al., 2000; Eamon, 2001). The significance of this relationship was tested by examining the p-value corresponding to the estimated hazards ratios, with the p-value set at 95% significance level (α=0.05). Such challenges thus exacerbate distress among kin caregivers which may ultimately affect their ability to provide adequate care and thus affect child health outcomes (Eamon, 2001). However, no significant association was found between under-five mortality and neither of the kin caregiver's employment status. Given this outcome, the research hypothesis is refuted and this leads to acceptance of the null hypothesis.

CHAPTER SEVEN
CONCLUSION AND RECOMMENDATIONS

7.1. Conclusion

The main objective of this study was to investigate the influence of sociodemographic factors, health-seeking behaviours, and familial characteristics of kin caregivers on under-five mortality among children raised in non-orphaned kinship care in South Africa. The overall inference drawn in this study is that the individual characteristics of kin caregivers, healthcare preferences and behaviours, and their family environments are greater risk factors that play a crucial role in compromising the ability of kin caregivers to provide adequate care. These factors also affect caregivers' ability to provide a conducive caregiving environment to the children under their care, rather than the kinship system itself, for example whether type of kin caregiver - whether aunt, uncle, grandparent, sibling, cousin - influences child health outcomes significantly. These circumstances thus expose children placed under such care to various risks that may be detrimental to their health and development.

The developmental outcomes that children experience throughout their life trajectories as well as their overall wellbeing are embedded in the provision of adequate care by a receptive caregiver who promotes the healthy upbringing of a child. These outcomes are also determined by the family environment in which they live and the quality of care that they receive in that family environment. This is because the rearing of children should not only be a responsibility that is assumed by children's biological parents or by the primary kin caregiver with whom a child is placed with. It should also be a shared and integral responsibility of all extended kin as they are important in providing social safety nets and the impact of family bargaining affects child health greatly. In addition, focusing on intra-family relationships helps provide insight into the role that interactions within families help play in child development. This is mainly because extended families are effective in adequately allocating resources to aid in the health and development of children in the household (LaFave & Thomas, 2017).

It is commonly believed that children who are raised by extended kin generally present with positive developmental outcomes. This is not often the case as such children have extensive healthcare needs and thus require an array of services. Thus, determining whether the family environments in which these children are raised by kin are conducive or not, and investigating individual kin who are embedded within these households as suitable in fulfilling the caregiving

role, is therefore of central importance. This is because the health outcomes of these children are vastly dependent on the quality of care that they receive from their primary kin caregivers and the caregiving environment. Thus, monitoring child health outcomes at an individual level of the kin caregiver, household level and family level are integral to improve and sustain the life chances of children.

Moreover, the use of South Africa as a focal country of study has proved to be successful considering that family structures in South Africa are changing rapidly. This is especially with regards to the practice of non-orphaned kinship care having rapidly emerged into a customary practice. Secondly, the aims and goals of kinship care as a family institution are rarely documented in the South African Constitution and in various other policies. This is because a large proportion of children are informally placed under the care of extended kin without the knowledge or intervention of child welfare authorities. This study will assist in providing policies such as the White Paper on Families and Social Welfare, National Family Policy, Draft National Policy Framework for Families, and the National Development Plan to evaluate and redesign their policies to include strategies that promote cooperation between primary kin caregivers, their families, and the child welfare system to collaborate in enhancing overall child wellbeing, safety and positive developmental outcomes. These strategies may further assist in providing comprehensive insight on how household composition and the quality of relationships of the people residing in the same households' influence child health outcomes significantly. Knowledge of these factors may thus assist in determining the appropriate interventions that should be implemented to improve the survival of children who are raised in such care contexts. This will then guide government and all relevant stakeholders in their engagement with the family to implement strategies and initiatives that address the plight of children raised in non-orphaned kinship care in South Africa.

In conclusion, kin caregivers have the potential and capability to provide adequate care, as well as a conducive and nurturing environment to the children who are under their care. However, it is imperative that kin caregivers are equipped with the necessary guidance, resources and training that facilitate the successful fulfilment of the caregiving role, given the number of unmet needs and challenges that they face.

7.2. Strengths and Limitations

7.2.1. Strengths

The first strength of this study was employing a mixed-methods research design by integrating both quantitative and qualitative data collection and analysis techniques in studying under-five mortality in non-orphaned kinship care in South Africa. The use of this convergent design assisted in exploring the quantitative findings by validating the findings obtained from the qualitative and quantitative analysis. It also assisted in explaining and corroborating the quantitative results in more detail, with the narratives of the participants obtained in the in-depth interviews. The use of this method thus helped in providing comprehensive insight on how the personal challenges of kin caregivers who have experienced a child death and the factors that have contributed to this, match with the quantitative results/ augment the quantitative results. It further helped in interpreting, elaborating, clarifying, and examining unexpected findings and potential contradictions in more detail and building on the findings of the quantitative analysis. Thus, this study has been successful in triangulating two different research paradigms to answer the research questions.

Secondly the reason why the use of a mixed-methods design has proved to be successful in the study of mortality in kinship care contexts is that most studies that have conducted research focusing on children in kinship care have largely been cross-sectional (Hynes & Dunifon, 2007). Thus, this study managed to use an adequately controlled statistical analysis and a qualitative approach to demonstrate whether children raised in non-orphaned kinship care have different health outcomes to children in other care contexts. This proved to be useful in understanding the context in which data is collected, by obtaining more in-depth and rich narrative information and thus producing findings that are reliable and credible.

The second strength was the integration of two existing theoretical frameworks (Social Determinants of Health Framework and Family Systems theory) to understand the factors that contribute to under-five mortality among children raised in non-orphaned kinship care in South Africa. Integrating the two frameworks served an integral role as it helped examine the social environment (in this case, the kinship care family context) as both these contexts help shape the lives of children profoundly. The integration of these two frameworks helped produce a synthesis that is superior to any one theory individually in studying the phenomenon of under-five mortality within kinship care. Furthermore, integrating the two theories proved to be

successful as it showed the interdependence between factors included in the Social Determinants of Health Framework and the Family Systems theory. It also showed how the interplay of all these factors ultimately affect kin caregivers, their family environments, and the ability of kin caregivers to provide adequate care to the children placed under their care. Thus, integrating the two theories has potential policy implications for Child Welfare authorities, government, and healthcare professionals to work collaboratively in gaining an understanding of how child health outcomes can be enhanced in these cooperative networks. It has also generated knowledge on how family systems and social determinants of health viewed holistically influence child health outcomes of children raised in kinship care. The operational framework has thus served as a multidimensional composite framework that can be used to study child health outcomes.

7.2.2. Limitations

The study is not without limitations. With regards to the quantitative analysis, there is very little robust data on children who are raised in kinship care thus the findings may not be generalizable to all children who have been raised in kinship care. Secondly, since mortality data was obtained based on household reports of death, child deaths may be under-reported since some respondents may have been unwilling to engage in discussions regarding the death of a child due to the unwillingness to recall the sad event or fear of being "reported" to child welfare authorities. In addition, there could be a problem with recall bias whereby some participants (particularly older or much younger participants) could have incorrectly reported the age at death of the child due to lack of accuracy to recall the memory of the actual year of death. This may thus possibly affect the internal validity of the study. Given that the study used the South African National Income Dynamics Survey there were issues of attrition where some participants were lost to follow up in the next Wave. Such factors may result in biased results, thus affecting the validity and reliability of the findings. Given that the outcome was observed in only one wave, it is not envisioned that the issue of attrition or recall bias, could have posed serious implications on the findings of this study. Most importantly, the study did not apply indirect methods of estimating child mortality. Indirect methods are particularly useful when household surveys are used as an interim measure for the derivation of vital statistics. However, it was not appropriate to apply these methods in the present study due to the fact that children

who raised by relative kin caregivers are not the biological offspring of these kin caregivers and thus kin caregivers cannot report their childbearing experiences on children who are not biologically their own, which makes indirect methods of estimating child mortality inappropriate in this study. Given that most surveys that provide information on mortality are often subject to an array of sampling and non-sampling errors and are usually not adequate for disaggregated analysis of for small subnational areas, the inability to apply indirect methods was thus a disadvantage although it should be noted that it was not appropriate to apply this method in the current study. Also, the National Income Dynamics Survey has the ability to provide detailed information about a range of characteristics of the population in relation to mortality given its versatility and the fact that only a small fraction of the total population is actually sampled. Lastly, the main limitation of the study is that the National Income Dynamics Survey is a panel survey which allows for longitudinal data analysis. This aspect of analysis was not explored in the current study on the basis that there were some changes in household living arrangements with some children living in different households at each wave. Thus, instability in living arrangements or placements of children from one household to the next would make it difficult to ascertain which kin caregiver characteristic (individual and household) could have influenced under-five mortality in the next Wave.

Given the sensitive nature of the study, there were some limitations in the qualitative analysis. Three of the participants were hesitant in providing detailed responses during the in-depth interviews and thus probes had to be used. This created difficulties as some of the responses that required further explanations were brief. This could have posed some problems as they may have withheld very important information that could have provided insight into the study and provided informative recommendations to Child Welfare Authorities, healthcare professionals and government at large. Secondly, the narratives of the participants could not be statistically represented or measured. However, this did not pose any problems as the narratives of the participants helped explain the quantitative results obtained. Lastly, the study found that all the children raised by kin (in particular those who were still alive) were also suffering from either an ongoing acute or chronic condition which required frequent medical attention. The limitation of this study was that only mortality was assessed thus excluding morbidity. Examining morbidity among non-orphaned children who are still alive could have assisted in describing the progression and severity of a given health event within the context of kinship care and how this can ultimately influence child survival. However, this is an aspect of research that has been considered for future research.

7.3. Recommendations

7.3.1. Policy recommendations

With respect to policy recommendations, the findings of this study have brought forth important policy implications. Based on these findings, this study recommends that various measures should be implemented to enhance the overall health and wellbeing of children who are raised in non-orphaned kinship care in South Africa. The recommended measures are as follows:

1. Kinship care families are often deemed by the Child Welfare system to have less needs compared to traditional foster care families. This is an incorrect assumption as literature has shown that most kinship care families have unmet needs. As such, most kin households remain undocumented in child welfare databases. Given these circumstances, child welfare authorities need to initiate regular quarterly visits that are unannounced to monitor and supervise these households including members residing within that household and engage in regular check-up calls. These would assist in deciphering if the children placed under such care are living under safe, healthy, and conducive caregiving environments. Regular visits and continuous monitoring will thus result in the reduced likelihoods of child neglect and inadequate care.
2. Prior to assuming the primary caregiving role, kin caregivers need to be provided with adequate counselling and support services which will thus enable them to feel equipped and ready enough to assume the caregiving role. Child welfare authorities need to achieve this by equipping kin caregivers with the necessary knowledge and skills needed to provide adequate care to children, which will ultimately foster positive developmental outcomes. In addition, kin caregivers can be provided with informative training videos that educate them on how to handle situations pertaining to childcare. Kin caregivers can also receive pre-service training workshops or training modules in which kin caregivers are trained on the following (i) learning what to expect and services are available; (ii) learning about stages of child development; (iii) Looking at one's own strengths and needs; (iv) Understanding the roles and responsibilities of teamwork and providing care to children; (v) Meeting children's developmental needs and addressing these developmental needs; (vi) role conflict; (vii) available supports; (viii) family group decision making and (viiii) how to navigate the child welfare system and gain access to support (financial and social support).

3. Prior to placement of a child with a primary kin caregiver, child welfare authorities need to employ various strategies and approaches that involve screening and assessing kin caregivers. This will assist in deciphering if the kin caregiver is a suitable carer and if placement of a child with that kin caregiver will be beneficial or will present certain risks for the child.
4. Most placements that occur in kinship care are involuntary and often occur because of parental neglect, abandonment, and parental incarceration. They also often take place without the intervention of child welfare authorities. Given this circumstance, child welfare authorities need to work collaboratively with healthcare professionals in providing joint support to kin caregivers who have assumed the care of children. The qualitative findings showed that most of the children in this care context are suffering from a terminal illness while others have died. Thus, the intervention of healthcare workers in the child welfare system is imperative as they may test children upon their placement, for the existence of any ongoing health issues. This practice will be useful as it will provide both the primary kin caregivers and child welfare workers with the much-needed detailed medical history which will assist in determining the children's healthcare needs and the specialised healthcare services that they need.
5. Access to healthcare services should be prioritised and made compulsory for children who are raised in kinship care. They are a vulnerable group of children who have complex needs and can thus be designated as children with special needs. The health of primary kin caregivers should also be prioritised as they first need to be in optimal health before they can adequately fulfil the caregiving role.
6. The caregiving environments should be rigorously examined to gain a comprehensive overview of the familial relationships, the cooperation or lack thereof of family members in providing care to the child and the kinship carer relationship with that of other family members within the household. Examining the caregiving environment will enable child welfare authorities to determine if the members of the household meet the necessary health and safety standards that are necessary in creating a nurturing and protective caregiving environment for the child placed under such care. Additionally, child welfare authorities need to investigate not only the needs of children but also the needs of the primary kin caregiver and other extended kin. Knowledge of these needs will assist in developing the necessary services that will help enhance the caregiving environment.

7. Child welfare authorities need to establish community social support groups that enable all kin caregivers to come together in which kin caregivers are given an opportunity to develop social networks with other carers and share their challenges. This will help caregivers to voice their needs and thus receive advise from others on how to improve their caregiving role.
8. Child welfare authorities should provide kin caregivers with the opportunity to place the children under their care, particularly those with special needs, into temporary institutional care, to provide relief to the usual carer when the carer needs it.

7.3.2. Research recommendations

1. An observation made in some of the Waves of the NIDS dataset showed that the PID of some caregivers and household identifiers changed from one Wave to the next. The PID numbers showed that the children were no longer resident in the same kin caregiver's household in the next Wave. This suggested that some children were moved from one kin caregiver's household to the next kin caregiver's household in the next Wave. Further research, in particular longitudinal research, should be conducted that examines multiple transitions or placement instability in kinship care and the subsequent effect this may have on child developmental outcomes and wellbeing. Such research will provide an important groundwork in understanding this complex relationship and the life trajectories of non-orphaned children who experience these family transitions.
2. In addition to the point mentioned above, subsequent analyses should include qualitative research that explores factors that contribute to continuity of care or stability of kinship care placements. Such research should also investigate factors that contribute to placement disruptions in kinship care arrangements. A better understanding of these factors will assist Child Welfare authorities to plan and implement new care strategies.
3. Further research should be conducted on the impact of cash transfers on the uptake of child health services and subsequent survival or development of children raised in kinship care. An investigation into this relationship would help provide an in-depth understanding of how members of the kinship unit work as a collective to allocate resources adequately to vulnerable children under their care. It will also assist in

providing insight into whether there are any differences in the quality of care of kin caregivers.

4. Further research is needed to gain a comprehensive understanding on other challenges (other than health challenges) that non-orphaned children who are raised in kinship care face and the factors that significantly influence these outcomes.
5. More methodologically rigorous research that provides baseline data that measures first entry into kinship care and subsequent child outcomes beyond adolescence and into adulthood is required.
6. Further qualitative research should be undertaken to examine the mortality risks of children who are placed within various kinship categories and to examine how their support and intervention needs, influence child survival significantly.

REFERENCES

Aassve, A., Meroni, E., & Pronzato, C. (2012). Grandparenting and childbearing in the extended family. *European Journal of Population/Revue européenne de Démographie*, *28*(4), 499-518.

Abdullah, A., Cudjoe, E., Young, S., Choi, A. W., Jordan, L. P., Chiu, M. Y., & Emery, C. R. (2020). Regulating the traditional kinship care practice in Ghana: Reflections from young people with kinship care experience. *Child: Care, Health and Development*.

Abebe, T., & Aase, A. (2007). Children, AIDS and the Politics of Orphan Care in Ethiopia: The Extended Family Revisted. *Social Science & Medicine*, 64(10), 2058-2069.

Aber, J.L., Jones, S., & Cohen, J. (2000). The impact of poverty on themental health and development of very young children. In C.H. Zeaneh (E.d.), *Handbook of infant mental health* (pp.113-128), 2nd ed. New York: The Guilford Press.

Abraham, H. (2017). A family is what you make it: legal recognition and regulation of multiple parents. *Am. UJ Gender Soc. Pol'y & L.*, *25*, 405.

Acheampong, M., Ejiofor, C., Salinas-Miranda, A., Wall, B., & Yu, Q. (2019). Priority setting towards achieving under-five mortality target in Africa in context of sustainable development goals: an ordinary least squares (OLS) analysis. *Global health research and policy*, *4*(1), 3.

Adedini, S. A. (2014). *Contextual determinants of infant and child mortality in Nigeria.*

Adato, M., Kadiyala, S., Roopnaraine, T., Biermayr-Jenzano, P., & Norman, A. (2005). *Children in the Shadow of AIDS: Studies of Vulnerable Children and Orphans in Three Provinces in South Africa*. Washington, DC: International Food Policy Research Institute.

Ajiboye, O. E., Atere, A. A., & Olufunmi, A. N. (2012). Changing patterns of child rearing practice in Badagry area of Lagos state: Implication for delinquent behaviour. *Eur. Sci. J*, *8*(12), 33-59.

Akresh, R. (2004). *Adjusting household structure: School enrollment impacts of fchild fostering in Burkina Faso*. Bonn: Institute for the Study of Labor (IZA Discussion Paper 1379).

Akwara, P. A., Noubary, B., Lim Ah Ken, P., Johnson, K., Yates, R., Winfrey, W., . . . Luo, C. (2010). Who is the vulnerable child? Using survey data to identify children at risk in the era of HIV and AIDS. *AIDS care*, *22*(9), 1066-1085.

Albertini, M., Kohli, M., & Vogel, C. (2007). Intergenrational Transfers of Time and Money in European Families: Common Practices – Different Regimes? *Journal of European Social Policy*, 17, 319-334.

Alderfer, M. A., Fiese, B. H., Gold, J. I., Cutuli, J. J., Holmbeck, G. N., Goldbeck, L., ... & Patterson, J. (2007). Evidence-based assessment in pediatric psychology: Family measures. *Journal of pediatric psychology*, *33*(9), 1046-1061.

Amoateng, A. Y. (2007). Towards a conceptual framework for families and households. *Families and households in post-apartheid South Africa: Socio-demographic perspectives*, 27-42.

Anderson, J. (2014). The impact of family structure on the health of children: Effects of divorce. *The Linacre Quarterly*, *81*(4), 378-387.

Annie E. Casey Foundation (AECF). (2012). Stepping up for kids: What government and communities should do to support kinship families. Baltimore, MD: The Annie E. Casey Foundation. Retrieved from http://www.aecf.org/resources/stepping-up-for-kids/

Ansah-Koi, A.A. (2006). 'Care of Orphans: Fostering Interventions for Children whose Parents die of AIDS in Ghana.' *Families in Society: The Journal of Contemporary Social Services*, 87(4), 554-564.

Ansell, N., & Van Blerk, L. (2004). Children's migration as a household/ family strategy: coping with AIDS in Lesotho and Malawi. *Journal of Southern African Studies*, 30(3), 673-690.

Ansell, N., & Young, L. (2004). Enabling Households to Support Successful Migration of AIDS Orphans in Southern Africa. *AIDS Care*, 16(1), 3-10.

Antfolk, J., Karlsson, L. C., Söderlund, J., & Szala, A. (2017). Willingness to invest in children: psychological kinship estimates and emotional closeness. *Evolutionary Psychology*, *15*(2), 1474704917705730.

Argeseanu, S. (2004). *Risks, amenities, and child mortality in rural South Africa*.

Ariyo, E., Mortelmans, D., & Wouters, E. (2019). The African child in kinship care: A systematic review. *Children and Youth Services Review*, *98*, 178-187.

Arthi, V., & Fenske, J. (2018). Polygamy and child mortality: Historical and modern evidence from Nigeria's Igbo. *Review of Economics of the Household*, *16*(1), 97-141.

Ashforth, A. (2005). Muthi, medicine and witchcraft: regulating 'African science' in post-apartheid South Africa? *Social Dynamics*, 31(2), 211-242.

Assim, U. M. (2013). *Understanding kinship care of children in Africa: a family environment or an alternative care option?* , University of Western Cape.

Atrash, H.K. (2011). Parents' death and its implications for child survival. *Revista brasileira de crescimento e desenvolvimento humano*, 21(3), 759.

Aubel, J., Toure, I., & Diagne, M. (2004). Senegalese grandmothers promote improved maternal and child nutrition practices: The guardians of tradition are not averse to change. *Social Science and Medicine*, 59(5), 945-959.

Backhouse, J., & Graham, A. (2010). Grandparents raising their grandchildren: an uneasy position. *Elder L. Rev.*, *6*, 1.

Bagattini, A. (2019). Children's well-being and vulnerability.

Baker, L.A., & Silverstein, M. (2008). Depressive symptoms among grandparents raising grandchildren: The impact of participation in multiple roles. *Journal of Intergenerationsl Relationships*, 6(3), 285-304.

Baker, L.A., & Mutchler, J.E. (2010). Poverty and material hardship in grandparent-headed households. *Journal of Marriage and Family*, 72, 947-962.

Bamatraf, F.F. (2008). *Determinants, health care seeking behaviour and treatment of persistent diarrhoea among children five years of age in Mukalia District*. PhD thesis. Universiti Kebangsaan Malaysia.

Bamford, L., McKerrow, N., Barron, P., & Aung, Y. (2018). Child mortality in South Africa: Fewer deaths, but better data are needed. *South African Medical Journal*, 108(3), 25-32.

Banda, P.C., Ntoimo, L.F.C., & Olamijuwon, E.O. (2017). Living arrangments and nutritional status of under-five children in sub-Saharan Africa. *African Population Studies*, 31(1), 3639-3649.

Barlow, K. (2004). Critiquing the "good enough" mother: A perspective based on the Murik of Papua New Guinea. *Ethos*, *32*(4), 514-537.

Bavier, R. (2011). Children residing with no parent present. *Children and Youth Services Review*, 33(10), 1891-1901.

Beal, S. J., & Greiner, M. V. (2016). Children in nonparental care: health and social risks. *Pediatric research*, *79*(1), 184-190.

Beaman, L., & Dillon, A. (2012). Do household definitions matter in survey design? Results from a randomized survey experiment in Mali. *Journal of Development Economics*, *98*(1), 124-135.

Beise, J. (2002). A multilevel event history analysis of the effects of grandmothers on child mortality in a historical German population, Krummhörn, Ostfriesland, 1720-1874. *Demographic Research*, 7, 13.

Beise, J., & Voland, E. (2002). A multilevel event history analysis of the effects of grandmothers on child mortality in a historical German population (Krummhörn, Ostfriesland, 1720-1874). *Demographic Research*, 7, 469-498.

Beise, J. (2004). The helping and the helpful grandmother – *The role of paternal and maternal grandmothers in child mortality in the 17th and 18th century population of French Settlers in Quebec, Canada*. Rostock, Germany: Max Planck Institute for Demographic Research Working Paper.

Beise, J. (2005). The helping grandmother and the helpful grandmother – The role of paternal and maternal grandmothers in child mortality in the 17th and 18th century population of French Settlers in Quebec, Canada. In Voland, A., Chasiotis, A., & Schiefenhovel, W

(Eds.), *Grandmotherhood: The evolutionary significance of the second half of the female life* (pp. 215-238). NJ, New Brunswick: Rutgers University Press.

Belli, P.C., Bustreo, F., & Preker, A. (2005). Investing in children's health: what are the economic benefits? *Bulletin of the World Health Organization*, 83, 777-784.

Belsey, M. A. (2005). *AIDS and the family: policy options for a crisis in family capital*: United Nations Publications.

Benatar, S. (2013). The challenges of health disaparities in South Africa. *b*, 103(3), 154-155.

Benedict, M., Zuravin, S., & Stallings, R. (1996). Adult functioning of children who lived in kin versus nonrelative family foster homes. *Child Welfare*, 75(5), 529-549.

Berger, M., & Schmid, M. (2018). Semiparametric regression for discrete time-to-event data. *Statistical Modelling*, 18(3-4), 322-345.

Berman, S., & Carpenter, S. (2014). Children in foster care and kinship care at risk for inadequate healthcare coverage and access. . *Changes in Health care Financing and Organisation, Academy Health findings brief,, VII*(V).

Bernard, H.R., & Ryan, G.W. (2010). *Analyzing qualitative data: Systematic approaches*. Thousand Oaks, CA: Sage.

Bernardi, F., Härkönen, J., & Boertien, D. (2013). *State-of-the-art Report: Effects of Family Forms and Dynamics on Children's Well-being and Life Chances: Literature Review*. Families And Societies project.

Berrick, J.D., , Barth, R.P., & Needell, B. (1994). A comparison of kinship foster homes and foster family homes: implications for kinship foster care as family preservation. *Child & Youth Services Review*, 16(1), 33-63.

Berry, L., & Malek, E. (2017). Caring for children: Relationships matter. *South African Child Gauge*, *12*, 51-60.

Bessas, L. (2017). Understanding the Mental Health Impacts of Non-Kinship vs. Kinship Placements.

Bester, S., & Malan-Van-Rooyen, M. (2015). Emotional Development, Effects of Parenting and Family Structure on.

Bezner Kerr, R., Dakishoni, L., Shumba, L., Msachi, R., & Chirwa, M. (2008). "We Grandmothers know Plenty': Breastfeeding, Complementary feeding and the Multifaceted Role of Grandmothers in Malawi". *Social Science & Medicine*, 66(5), 1095-1105.

Bhopal, S., Roy, R., Verma, D., Kumar, D., Avan, B., Khan, B., … & Kirkwood, B.R. (2019). Impact of adversity on early childhood growth & development in rural India: Findings from the early life stress sub-study of the SPRING cluster randomised controlled trial (SPRING-ELS). *PloS one*, 14(1), e0209122.

Biemba, G., Beard, J., Brooks, B., Bresnahan, M., Flynn, D., & Simon, J. (2010). The scale, scope and impact of alternative care for OVC in developing countries.

Bija, Y. (2019). Determinants of under-five mortality in South Africa: A logistic regression.

Billing, A., Ehrle, J., & Kortenkamp, K. (2002). '*Children cared for by relatives: What do we know about their wellbeing? '* Washington, DC: Urban Institute.

Billing, A., Ehrle, K., & Kortenkamp, K. (2012). *Children Cared for by Relatives: What Do We Know about Their Well-Being?* The Urban Institute, Series B, No. B-46, Washington, D.C: The Urban Institute.

Blackie, D. E. (2015). *Sad, bad and mad: exploring child abandonment in South Africa.*

Bledsoe, C. (1990). 'No success without struggle': social mobility and hardship for foster children in Sierra Leone. *Man*, 70-88.

Block, E. (2014). Flexible kinship: caring for AIDS orphans in rural Lesotho. *Journal of the Royal Anthropological Institute*, 20(4), 711-727.

Blythe, S. (2012). *The stories of women who provide long-term foster care in Australia*. Doctoral Thesis. School of Nursing and Midwifery, University of Western Sydney.

Boetto, H. (2010). Kinship care: A review of issues. *Family Matters*, (85), 60.

Bồning, A., & Ferreira, S. (2014). An analysis of, and different approach to, challenges in foster care practice in South Africa. *Social Work/ Maatskaplike Werk*, 49(4).

Borgehoff Mulder, M. (2007). Hamilton's rule and kin competition: The Kipsigis case. *Evolution and Human Behavior*, 28, 299-312.

Bouldin, E. D., Shaull, L., Andresen, E. M., Edwards, V. J., & McGuire, L. C. (2018). Financial and Health Barriers and Caregiving-Related Difficulties Among Rural and Urban Caregivers. *The Journal of Rural Health*, *34*(3), 263-274.

Bove, R.B., Valeggia, C.R., & Ellison, P.T. (2002). Girl helpers and allocation of nursing women among the Toba of Argentina. *Human Nature – An Interdisciplinary Biosocial Perspective*, 13(4), 457-472.

Bowen, M. (1978). Family Therapy in Clinical Practice. New York (Aronson) 1978.

Boyd, R. (1982). Density-dependent mortality and the evolution of social interactions. *Animal Behavior*, 30, 972-982.

Bradshaw, J, (2012). *The well-being of children in the U.K.* Bristol, UK: Cooper & Moore, 2102.

Bradshaw, J. (Ed.). (2016). *The Well-being of Children in the UK*. Policy Press.

Bramlett, M.D., & Blumberg, S.J. (2007). Family structure and children's physical and mental health. *Health Affairs*, 26(2), 549-558.

Bramlett, M.D., Radel, L.F., & Chow, K. (2017). Health and Wellbeing of Children in Kinship Care: Findings from the National Survey of Children in NonParental Care. *Child welfare*, 95(3), 41-60.

Brannan, A.M., Manteuffel, B., Holden, E.W., & Heflinger, C.A. (2006). Use of the Family Resource Scale in children's mental health: Reliability and validity among economically diverse samples. *Administration and Policy in Mental Health Services Research*, 33(2), 182-197.

Breiner, H., Ford, M., Gadsden, V. L., & National Academies of Sciences, Engineering, and Medicine. (2016). Parenting knowledge, attitudes, and practices. In *Parenting matters: Supporting parents of children ages 0-8*. National Academies Press (US).

Breman, R., MacRae, A., & Vicary, D. (2018). ' It's Been an Absolute Nightmare' - Family Violence in Kinship Care in Victoria. *Children Australia*, 43(1), 7-12.

Broad, B. (2007). Kinship Care: Providing positive and safe care for children living away from home. *London: Save the Children UK*.

Broad, B., Young, S., Operario, D., Turnell, A., Gleeson, J., Cluver, L., & Gough, A. (2013). *Inside kinship care: Understanding family dynamics and providing effective support*. Jessica Kingsley Publishers.

Brooks, D., & Barth, R. (1998). Characteristics and outcomes of drug-exposed and non-drug exposed children in kinship and non-relative foster care. *Children & Youth Services Review*, 20(6), 475-501.

Brown, S. L., Manning, W. D., & Stykes, J. B. (2015). Family structure and child well-being: Integrating family complexity. *Journal of Marriage and Family*, *77*(1), 177-190.

Buchner-Eveleigh, M. (2016). Children's rights of access to health care services and to basic health care services: a critical analysis of case law, legislation and policy. *De Jure*, 49(2), 307-325.

Bucki, B., Spitz, E., Etienne, A. M., Le Bihan, E., & Baumann, M. (2016). Health capability of family caregivers: how different factors interrelate and their respective contributions using a Bayesian approach. *BMC Public Health*, *16*(1), 364.

Buckner, J. C., Mezzacappa, E., & Beardslee, W. R. (2003). Characteristics of resilient youths living in poverty: The role of self-regulatory processes. *Development and psychopathology*, *15*(1), 139-162.

Bundy-Fazioli, K., Fruhauf, C. A., & Miller, J. L. (2013). Grandparents caregivers' perceptions of emotional distress and well-being. *Journal of Family Social Work*, *16*(5), 447-462.

Burch, T.K., & Gendell, M. (1970). "Extended Family Structure and Fertility: Some Conceptual and Methodological Issues". *Journal of Marriage and Family*, 32(2), 227-236.

Burge, P. (2020). Attempting to operationalize a multi-dimensional definition of permancney in child welfare practice: results from a demonstration project. *Journal of Public Child Welfare*, 1-23.

Burke, K., & Beegle, K. (2004). Why children aren't attending school: The case of Northwestern Tanzania. *Journal of African Economies*, 13(2), 333-355.

Burnette, D. (1999). Custodial grandparents in latino families: patterns of service use and predictors of unmet needs. *Social Work*, 44(1), 22-34.

Burns, B.J., Phillips, S.D., Wagner, H.R., Barth, R.P., Kolko, D.J., Campbell, Y., & Landsverk, J. (2004). Mental health need and access to mental health services by youths involved with child welfare: A national survey. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43(8), 960-970.

Butler, T. (2015). Informal Kinship Caregivers of Children with an Incarcerated Mother: A Resource Examination Across Five Levels.

Buwembo, P. (2010). Factors associated with under-5 mortality in South Africa: Trends 1997-2002 (Doctoral dissertation, University of Pretoria).

Caldwell, J.C. (1978). "A Theoruy of Fertility: From High Plateau to de-Stabilisation". *Population and Development Review*, 4(4), 553-577.

Campbell, C. D., & Lee, J. (2002). When husbands and parents die: widowhood and orphanhood in late imperial Liaoning, 1789-1909. *When Dad Died: Individuals and Families Coping with Familial Stress in Past Societies*.

Cantwell, N., Davidson, J., Elsley, S., Milligan, I., & Quinn, N. (2014). Moving forward: Implementing the 'Guidelines for the alternative care of children'international. *Institutionalised Children Explorations and Beyond*, *1*(1), 137-137.

CARE, C.O.F. (2015). Health care issues for children and adolscents in foster care and kinship care. *Pediatrics*, 136(4), e1131-e1140.

Carr, G. (2009). Information need, service need, and service use: what are their relationships in African American grandmothers? Southern Nursing Research Society Conference. *Southern Online Journal of Nursing Research*, 9(1), 1.

Cas, A. G., Frankenberg, E., Suriastini, W., & Thomas, D. (2014). The impact of parental death on child well-being: evidence from the Indian Ocean tsunami. *Demography*, *51*(2), 437-457.

Case, A. (2004). Does money protect health status? Evidence from South African pensions *Perspectives on the Economics of Aging* (pp. 287-312): University of Chicago Press.

Cashmore, J., Paxman, M., & Townsend, M. (2007). The educational outcomes of young people 4-5 years after leaving care: An Australian perspective. *Adoption & Fostering*, 31(1), 50-61.

Casper, L. M., & Bryson, K. R. (1998). *Co-resident grandparents and their grandchildren: Grandparent maintained families*: Population Division, US Bureau of the Census Washington, DC.

Chamberlain, P., Price, J., Leve, L. D., Laurent, H., Landsverk, J. A., & Reid, J. B. (2008). Prevention of behavior problems for children in foster care: Outcomes and mediation effects. *Prevention Science*, *9*(1), 17-27.

Chandwani, H., & Pandor, J. (2015). Healthcare-Seeking Behaviours of Mothers regarding their Children in a Tribal Community of Gujarat, India. *Electronic Physician*, 7(1), 990-997.

Chapman, M.V., Wall, A., & Barth, R.P. (2004). Children's voices: The perceptions of children in foster care. *American Journal of Orthopsychiatry*, 74(3), 293-304.

Cheney, K.E. (2017). *Crying for our elders: African orphanhood in the age of HIV and AIDS*. Chicago: The University of Chicago Press.

Chijere Chirwa, W. (2002). Social exclusion and inclusion: Challenges to orphan care in Malawi. *Nordic Journal of African Studies*, 11(1), 93-113.

Child Trends (2014). *World Family Map 2014: Mapping Family change and child well-being outcomes*. Bethesda, MD: Child Trends.

Child Welfare Information Gateway (CWIG). (2012). *Working with kinship caregivers*. Washington, DC: U.S. Department of Health and Human Services, Children's Bureau.

Child Welfare Information Gateway (CWIG). (2016). *Kinship caregivers and the child welfatre system*. Washington, DC: U.S Department of Health and Human Services, Children's Bureau.

Chinyenze, P. (2017). *Institutional childcare services in Harare, Zimbabwe: exploring experiences of managers, caregivers and children* (Doctoral dissertation).

Chipman, R., Wells, S.W., & Johnson, M.A. (2002). 'The meaning of quality in kisnhip foster care: Caregiver, child and worker perspectives'. *Families in Society*, 83(5-6), 508.

Chipungu, S., & Everett, J. (1998). *Children placed in foster care with relatives: A multi-state country*. USA: Department of Health and Human Services.

Choi, M., Sprang, G., & Eslinger, J. G. (2016). Grandparents raising grandchildren. *Family & Community Health*, *39*(2), 120-128.

Chrastil, E., Getz, W.M., Euler, H.A., and Stark, P.T. (2006). Paternity uncertainty overrides sex chromosome selection for preferential grandparenting. Evolution and Human Behavior, 27, 206-223.

Christian, C. S. (2014). Access in the South African public health system: factors that influenced access to health care in the South African public sector during the last decade.

Cicchetti, D. E., Rappaport, J. E., Sandler, I. E., & Weissberg, R. P. (2000). *The promotion of wellness in children and adolescents*: Child Welfare League of America.

Clark, S., & Hamplová, D. (2013). Single motherhood and child mortality in sub-Saharan Africa: a life course perspective. *Demography*, *50*(5), 1521-1549.

Clark, S., Madhavan, S., & Kabiru, C. (2017, April). The Importance of Kin in Protecting the Health of Children in Nairobi. In *PAA 2017 Annual Meeting*. PAA.

Clark, S., Madhavan, S., Cotton, C., Beguy, D., & Kabiru, C. (2017). Who helps single mothers in Nairobi? The role of kin support. *Journal of Marriage and Family*, *79*(4), 1186-1204.

Clark, S., Madhavan, S., & Kabiru, C. (2018). Kin support and child health: Investigating two approaches in an African slum. *Social science research*, 76, 105-119.

Coall, D.A., & Hertwig, R. (2010). Grandparental investment: past, present and future. *Behavioral and brain sciences*, 33(1), 1-19.

Coall, D.A., Hilbrand, S., & Hertwig, R. (2014). Predictors of grandparent investment decision in contemporary Europe: biological relatedness and beyond. *PLoS One*, 9, e84082.

Coall, D.A., Hilbrand, S., Sear, R., & Hertwig, R. (2016). A new niche? The theory of granfather involvement. In *Grandfathers* (pp. 21-44). London: Palgrave Macmillan.

Cole, S.A. (2005). Infants in foster care: An investigation of the relational and physical environment. *Journal of Reproductive and Infant Psychology*, 23, 33-41.

Cole, S.A., & Eamon, M.K. (2007). Self-perceptions of fulfilling the foster caregiver role: A preliminary analysis. *Children & Youth Services Review*, 29, 655-671.

Coleman, K. L., & Wu, Q. (2016). Kinship care and service utilization: A review of predisposing, enabling, and need factors. *Children and Youth Services Review*, *61*, 201-210.

Commission for Children and Young People, 'In our own words': Systemic inquiry into the lived experience of children and young people in the Victorian out-of-home care system (Melbourne: Commission for Children and Young People, 2019).

Connolly, M. (2003). Kinship care: A selected literature review. Retrieved from https://www.academia.edu/18570384/A_kinship_care_literature_review

Connolly, M., Kiraly, M., McCrae, L., & Mitchell, G. (2017). A Kinship Care Practice Framework: Using a Life Course Approach. *The British Journal of Social Work*, 47(1), 87-105.

Constantine, L. L. (1986). *Family paradigms: The practice of theory in family therapy*: Guilford Press.

Conway, K. S., & Li, M. (2012). Family structure and child outcomes: a high definition, wide angle "snapshot". *Review of Economics of the Household, 10*(3), 345-374.

Courtney, M., & Needell, B. (1997). Outcomes of kinship care: lessons from California. In Berrick, J, Barth, R., & Gilbert, N (Eds.), *Child Welfare Research Review* (pp. 130-150). NY, New York: Columbia University Press.

Courtney, M.E., & Iwaniec, D. (2009). *Residential Care of Children*: *Comparative Perspectives*. Oxford, New York: Oxford University Press.

Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approaches.

Crittenden, A., & Marlowe, F.W. (2008). Allomaternal care among the Hadza of Tanzania. *Human Nature*, 19, 249-262.

Crosnoe, R., Prickett, K.C., Smith, C., & Cavanagh, S. (2014). Changes in Young Children's Family Structures and Child Care Arrangements. *Demography*, 51(2), 459-483.

Cuddeback, G. S. (2004). Kinship family foster care: A methodological and substantive synthesis of research. *Children and Youth Services Review, 26*(7), 623-639.

Cudjoe, E., Abdullah, A., & Chiu, M. Y. (2019). What makes kinship caregivers unprepared for children in their care? Perspectives and experiences from kinship care alumni in Ghana. *Children and Youth Services Review, 101*, 270-276.

Cudjoe, E., Abdullah, A., & Chiu, M.Y. (2020). Experiences of Children in Kinship Care (CKC) in Ghana: Challenges for Cultural Practices. *Journal of Family Issues*, 0192513X20921523.

Cunningham, S.A., Elo, I.T., Herbst, K., & Hosegood, V. (2010). Prenatal development in rural South Africa: relationship between birth weight and access to fathers and grandparents. *Population Studies*, 64(3), 229-246.

Davey, J. (2016). *The care of kin: a case study approach to kinship care in the south of England and Zululand, South Africa* (Doctoral dissertation, Bournemouth University).

Davis, M. T., Warfield, M. E., Boguslaw, J., Roundtree-Swain, D., & Kellogg, G. (2020). Parenting a 6-Year Old Is Not What I Planned in Retirement: Trauma and Stress among Grandparents Due to the Opioid Crisis. *Journal of Gerontological Social Work, 63*(4), 295-315.

Davis-Sowers, R. (2012). "It Just Kind of Like Falls in Your Hands" Factors that Influence Black Aunts' Decisions to Parent Their Nieces and Nephews. *Journal of Black Studies, 43*(3), 231-250.

Denby, R.W. (2011). Kinship liaisons: A peer-to-peer approach to supporting kinship caregivers. *Children and Youth Services Review*, 33(2), 217-225.

Denby, R. W., Brinson, J. A., Cross, C. L., & Bowmer, A. (2014). Male kinship caregivers: Do they differ from their female counterparts? *Children and Youth Services Review*, *46*, 248-256.

Denby, R. W. (2015). *Kinship care: Increasing child well-being through practice, policy, and research*. Springer Publishing Company.

de Vise-Lewis, E. (2012). Family support services and alternative care in Sub-Saharan Africa. *Hong Kong: Child Frontiers Ltd*.

Department of Social Development. (2012). White Paper on Families in South Africa. Retrieved from https://www.westerncape.gov.za/assets/departments/social-development/white_paper_on_families_in_south_africa_2013.pdf.

Department of Social Development. (2013). *White Paper on Families in South Africa*. Retrieved from https://www.westerncape.gov.za/assets/departments/social-development/white_paper_on_families_in_south_africa_2013.pdf

Department of Social Development (2017). *Draft Child Care and Protection Policy*. Pretoria: DSD.

Derosas, R. (2002). Fatherless families in 19th century Venice. In Derosas, R., & Oris, M (Eds.), *When dad died: Individuals and families coping with distress in past socieities* (pp. 421-452). NJ, Bern: Peter Lang.

Desta, M. K. (2012). *Kinship care for orphans and vulnerable children in Ethiopia: A mixed methods study of caregiver coping* (Doctoral dissertation, University of Illinois at Chicago).

Dias, B.C., Ichisato, S.M., Marchetti, M.A., Neves, E.T., Higarashi, I.H., & Marcon, S.S. (2019). Challenges of family caregivers of children with special needs of multiple, complex and continuing care at home. *Escola Anna Nery*, 23(1).

Doley, R., Bell, R., Watt, B., & Simpson, H. (2015). Grandparents raising grandchildren: Investigating factors associated with distress among custodial grandparent. *Journal of Family Studies*, *21*(2), 101-119.

Domingo, W. (2011). " For the sake of the children": South African family relocation disputes. *Potchefstroom Electronic Law Journal/Potchefstroomse Elektroniese Regsblad*, *14*(2).

Dong, H., Manfredini, M., Kurosu, S., Yang, W., & Lee, J. Z. (2017). Kin and birth order effects on male child mortality: three East Asian populations, 1716–1945. *Evolution and human behavior*, *38*(2), 208-216

Donoghue, S., & Stacey, J. (2018). Kinship care: Increasing child well-being through practice, policy, and research [Book Review]. *Developing Practice: The Child, Youth and Family Work Journal*, (51), 103.

Douglass, R.L., & McGadney-Douglass, B.F. (2008). "The Role of Grandmothers and Older Women in the Survival of Children with Kwashiorkor in Urban Accra, Ghana". *Research in Human Development*, 5(1), 26-43.

Drah, B. (2012). Orphans in sub-Saharan Africa: The crisis, the interventions, and the anthropologist. *Africa Today*, 59(2), 2-21.

Dubowitz, H. (1993). A profile of kinship care. *Child welfare, 72*(2), 153-169.

Dubowitz, H., Feigelman, S., Harrington, D., Starr, R., Zuravin, S., & Sawyer, R. (1994). Children in kinship care: How do they fare? *Children & Youth Services Review*, 16, 85-106.

Dunifon, R., & Bajracharya, A. (2012). The role of grandparents in the lives of youth. *Journal of Family Issues*, 33(9), 1168-1194.

Dunifon, R. (2013). The influence of grandparents on the lives of children and adolescents. *Child Development Perspectives*, *7*(1), 55-60.

Dunne, E. G., & Kettler, L. J. (2006). Social and emotional issues of children in kinship foster care and stressors on kinship carers: A review of the Australian and international literature. *Children Australia, 31*(02), 22-29.

Dziro, C., & Mhlanga, J. (2018). The sustainability of kinship foster care system in Zimbabwe: a study of households caring for orphans and other vulnerable children in Bikita. *African Journal of Social Work*, *8*(2), 20-28.

Eamon, M.K. (2001). Poverty, parenting, peer and neighbourhood influences on young adolescent antisocial behavior. *Journal of Social Service Research*, 28, 1-23.

East, P.L. (2010). Children's provision of family caregiving: Benefit or burden? *Child Development Perspectives*, 4(1), 55-61.

Ehrle, J., Geen, R., & Clark, R. (2001). Children Cared for by Relatives: *Who Are They and How Are They Faring? New Federalism: National Survey of America's Families, Series B, No. B-28.* Assessing the New Federalism: An Urban Institute Program To Assess Changing Social Policies.

Ehrle, J., & Geen, R. (2002). Kin and non-kin foster care- findings from a National Survey. *Children and Youth Services Review*, 27, 595-614.

Ehrle, J., Geen, R., & Main, R. (2003). *Kinship Foster Care: Custody, Hardships and Services*. Washington, DC: The Urban Institute.

Ekholuenetale, M., Wegbom, A. I., Tudeme, G., & Onikan, A. (2020). Household factors associated with infant and under-five mortality in sub-Saharan Africa countries. *International Journal of Child Care and Education Policy, 14*(1), 1-15.

Eloundou-Enyegue, P.M., & Stokes, C.S. (2002). Will economic crises in Africa weaken rural-urban ties? Insights from child fosterage trends in Cameroon. *Rural Sociology*, 67(2), 278-298.

Embleton, L., Ayuku, D., Kamanda, A., Atwoli, L., Ayaya, S., Vreeman, R., ... & Braitstein, P. (2014). Models of care for orphaned and separated children and upholding children's rights: cross-sectional evidence from western Kenya. *BMC international health and human rights*, *14*(1), 9.

Emlen, S.T. (1995). *An evolutionary theory of the family*. Proceedings of the National Academy of Sciences of the United States of America, 92, 8092-8099.

Engler, A. D., Sarpong, K. O., Van Horne, B. S., Greeley, C. S., & Keefe, R. J. (2020). A systematic review of mental health disorders of children in foster care. *Trauma, Violence, & Abuse*, 1524838020941197.

Epstein, H. R. (2017). Kinship care is better for children and families. *Child L. Prac.*, *36*, 77.

Eseigbe, E.E., Anyiam, J.O., Ogunrinde, G.O., Wammanda, R.D., & Zoaka, H.A. (2012). Health Care Seeking Behavior among Caregivers of Sick Children who had Cerebral Malaria in Northwestern Nigeria. *Malaria Research and Treatment*, 2012.

Esq, G.W.W. (2016). A Family Right to Care: Charting the legal Obstacles. *GrandFamilies: The Contemporary Journal of Research, Practice and Policy*, 3(1).

Euler, H. A., & Weitzel, B. (1996). Discriminative grandparental solicitude as reproductive strategy. *Hu Nat*, *7*(1), 39-59.

Euler, H.A., & Michalski, R.L. (2008). Grandparental and Extended Kin Relationships. In Salmon, C.A., & Shackelford, T.A. (Eds.), *An Evolutionary Perspective* (pp. 230-256). Oxford: Oxford University Press.

Farmer, E., & Moyers, S. (2005). Children placed with family and friends: placement patterns and outcomes. *Executive Summary for the Department of Education and Skills, Bristol University, Bristol*.

Feldman, I.H., & Fertig, A. (2013). Measuring the impact of enhanced kinship navigator services for informal kinship caregivers using an experimental design. *Child Welfare*, 92(6), 41-62.

Fernandez, E., & Maplestone, P. (2006). Permanency planning: A review of the research evidence related to permanency planning in out of home care. *New South Wales: The University of New South Wales. Google Scholar*.

Fernandez, E., & Lee, J. S. (2013). Accomplishing family reunification for children in care: An Australian study. *Children and Youth Services Review*, *35*(9), 1374-1384.

Ferreira, T.D.M., Piccioni, L.D., Queiroz, P.H.B., Silva, E.M., & Vale, I.N.D. (2018). Influence of grandmothers on exclusive breastfeeding: cross-sectional study. *Einstein (Sao Paulo)*, 16(4).

Flaherty, E., Legano, L., Idzerda, S., & ABUSE, C. O. C. (2019). Ongoing pediatric health care for the child who has been maltreated. *Pediatrics*, *143*(4).

Focus, F. (2009). *Addressing the health care needs of foster care children*. May 2008.

Font, S. A. (2015). Are children safer with kin? A comparison of maltreatment risk in out-of-home care. *Children and youth services review*, *54*, 20-29.

Font, S. A. (2015). Is higher placement stability in kinship foster care by virtue or design?. *Child abuse & neglect*, *42*, 99-111.

Forrest, K., & Rushton, A. (1999). 'Children with relatives abroad: Assessment for placement'. *Child and Family Social Work*, 4(2), 153.

Fortune, C. L. (2016). *An overview of the foster care crisis in South Africa and its effect on the best interests of the child principle: a socio-economic perspective.* University of the Western Cape.

Fottrell, E., Tollman, S., Byass, P., Golooba-Mutebi, F., & Kahn, K. (2012). The epidemiology of 'bewitchment' as a lay-reported cause of death in rural South Africa. *Journal of Epidemiol Community Health*, 66(8), 704-709.

Frank, S.A. (1998). *Foundations of social evolution*. Princeton: Princeton University Press.

Franklin, P., & Volk, A.A. (2016). Evolutionary paradox: Adoption. In Shackelford, T.K., & Weekes-Shackelford, V.A. (Eds.), *Encyclopedia of evolutionary psychological science* Cham: Springer International.

Freeman, L.L., & Brewer, M. (2013). Family Matters: Links between Family Structure and Early Child Health. *Journal of Applied Research on Children*, 4(1), 6.

Fuentes-Pelaez, N., Amoros, P., Pastor, C., Molina, M.C., & Mateo, M. (2015). Assessment in kinship foster care: A new tool to evaluate the strenghts and weaknesses. *Social Sciences*, 4(1), 1-17.

Fuller-Thompson, E., & Minkler, M. (2000). African-American grandparents raising grandchildren: a national profile of demographic and health characteristics. *Health and Social Work*, 25(2), 109-119.

Gale, C. (2019). Children Without Parental Care and Alternative Care. Retrieved from https://www.celcis.org/files/8115/6768/9042/Children_without_parental_care_and_alternative_care_report.pdf.

Galehouse, P., Herrick, C., & Raphel, S. (2010). Position statement… on Foster Care International Society of Psychiatric-Mental Health Nurses. *Journal of Child and Adolescent Paychiatric Nursing*, 23(1), 36-39.

Gao, M., Brännström, L., & Almquist, Y. B. (2016). Exposure to out-of-home care in childhood and adult all-cause mortality: a cohort study. *International journal of epidemiology*, dyw295.

Gayapersad, A., Ombok, C., Kamanda, A., Tarus, C., Ayuku, D., & Braitstein, P. (2019). The Production and Reproduction of Kinship in Charitable Children's Intitutions in Uasin Gishu County, Kenya. *Child and Youth Care Forum*, 48, 797-828.

Gaydosh, L. (2015). Childhood risk of parental absence in Tanzania. *Demography*, 52(4), 1121-1146.

Geen, R. (2000). 'In the interest of children: Rethinking federal and state policies affecting kinship care'. *Policy and Practice of Public Human Services*, 58(1), 19.

Geen, R. (2004). The evolution of kinship care policy and practice. *The future of children*, 131-149.

Gibbs, D. (2005). *Understanding foster parenting: Using administrative data to explore retention.* Washington, DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation.

Gibbs, D., Kasten, J., Bir, A., Duncan, D., & Hoover, S. (2006). Between two systems: Children in TANF child-only cases with relative caregivers. *Children & Youth Services Review*, 28(4), 435-446.

Gibson, M., & Mace, R. (2005). Helpful grandmothers in rural Ethiopia: A study of the effect of kin on child survival and growth. *Evolution and Human Behavior*, 26, 469-482.

Gibson, S.M., Cryer-Coupet, Q.R., Knox, J.L., & Field, K. (2020). Father involvement in kinship care: A risk and resilience perspective. *Children and Youth Services Review*, 119, 105354.

Gillespie, S., Norman, A., & Finley, B. (2005). Child vulnerability and HIV/AIDS in sub-Saharan Africa: What we know and what can be done. *International Food Policy Research Institute) Amy Norman University of Calgary, Canada Betsy Finley, Tulane University, USA.*

Glaser, K., Price, D., Gessa, G.D., Ribe, E., Stuchbury, R., & Tinker, A. (2013). Grandparenting in Europe: Family policy and grandparents' role in providing childcare. Report for Grandparents Plus. Retrieved from http://www.grandparentsplus.org.uk/wp-content/uploads/2013/08/Grandparenting-in-Europe-0613_Electronic.pdf.

Gleeson, J.P., & Craig, L.C. (1994). Kinship care in child welfare: An analysis of states' policies. *Children & Youth Services Review*, 16, 7-31.

Gleeson, J. (2007). Kinship care research and literature: Lessons learned and directions for future research. *Kinship Reporter, 1*(2), 8-11.

Gleeson, J.P., Wesley, J.M., Ellis, R., Seryak, C.M., Talley, G.W., & Robinson, J. (2009). Becoming involved in raising a relative's child: Reasons, caregiver motivations and pathways to informal kinship care. *Child and Family Social Work*, 14, 300-310.

Goldberg, R.E., & Short, S.E. (2012). "The Luggage that Isn't Theirs is Too Heavy": Understandings of Orphan Disadvantage in Lesotho. *Population Research and Policy Review*, 31(1), 67.

Gomo, P., Raniga, T., & Motloung, S. (2017). Resilience amongst children living with HIV: Voices of foster parents residing in Bhambayi, Kwazulu-Natal, South Africa. *Social Work*, *53*(2), 186-200.

Goody, E. (1996). 'The Fostering of Children in Ghana: A Preliminary Report'. *Ghana Journal of Sociology*, 2(1), 26-33.

Gordon, A. L., McKinley, S. E., Curtis, P. A., & Satterfield, M. L. (2003). A first look at the need for enhanced support services for kinship caregivers. *Child welfare*, *82*(1).

Gottlieb, A. (2015). *The afterlife is where we come from*. University of Chicago Press.

Govender, K., Reardon, C., Quinlan, T., & George, G. (2014). Children's psychosocial wellbeing in the context of HIV/AIDS and poverty: a comparative investigation of orphaned and non-orphaned children living in South Africa. *BMC Public Health*, *14*(1), 615.

Grant, M.J., & Yeatman, S. (2014). The impact of family transitions on child fostering in rural Malawi. *Demography*, 51(1), 205-228.

Gray, P.B., & Crittenden, A.N. (2014). Father Darwin: Effects of children on men, viewed from an evolutionary perspective. *Fathering*, 12, 121-142.

Green, Y. R., & Goodman, C. C. (2010). Understanding birthparent involvement in kinship families: Influencing factors and the importance of placement arrangement. *Children and Youth Services Review*, *32*(10), 1357-1364.

Gresswell, J., & Plano Clark, V. (2007). Designing and conducting mixed methods research. Thousand Oaks etc: Sage.

Griffin, A.S., West, S.A., & Buckling, A. (2004). Cooperation and competition in pathogenic bacteria. *Nature*, 430, 1024-1027.

Groza, V. K., Bunkers, K. M., & Gamer, G. N. (2011). VII. Ideal Components and Current Characteristics of Alternative Care Options for Children Outside of Parental Care in Low-Resource Countries. *Monographs of the Society for Research in Child Development*, *76*(4), 163-189.

Guest, G., MacQueen, K., & Namey, E. (2012). *Applied Thematic Analysis*. Thousand Oaks, CA: Sage.

Guest, G., Namey, E., & Chen, M. (2020). A simple method to assess and report thematic saturation in qualitative research. *PLoS ONE*, 15(5): e0232076.

Guzman, L. (2004). Grandma and grandpa taking care of the kids: Patterns of involvement. Retrieved from http://www.childtrends.org.

Gwele, M.P. (2005). *Health and religion: a study of health-seeking behaviour in Kayamandi, Western Cape in the context of "medical pluralism*" (Masters dissertation, University of Cape Town).

Hall, K., Meintjes, H., & Sambu, W. (2014). Demography of South Africa's children. *South African child gauge*, 90-93.

Hall, K., Meintjes, H., & Sambu, W. (2014). Demography of South Africa's children. *South African child gauge*, 90-93.

Hall, K., Meintjies, H., Sambu, W., Mathews, S., Jamieson, L., & Lake, L.C. (2017). Demography of South Africa's Children. South African Child Gauge, pp.90-93.

Hall, K., Richter, L., Mokomane, Z., & Lake, L (eds). (2018). *Introduction: Children, Families and The State:* Collaboration and Contestation. Retrieved from http://webcms.uct.ac.za/sites/default/files/image_tool/images/367/South%20African%Child%20Gauge%202018%20-%20Nov%2020.pdf

Hall, K., Richter, L., Mokomane, Z., & Lake, L. (2018). South African Child Gauge 2018 children, families and the state collaboration and contestation.

Hall, K., & Posel, D. (2019). Fragmenting the Family? The complexity of household migration strategies in post-apartheid South Africa. *IZA Journal of Development and Migration*, *10*(2).

Hamilton, W.D. (1964). The genetical evolution of social behavior, I and II. *Journal of Theoretical Biology*, 7, 1-52.

Hamilton, W.D. (1967). Extraordinary sex ratios. *Science*, 156, 477-488.

Hampshire, K. (2002). Networks of nomads: Negotiating access to health resources among pastoralist women in Chad. *Social Science & Medicine*, 54(7), 1025-1037.

Hank, K., & Buber, I. (2009). Grandparents caring for their grandchildren: Findings from the 2004 Survey of Health, Ageing, and Retirement in Europe. *Journal of Family Issues*, 30, 53-73.

Hansen, R.L., Mawjee, F.L., Barton, K., Metcalf, M.B., & Joye, N.R. (2004). Comparing the health status of low-income children in and out of foster care. *Child Welfare*, 83(4), 367-381.

Harden, B. J., Clyman, R. B., Kriebel, D. K., & Lyons, M. E. (2004). Kith and kin care: Parental attitudes and resources of foster and relative caregivers. *Children and Youth Services Review, 26*(7), 657-671.

Harnett, P. H., Dawe, S., & Russell, M. (2014). An investigation of the needs of grandparents who are raising grandchildren. *Child & Family Social Work, 19*(4), 411-420.

Harris, M.S., & Skyles. (2008). Kinship care for African American children: Disproportionte and disadvantageous. *Journal of Family Issues*, 29(8), 1013-1030.

Harwin, J., Alrouh, B., Golding, L., McQuarrie, T., Broadhurst, K., & Cusworth, L. (2019). The contribution of supervision orders and special guardianship to children's lives and family justice.

Hawkes, K. (2003). Grandmothers and the evolution of human longevity. *American Journal of Human Biology*, 15, 380-400.

Hawkes, K. (2004). Human Longevity: the grandmother effect. *Nature*, 428, 128-129.

Hayduk, I. (2014). The Effect of Kinship Placement on Foster Children's Well-Being.

Hayslip Jr, B., Blumenthal, H., & Garner, A. (2015). Social support and grandparent caregiver health: One-year longitudinal findings for grandparents raising their grandchildren. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *70*(5), 804-812.

Heath, K.M. (2003) The effects of kin propinquity on infant mortality. Social Biology, 50, 270-280.

Hedges, S., Sear, R., Todd, J., Urassa, M., & Lawson, D. (2019). Earning their keep? Fostering, children's education, and work in north-western Tanzania. *Demographic Research*, 41(10), 263-292.

Hegar, R.L. (1999). 'The cultural roots of kinship care'. In Hegar, R., & Scannapieco, M (Eds.), *Kinship Foster Care: Policy, Practice and Research* New York: Oxford University Press.

Hernandez, J., & Berrick, J. D. (2019). Kinship probate guardianship: An important permanency option for children. *Families in Society*, *100*(1), 34-51.

Hewlett, B.S., Lamb, M.E., Leyendecker, B., & Schölmerich, A. (2000). Parental investment strategies among Aka foragers, Ngandu farmers and Euro-American urban-industrialists. In Cronk, L., Chagnon, N., & Irons, W. (Eds.), *Adaptation and human behavior: An anthropological perspective* (pp. 155-177). New York: Aldine de Gruyter.

Hewlett, B.S., & Lamb, M.E. (2005). *Hunter-gatherer childhoods: Evolutionary, developmental, and cultural perspectives*. New Brunswick, NJ: Transaction Publishers.

Hill, T. L. (2010). Child kinship care: An exploratory mixed methods study of social support, resources, and health issues of Nebraska child kinship caregivers.

Hill, K., & Hurtado, A. M. (2017). *Ache life history: The ecology and demography of a foraging people*: Routledge.

Hillen, T., & Gafson, L. (2015). Why good placements matter: pre-placement and placement risk factors associated with mental health disorders in pre-school children in foster care. *Clinical child psychology and psychiatry*, *20*(3), 486-499.

Hlongwa, M. N. (2016). *Demographic and socioeconomic factors associated with under-5 mortality in KwaZulu-Natal, South Africa.*

Hornby, H., Zeller, D., & Karraker, D. (1996). Kinship care in America: What outcomes should policy seek? *Child welfare, 75*(5), 397.

Hosegood, V. (2009). The demographic impact of HIV and AIDS across the family and household life-cycle: implications for efforts to strengthen families in sub-Saharan Africa. *AIDS care, 21*(sup1), 13-21.

Hossain, M., & Islam, M. (2009). Effects Of demographic and household variables on infant and child under-five mortality: An application of logistic model. *The Internet Journal of Health, 8*(2), 1-9.

Houle, B., Stein, A., Kahn, K., Madhavan, S., Collinson, M., Tollman, S. M., & Clark, S. J. (2013). Household context and child mortality in rural South Africa: the effects of birth spacing, shared mortality, household composition and socio-economic status. *International journal of epidemiology, 42*(5), 1444-1454.

Houle, B., Clark, S. J., Kahn, K., Tollman, S., & Yamin, A. E. (2015). The impacts of maternal mortality and cause of death on children's risk of dying in rural South Africa: evidence from a population based surveillance study (1992-2013). *Reproductive health, 12*(1), S7.

Hrdy, S.B., & Judge, D.S. (1993). Darwin and the puzzle of primogeniture—An essay on biases in parental investment after death. *Human Nature*, 4, 145.

Hrdy, S. B. (2005). Cooperative breeders with an ace in the hole. In Voland, E., Chasiotis, A., & Schiefenhövel, W. (Eds.), *Grandmotherhood: The evolutionary significance of the second half of female life* (pp. 295–317). New Brunswick: Rutgers University Press.

Hrdy, S. B. (2009). *Mothers and others: The evolutionary origins of mutual understanding*. Cambridge: Belknap Press of Harvard University Press.

Hublin, J.J., Neubauer, S., & Gunz, P. (2015). Brain ontogeny and life history in Pleistocene hominins. *Philosophical Transactions of the Royal Society of London B*, 370, 20140062.

Hughes, M.E., Waite, L.J., LaPierre, T.A., & Luo, Y. (2008). All in the Family: The Impact of Caring for Grandchildren on Grandparents' Health. *The Journals of Gerontology, Series B, Psychological Sciences and Social Sciences*, 62(2), S108-S119.

Hunt, J. (2003). *Family and Friends* Carers Report prepared for the department of Health. Retrieved from http://www.doh.gov.uk/carers/familyandfriends.htm

Hynes, K., & Dunifon, R. (2007). Children in no-parent households: The continuity of arrangements and the composition of households. *Children and Youth Services Review, 29*(7), 912-932.

Huynh, H.V. (2014). New directions in orphan and vulnerable children policy and research: A focus on supporting "suitable" institutions when placement is "necessary" for a child. *American Journal of Orthopsychiatry*, 84(4), 387–394.

Ibrahim, K.D. (n.d.). Understanding the many faces of child fostering in Ghana.

Iglehart, A. (1994). Kinship foster care: placement, service and outcome issues. *Children & Youth Services Review*, 16(1-2), 107-122.

Ivey, P.K. (2000). Cooperative reproduction in Ituri Forest hunter-gatherers: Who cares for Efe infants? *Current Anthropology*, 41, 856-866.

Izugbara, C. (2014). Whose child is dying? Household characteristics and under-5 mortality in Nigeria. *South African Journal of Child Health, 8*(1), 16-22.

Jaeggi, A. V., Burkart, J. M., & Van Schaik, C. P. (2010). On the psychology of cooperation in humans and other primates: combining the natural history and experimental evidence of prosociality. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *365*(1553), 2723-2735.

Jaggers, J. W., Richardson, E. A., Aalsma, M., & Hall, J. A. (2016). Resources, Race, & Placement Frequency: An Analysis of Child Well-Being. *Child Welfare*, *94*(6), 105-128.

Jamison, C.S., Cornell, L.L., Jamison, P.L., & Nakazato, H. (2002). Are all grandmothers equal? A review and a preliminary test of the 'grandmother hypothesis' in Tokugawa, Japan. *American Journal of Physical Anthropology: The Official Publication of the American Association of Physical Anthropologists*, 119(1), 67-76.

Jaudes, P.K., Bilaver, L.A., Goerge, R.M., Masterson, J., & Catania, C. (2004). Improving access to health care for for foster children: The Illinois model. *Child Welfare*, 83(3), 215-238.

Jedwab, M., Xu, Y., & Shaw, T.V. (2020). Kinship care first? Factors asssociated with placement moves in out-of-home care. *Children and Youth Services Review*, 115, 105104.

Jee, S. H., Szilagyi, M., & Augustyn, M. (2016). *Comprehensive health care for children in foster care.*

Kadungure, T. P. (2017). *Experiences of caregivers caring for children with different special needs in a cluster foster care village in KwaZulu-Natal* (Doctoral dissertation).

Kalemba, J. (2016). *" It's uncomfortable for us to be called sisters": an exploratory study into the experiences of male nurses in a Johannesburg hospital, South Africa.*

Kalil, A. (2003). *Family Resilience and Good Child Outcomes: A Review of the Literature*. Te Manatu Whakahiato Ora: Centre for Social Research and Evaluation. Retrieved from https://pdfs.semanticscholar.org/41ed/83ff82b6d93b2509581374f6e3fcd03b7ecb.pdf

Kaptijn, R., Thomese, F., van Tilburg, T.G., & Liefbroer, A.C. (2010). How Grandparents Matter: Support for the Cooperative Breeding Hypothesis in a Contemporary Dutch Population. *Human Nature*, 21, 393-405.

Kar, N. (2008). Resort to faith-healing practices in the pathway to care for mental illness: a study on psychiatric inpatients in Orissa. *Mental Health, Religion and Culture*, 11(7), 720-740.

Kaziboni, A. (2015). 'Orphans in Foster Care and the State: The Bio-political Analysis of the Relationship'. MA dissertation, University of Johannesburg.

Kelch-Oliver, K. (2011). African American grandchildren raised in grandparent-headed families: An exploratory study. *The Family Journal*, *19*(4), 396-406.

Keller, H. (2013). Attachment and culture. *Journal of Cross-Cultural Psychology*, *44*(2), 175-194.

Kelley, S. J., Whitley, D. M., & Campos, P. E. (2011). Behavior problems in children raised by grandmothers: The role of caregiver distress, family resources, and the home environment. *Children and Youth Services Review*, *33*(11), 2138-2145.

Kelley, S. J., Whitley, D. M., & Campos, P. E. (2013). Psychological distress in African American grandmothers raising grandchildren: The contribution of child behavior problems, physical health, and family resources. *Research in Nursing & Health*, *36*(4), 373-385.

Kemkes-Grottenthaler, A. (2005). Of grandmothers, grandfathers and wicked step-grandparents. Differential impact of paternal grandparents on grandoffspring survival. *Historical Social Research/Historische Sozialforschung*, 219-239.

Kidman, R., Petrow, S.E., & Heymann, S.J. (2007). Africa's Orphan Crisis: Two Community-Based Models of Care. *AIDS Care*, 19(3), 326–329.

Kim, D., & Saada, A. (2013). The social determinants of infant mortality and birth outcomes in Western developed nations: a cross-country systematic review. *International journal of environmental research and public health*, *10*(6), 2296-2335.

Kim, S. (2014). *A Comparison of Discrete and Continuous Survival Analysis.* Virginia Tech.

Kiraly, M., & Humphreys, C. (2013). Family contact for children in kinship care: A literature review. *Australian Social Work*, *66*(3), 358-374.

Kiraly, M., Hoadley, D & Humphreys, C. (2020). The nature and prevalence of kinship care: Focus on young kinship carers. *Child & Family Social Work*.

Knijn, T., & Patel, L. (2018). Family life and family policy in South Africa: responding to past legacies, new opportunities and challenges. In *Handbook of Family Policy*. Edward Elgar Publishing.

Knodel, J., & Hermalin, A.I. (1994). Effects of borth rank, maternal age, birth interval, and sibship size on infant and child mortality: evidence from 18th and 19th century reproductive histories. *American Journal of Public Health*, 74(10), 1098-1106.

Kokorelias, K. M., Gignac, M. A., Naglie, G., & Cameron, J. I. (2019). Towards a universal model of family centered care: a scoping review. *BMC health services research*, *19*(1), 564.

Kolomer, S.R., McCallion, P., & Janicki, M.P. (2002). African-American grandmother carers of children with disabilities: Predictors of depressive symptoms. *Journal of Gerontological Social Work,* 37(3/4), 45−63.

Kramer, K.L. (2002). Variation in juvenile dependence—Helping behavior among Maya children. *Human Nature—An Interdisciplinary Biosocial Perspective,* 13 (2), 299–325.

Kramer, K. L. (2010). Cooperative breeding and its significance to the demographic success of humans. *Annual Review of Anthropology*, *39*, 417-436.

Kramer, K.L., & Ota' rola-Castillo, E. (2015). When mothers need others: The impact of hominin life history evolution on cooperative breeding. *Journal of Human Evolution*, 84, 16–24.

Kuyini, A.B., Alhassan, A.R., Tollerud, I., Weld, H., & Haruna, I. (2009). Traditional kinship foster care in northern Ghana: the experiences and views of children, carers and adults in Tamale.

Kyei, K. A. (2011). Socio–economic factors affecting under five mortality in South Africa–An investigative study. *Journal of Emerging Trends in Economics and Management Sciences, 2*(2), 104-110.

Kyomuhendo, G.B. (2003). Low use of rural maternity services in Uganda: impact of women's status, traditional beliefs and limited resources. *Reproductive Health Matters*, 11(21), 16-26.

Kyomugisha, F., & Rutayuga, J.B.K. (2011). Extended family and kinship network systems for caring for children. In Aborampah, O.M., & Sudarkasa, N. (Eds.), *Extended families in Africa and the African diaspora* (pp. 183–199). Trenton: African World Press.

LaFave, D., & Thomas, D. (2017). Extended Families and Child Well-being. *Journal of Development Economics*, 126, 52-65.

Lahdenpera, M., Lummaa, V., Helle, S., Tremblay, M., & Russell, A.F. (2004). Fitness benefits of prolonged post reproductive lifespan in women. *Nature*, 428 (6979), 178–181.

Lamm, B., Keller, H., Yovsi, R.D., & Chaudhary, N. (2008). Grandmaternal and maternal ethnotheories about early childcare. *Journal of Family Psychology*, 22(1), 80.

Lane, H. M. (2012). The Influences of Caregiver-Child Interactions and Temperament on Cortisol Concentrations of Toddlers in Full-Day Childcare.

Lang, K., & Zagorsky, J. L. (2001). Does growing up with a parent absent really hurt? *Journal of human Resources*, 253-273.

Laslett, P. (1988). "Family, Kinship and Collectivity as Systems of Support in Pre-Industrial Europe: A Consideration of the 'nuclear-Hardship' Hypothesis." *Continuity and Change* 3 (2). Cambridge University Press: 153.

Lawson, D. W., & Uggla, C. (2014). Family structure and health in the developing world: What can evolutionary anthropology contribute to population health science? In *Applied evolutionary anthropology* (pp. 85-118). Springer, New York, NY.

Lawson, D.W., Schaffnit, S.B., Hassan, A., Ngadaya, E., Ngowi, B., Mfinanga, S.G.M., James, S., & Borgehoff, Mulder, M. (2017). Father absence but not fosterage predicts food insecurity, relative poverty, and poor child health in Northern Tanzania. *American Journal of Human Biology*, 29(3): e22938.

Leathers, S.J. (2006). Placement disruption and negative placement outcomes among adolescents in long-term foster care: The role of behavior problems. *Child Abuse & Neglect*, 30(3), 307-324.

Leder, S., Grinstead, L.N., & Torres, E. (2007). Grandparents raising grandchildren: Stressors, social support, and health outcomes. *Journal of Family Nursing*, 13(3), 333-352.

Lee, E., Clarkson-Hendxrix, M., & Lee, Y. (2016). Parenting stress of grandparents and other kin as informal kinship caregivers: A mixed-methods study. *Children and Youth Services Review*, 69, 29-38.

Lee, E., Choi, M.J., Lee, Y & Kramer, C. (2017). Placement stability of children in informal kinship care: Age, poverty, and involvement in the child welfare system. *Child Welfare*, 95(3), 87-110.

Lee, E., Kramer, C., Choi, M. J., Pestine-Stevens, A., & Huang, Y. (2020). The cumulative effect of prior maltreatment on emotional and physical health of children in informal kinship care. *Journal of Developmental & Behavioral Pediatrics*, *41*(4), 299-307.

Leek, M., & Smith, P. (2017). Cooperation and conflict in three-generation families. In *The psychology of grandparenthood* (pp. 177-194). Routledge.

Lehohla, P. (2020). Statistics South Africa Mid-Year Population Estimates. Retrieved from http://www.statssa.gov.za/publications/P0302/P03022020.pdf

Leinaweaver, J. B. (2008). *The circulation of children: Kinship, adoption, and morality in Andean Peru*. Duke University Press.

Lenders, S. R. (2015). The role of family functioning in the decision-making styles of adolescents in the Overberg area.

Leonetti, D.L., Nath, D.C., Hemam, N.S., & Neill, D.B. (2004). Do women really need marital partners for support of their reproductive success? The case of the matrilineal Khasi of NE India. *Research in Economic Anthropology*, 23, 151–174.

Leonetti, D.L., Nath, D.C., Hemam, N.S., & Neill, D.B. (2005). Kinship organization and grandmother's impact on reproductive success among the matrilineal Khasi and the patrilineal Bengali of N.E. India. In Voland, E., Chasiotis, A., & Schiefenhoevel, W. (Eds.), *Grandmotherhood: The evolutionary significance of the second half of female life*. Piscataway: Rutgers University Press.

Leos-Urbel, J., Bess, R., & Geen, R. (2000). State policies for assessing and supporting kinship foster parents. Washington DC: The Urban Institute. Retrieved from http://www.urban.org/url.cfm?ID=409609.

Leslie, L.K., Landsverk, J., Horton, M.B., Ganger, W., & Newton, A.R. (2000). The Heterogeneity of Children and their Experiences in Kinship Care. *Child Welfare*, 79(3), 315-334.

Leslie, L. K., Gordon, J. N., Lambros, K., Premji, K., Peoples, J., & Gist, K. (2005). Addressing the developmental and mental health needs of young children in foster care. *Journal of developmental and behavioral pediatrics: JDBP*, *26*(2), 140.

Levin, J. (2009). How faith heals: a theoretical model. *Explore*, 5, 77-96.

Lin, C.H. (2014). Evaluating services for kinship care families: A systematic review. *Children and Youth Services Review*, 36, 32-41.

Livingston, G., & Parker, K. (2010). Since the start of the great recession, more children raised by grandparents.

Liwin, L. K., & Houle, B. (2019). The effects of household and community context on mortality among children under five in Sierra Leone. *Demographic Research*, *40*, 279-306.

Lodenyo, M.M., Otsyula, B.K., Downing, R., Yakubu, K., Miima, M., & Ifeyinwa, O. (2016). Factors affecting time of access of in-patient care at Webuye District Hospital, Kenya. *African Journal of Primary Health care and Family medicine*, 8(1), 1-9.

Lohr, W. D., & Jones, V. F. (2016). Mental health issues in foster care. *Pediatric annals*, *45*(10), e342-e348.

Mace, R., & Sear, R. (2005). Are humans cooperative breeders? In Voland, E., Chasiotis, A., & Schiefenhovel, W. (Eds*). Grandmotherhood: the evolutionary significance of the second half of the female life*. Piscataway: Rutgers University Press.

Mace, R. (2013). Cooperation and Conflict between Women in the Family." *Evolutionary Anthropology: Issues, News, and Reviews* 22 (5): 251–58.

Mackay, R. (2005). The impact of family structure and family change on child outcomes: A personal reading of the research literature. *Social Policy Journal of New Zealand*, *24*(4), 111-133.

Madhavan, S. (2004). Fosterage patterns in the age of AIDS: continuity and change. *Social science & medicine*, *58*(7), 1443-1454.

Madhavan, S., & Townsend, N. (2007). The social context of children's nutritional status in rural South Africa 1. *Scandinavian Journal of Public Health*, *35*(69_suppl), 107-117.

Madhavan, S., Mee, P., & Collinson, M. (2014). Kinship in Practice: Spatial Distribution of Children's Kin Networks. *Journal of Southern African Studies*, 40(2), 401-418.

Magnuson, K., & Schindler, H. (2019). Supporting children's early development by building caregivers' capacities and skills: A theoretical approach informed by new neuroscience research. *Journal of Family Theory & Review*, *11*(1), 59-78.

Makiwane, M., Nduna, M., & Khalema, N. E. (2016). *Children in South African families: Lives and times*: Cambridge Scholars Publishing.

Maluleke, T., & Chola, L. (2015). Millennium Development Goal 4: Reduce child mortality 2015.

Manderson, L., & Block, E. (2016). Relatedness and care in Southern Africa and beyond.

Marks, G.N. (2006). Family size, family type and student achievement: Cross-national differences and the role of socioeconomic and school factors. *Journal of Comparative Family Studies*, 37, 1-24.

Marlowe, F. (2001). Male contribution to diet and female reproductive success among foragers. *Current Anthropology*, 42 (5), 755–760.

Marmot, M. (2005). Social determinants of health inequalities. *The lancet*, *365*(9464), 1099-1104.

Martin, F. S., & Zulaika, G. (2016). Who cares for children? A descriptive study of care-related data available through global household surveys and how these could be better mined to inform policies and services to strengthen family care. *Global social welfare*, *3*(2), 51-74.

Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American psychologist*, *56*(3), 227.

Mathambo, V., Gibbs, A., Richter, L., & Sherr, L. (2008). Qualitative accounts of family and household changes in response to the effects of HIV and AIDS: A review with pointers to action. *Johannesburg: Joint Learning Initiative on Children and HIV/AIDS*, *1*(1), 19-29.

Mathambo, V., & Gibbs, A. (2009). Extended family childcare arrangements in a context of AIDS: collapse or adaptation? *AIDS care*, *21*(sup1), 22-27.

McCartan, C., Bunting, L.,Bywaters, P., Davidson, G., Elliott, M., & Hooper, J. (2018). A four-nation comparison of kinship care in the UK: the relationship between formal kinship care and deprivation. *Social Policy and Society*, 17(4), 619-635.

McFadden, E. J. (1998). Kinship care in the United States. *Adoption & Fostering*, *22*(3), 7-15.

McGarry, K., & Schoeni, R. F. (1995). *Transfer behavior within the family: Results from the Asset and Health Dynamics Survey* (No. w5099). National Bureau of Economic Research.

McKenzie, C., & Silverberg, J. I. (2018). Association of family structure with atopic dermatitis in US children. *Journal of the American Academy of Dermatology*, *79*(4), 638-644.

McLaren, S., Belling, R., Paul, M., Ford, T., Kramer, T., Weaver, T., & Singh, S.P. (2013). "Talking a different language": an exploration of the influence of organizational cultures and working practices on transition from child to adult mental health services. *BMC Health Services Research,* 13(1), 254.

Md-Yunus, S. (2017). Development of Well-Being in Children Raised by Grandparents. *Child Research Net*.

Meehan, C. L., Helfrecht, C., & Quinlan, R. J. (2014). Cooperative breeding and Aka children's nutritional status: Is flexibility key? *American journal of physical anthropology*, *153*(4), 513-525.

Meehan, C.L., & Crittenden, A.N. (2016). *Childhood: Origins, evolution and implications*. Albuquerque: University of New Mexico Press.

Meintjies, H., & Hall, K. (2011). Demography of South Africa's Children. In L. Jamieson, R. Bray, L. Lake, S. Pendlebury, & C. Smith (Eds.), South African Child Gauge 2010/2011 (pp.79-83). Cape Town: Children's Institute, University of Cape Town.

Mekonen, Y., & Tiruneh, M. (2014). Implementation of the convention on the rights of the child and its effect on child well-being. *Handbook of child well-being. New York: Springer*.

Messing, J.T. (2006). From the child's perspective: a qualitative analysis of kinship care placements. *Children & Youth Services Review*, 28(12), 1415-1434.

Miller, S., & Belizán, J. M. (2015). The true cost of maternal death: individual tragedy impacts family, community and nations. *Reproductive health*, *12*(1), 56.

Mitchell, C., McLanahan, S., Notterman, D., Hobcraft, J., Brooks-Gunn, J., & Garfinkel, I. (2015). Family structure instability, genetic sensitivity, and child well-being. *American Journal of Sociology*, *120*(4), 1195-1225.

Mkhwanazi, N., Makusha, T., Blackie, D., Manderson, L., Hall, K., & Huijbregts, M. (2018). Negotiating the care of children and support for caregivers. *Children, Families and the State*, 70.

Mohale, N.F. (2013). *The burden of grandparenting: caring for AIDS-orphaned grandchildren in Lephalale, South Africa* (Doctoral dissertation, University of Limpopo).

Mokone, J. (2014). Challenges experienced by Grandparents raising grandchildren: An exploratory study. *Social Work/Maatskaplike Werk, 42*(2).

Monasch, R., & Boerma, J.T. (2004). Orphanhood and childcare patterns in subSaharan Africa: An analysis of national surveys from 40 countries. *AIDS*, 18(S2), 55–65.

Moore, T.G., McDonald, M., Carlon, L., & O' Rourke, K. (2015). Early childhood development and the social determinants of health inequities. *Health Promotion International*, 30(suppl_2), ii102-ii115.

Moreira, H., Frontini, R., Bullinger, M., & Canavarro, M. C. (2014). Family cohesion and health-related quality of life of children with type 1 diabetes: The mediating role of parental adjustment. *Journal of Child and Family Studies*, *23*(2), 347-359.

Moroney, R. (2016). *Shared responsibility: Families and social policy*. Transaction Publishers.

Mostafa, T., Gambaro, L., & Joshi, H. (2018). The impact of complex family structure on child well-being: Evidence from siblings. *Journal of marriage and family*, *80*(4), 902-918.

Motsima, T., Zuma, K., & Rapoo, E. (2020). Determinants of Under-five Mortality in South Africa: Results from a Cross-Sectional Demographic and Health Survey. *European Journal of Medical and Health Sciences*, 2(3), 1-7.

MsCosker, H., Barnard, A., & Gerber, R. (2001). Undertaking sensitive research: Issues and strategies for meeting the safety needs of all participants. In *Forum Qualitative Sozialforsschung/Forum: Qualitative Social Research*, 2(1).

Mtshali, M. N. G. (2015). The relationship between grandparents and their grandchildren in the black families in South Africa. *Journal of Comparative Family Studies*, *46*(1), 75-83.

Mulder, M. B. (2007). Hamilton's rule and kin competition: the Kipsigis case. *Evolution and human behavior*, *28*(5), 299-312.

Murovhi, A., Matshidze, P., Netshandama, V., & Klu, E. (2018). Traditional child rearing practices in Vhavenda families South Africa. *Journal of Gender, Information and Development in Africa (JGIDA)*, *7*(1), 21-37.

Musoke, D., Boynton, P., Butler, C., & Musoke, M.B. (2014). Health seeking behaviour and challenges in utilising health facilities in Wakiso district, Uganda. *African health sciences*, 14(4), 1046-1055.

Nandy, S., Selwyn, J., Farmer, E., & Vaisey, P. (2011). S*potlight on kinship care: Using census microdata to examine the extent and nature of kinship care in the UK at the turn of the twentieth century.* Bristol: University of Bristol.

Ndwandwe, D., Nnaji, C. A., & Wiysonge, C. S. (2020). The Magnitude and Determinants of Missed Opportunities for Childhood Vaccination in South Africa. *Vaccines*, *8*(4), 705.

Nasejje, J. B., Mwambi, H. G., & Achia, T. N. (2015). Understanding the determinants of under-five child mortality in Uganda including the estimation of unobserved household and community effects using both frequentist and Bayesian survival analysis approaches. *BMC public health*, *15*(1), 1003.

Naz, L., Kumar Patel, K., & Uzoma, I.E. (2020). Crucial predictring factors of under-five mortality in Sierra Leone. Clinical Epoidemiology and Global Health.

Neely-Barnes, S. L., Carolyn Graff, J., & Washington, G. (2010). The health-related quality of life of custodial grandparents. *Health & Social Work*, *35*(2), 87-97.

Negusssi, Y., Geller, A., DeVoe, J.E., & National Academies of Sciences, Engineering, and Medicine. (2019). Fostering Caregiver Well-Being Toward Healthy Child Development. In *Vibrant and Healthy Kids: Aligning Science, Practice, and Policy to Advance Health Equity*. National Academies Press (US).

Neimetz, C. (2011). Navigating family roles within an institutional framework: An exploratory study in one private Chinese orphanage. *Journal of Child and Family Studies*, 20(5), 585–595.

Nenko, I., Chapman, S. N., Lahdenperä, M., Pettay, J. E., & Lummaa, V. (2020). Will granny save me? Birth status, survival, and the role of grandmothers in historical Finland. *Evolution and Human Behavior*.

Ngwabi, N. T. (2015). *Barriers in implementing foster care services within a developmental approach in Nkangala District, Mpumalanga.* University of Pretoria.

Nielsen, F. (1994). Sociobiology and Sociology, *Annual Review of Sociology*, 20(1), 267-303.

Nkonki, L. L., Chopra, M., Doherty, T. M., Jackson, D., & Robberstad, B. (2011). Explaining household socio-economic related child health inequalities using multiple methods in three diverse settings in South Africa. *International journal for equity in health*, *10*(1), 13.

Noël-Miller, C. M. (2016). Grandparents and grandchildren in the Gambia. In *African Households: Censuses and Surveys* (pp. 169-198). Routledge.

Notermans, C. (2004). Sharing home, food, and bed: Paths of grandmotherhood in East Cameroon. *Africa*, 6-27.

Ntoimo, L. F., & Odimegwu, C. O. (2014). Health effects of single motherhood on children in sub-Saharan Africa: a cross-sectional study. *BMC public health*, *14*(1), 1145.

Ntshebe, O. (2017). *Three papers on households and child health in Botswana* (Doctoral dissertation, University of Southampton).

Ntshebe, O., Channon, A. A., & Hosegood, V. (2019). Household composition and child health in Botswana. *BMC Public Health*, *19*(1), 1621.

Nyesigomwe, L. (2005). Strengthening the Capacity of Grandparents in Providing Care to Young Children Affected by HIV/AIDS. *Journal of Intergenerational Relationships*, 4(1), 55–63.

Oakley, M., Miscampbell, G., & Gregorian, R. (2018). Looked-after Children: the silent crisis. *London: The Social Market Foundation*.

O'Brien, V. (2012). The benefits and challenges of kinship care. *Child Care in Practice*, *18*(2), 127-146.

Okon, E. (2012). Towards defining the'right to a family'for the African child. *African Human Rights Law Journal*, *12*(2), 373-393.

Olenja, H. (2003). Editorial Health seeking behaviour in context. *East African Medical Journal*, 80(2), 61-62.

Orme, J.G., & Buehler, C. (2001). Foster family characteristics and behavioral and emotional problems of foster children: *A narrative review. Family Relations*, 50(1), 3-15.

Orth, U. (2018). The family environment in early childhood has a long-term effect on self-esteem: A longitudinal study from birth to age 27 years. *Journal of Personality and Social Psychology*, *114*(4), 637.

Palermo, T. M., & Chambers, C. T. (2005). Parent and family factors in pediatric chronic pain and disability: an integrative approach. *Pain*, *119*(1-3), 1-4.

Parker, E.M., & Short, S.E. (2009). Grandmother co-residence and school enrollment in sub-Saharan Africa. *Journal of Family Issues,* 30, 803–836.

Pashos, A. (2000). Does paternal uncertainty explain discriminative grandparental solicitude? A cross-cultural study in Greece and Germany. *Evolution and Human Behavior,* 21, 97-109.

Pashos, A., & McBurney, D.H. (2008). Kin relationships and the caregiving biases of grandparents, aunts, and uncles. *Human Nature*, 19(3), 311-330.

Pashos, A., Schwarz, S., & Bjorklund, D. F. (2016). Kin investment by step-grandparents—more than expected. *Evolutionary Psychology*, *14*(1), 1474704916631213.

Patel, L., Knijn, G.C.M., Gorman-Smith, D., Hochfeld, T., Isserow, M., Garthe, R., & Kgaphola, I.K. (2017). *Family contexts, Child Support Grants and child well-being in South Africa.*

Patel, L., Hochfeld, T., & Chiba, J. (2019). Perspectives of South African caregivers in receipt of Child Support Grants: Implications for family strengthening interventions. *International Journal of Social Welfare*, *28*(3), 307-317.

Patel, L., Hochfeld, T., Ross, E., Chiba, J., & Luck, K. (2019). Connecting cash with care for better child well-being. *Retrieved from University of Johannesburg, The Centre for Social Development in Africa website: https://www. uj. ac. za/faculties/humanities/csda/Documents/CSDA_Sihleng% 27imizi_ REPORT_ConnectCashwithCare_Feb2019_ONLINE. pdf*.

Patel, L., & Ross, E. (2020). Connecting Cash Transfers with Care for Better Child and Family Well-Being: Evidence from a Qualitative Evaluation in South Africa. *Child and Adolescent Social Work Journal*, 1-13.

Patton, N. (2003). *The effects of parental drug use-Children in kinship care: A review of the literature*: Mirabel Foundation Incorporated.

Peprah, P., Gyasi, R.M., Adjei, P.O.W., Agyemang-Duah, W., Abalo, E.M., & Amon Kotei, J.N. (2018). Religion and Health: exploration of attitudes and health perceptions of faith healing users in urban Ghana. *BMC Public Health,* 18(1394).

Perry, G., & Daly, M. (2017). A model explaining the matrilateral bias in alloparental investment. *Proceedings of the National Academy of Sciences*, *114*(35), 9290-9295.

Petrowski, N., Cappa, C., & Gross, P. (2017). Estimating the number of children in formal alternative care: Challenges and results. *Child Abuse and Neglect*, 70, 388–398.

Pezzoli, P., Antfolk, J., Hatoum, A.S., & Santtila, P. (2019). Genetic vulnerability to experiencing child maltreatment. *Frontiers in genetics*, 10.

Pillay, A. (2010). *The influence of household and family structure on children in the Chatsworth area with special reference to primary school learners*. Citeseer.

Pitrone, A. (2020). *Kinship Voices: Listening to Grandparent Caregivers Raising School-Age Children* (Doctoral dissertation, University of Pittsburgh).

Poggenpoel, M., Jacobs, F.E., Myburgh, C.P., & Temane, A.M. (2017). Young families become mindful of their possibilities through the appreciation of their family life. *Health sa gesondheid*, 22, 1-8.

Pollet, T.V., Nettle, D., & Nelissen, M. (2006). Contact frequencies between grandparents and grandchildren in a modern society: Estimates of the impact of paternity uncertainty. *Journal of Cultural and Evolutionary Psychology*, 4, 203-214.

Polvere, L., Barnes, C., & Lee, E. (2018). Housing needs of grandparent caregivers: grandparent, youth, and professional perspectives. *Journal of Gerontological Social Work*, *61*(5), 549-566.

Ponnert, L. (2017). Emotional kinship care and neutral non-kinship care- the struggle between discourses. *Child & Family Social Work*, 22(2), 1084-1093.

Prazak, M. (2012). Studying Life Strategies of AIDS Orphans in Rural Kenya. *Africa Today*, 58(4), 44– 64.

Prioreschi, A. (2020). Child Gauge 2019: Child and Adolescent Health-Leave no one behind.

Quiroga, M. G., & Hamilton-Giachritsis, C. (2016, August). Attachment styles in children living in alternative care: A systematic review of the literature. In *Child & youth care forum* (Vol. 45, No. 4, pp. 625-653). Springer US.

Qvortrup, J. (2014). Sociology: Societal structure, development of childhood, and the well-being of children. *Handbook of Child Well-Being: Theories, Methods and Policies in Global Perspective*. New York: Springer, 663-707.

Rabe, M. (2017C). 'Family policy for all South African families'. *International Social Work*, 60(5), 1189-1200.

Radel, L., & Bramlett, M. (2014). Children in Nonparental Care: Findings from the 2011-2012 National Survey of Children's Health. *Children*, *3*, 01.

Rademeyer, S. (2019). Levels and determinants of under-five mortality in South Africa. *Southern African Journal of Demography*, *19*(1).

Raghavan, R., Inoue, M., Ettner, S.L., Hamilton, B.H., & Landsverk, J. (2010). A preliminary analysis of the receipt of mental health services consistent with national standards among children in the child welfare system. *American Journal of Public Health*, 100(4), 742-749.

Raj, S. P., & Raval, V. V. (2013). PARENTING AND FAMILY SOCIALIZATION WITHIN A CULTURAL CONTEXT. *Journal of Communications Research*, *5*(2).

Ranson, K. E., & Urichuk, L. J. (2008). The effect of parent–child attachment relationships on child biopsychosocial outcomes: a review. *Early Child Development and Care*, *178*(2), 129-152.

Rapoport, E., Muthiah, N., Keim, S. A., & Adesman, A. (2020). Family Well-being in Grandparent-Versus Parent-Headed Households. *Pediatrics*, *146*(3).

Raver, C.C., & Leadbeater, B.J. (1999). Mothering under pressure: Environmental, child and dyadic correlates of maternal self-efficacy among low income women. *Journal of Family Psychology*, 13, 523-534.

Reinbold, G.W. (2019). Effects of the Convention on the Rights of the Child on child mortality and vaccination rates: a synthetic control analysis. *BMC international health and human rights*, 19(1), 24.

Reinhard, S. C., Given, B., Petlick, N. H., & Bemis, A. (2008). Chapter 14: Supporting family caregivers in providing. *Patient safety and quality: An evidence-based handbook for nurses. Rockville, MD: Agency for Healthcare Research and Quality (US). Retrieved from http://www. ncbi. nlm. nih. gov/books/NBK2665*.

Remes, H., Martikainen, P., & Valkonen, T. (2010). The effects of family type on child mortality. *The European Journal of Public Health, 21*(6), 688-693.

Ribar, D. (2004). What do social scientists know about the benefits of marriage? A review of quantitative methodologies.

Ringeisin, H., Casanueva, C., Urato, M., & Cross, T. (2008). Special health care needs among children in the welfare system. *Pediatrics*. 122(1), e232-e241.

Rivers, W.H.R. (1924). *Medicine, magic and religion*. London: Kegan Paul, Trench, Trubner.

Robson, S.L., van Schaik, C., & Hawkes, K. (2006). The derived features of human life history. In K. Hawkes & R. R. Paine (Eds.), *The evolution of human life history* (pp. 17–44). Santa Fe: School of American Research Press.

Roby, J. (2011). Children in informal alternative care. *New York: UNICEF, Child Protection Section*.

Ross, E., Patel, L., Sitshange, M., & Matidza, K. (2020). Connecting cash with care for better child well-being.

Rubin, D.M., Downes, K.J., O' Reilly, A.L.R., Mekonnen, R., Luan, X., & Localio, R. (2008). Impact of Kinship Care on Behavioural Well-being for Children in Out-Of-Home-Care. *Archives of Pediatrics & Adolescent Medicine*, 162(6), 550-556.

Rubin, D., Springer, S. H., Zlotnik, S., Kang-Yi, C. D., & CARE, C. O. F. (2017). Needs of kinship care families and pediatric practice. *Pediatrics*, *139*(4).

Ruggles, S. (1986). "Availability of Kin and the Demography of Historical Family Structure." Historical Methods: A Journal of Quantitative and Interdisciplinary History 19 (3), 93–102.

Rushovich, B.R., Murray, K.W., Woodruff, K., & Freeman, P.C. (2017). A Kinship Navigator Program: A Comprehensive Approach to Support Private and Voluntary Kinship Caregivers. *Child Welfare*, 95(3).

Russell, M. (2003). Understanding black households: The problem. *Social Dynamics*, 29(2), 5-47.

Rutgers, J. (2020). The effect of the acquisition of parental responsibilities and rights on the realisation of the right to parental care of children born to unmarried parents.

Ryan, S.D., Hinterlong, J., Hegar, R.L., & Johnson, L.B. (2010). Kin adopting kin: In the best interest of the children? *Children and Youth Services Review*, 32(12), 1631-1639.

Sabatelli, R.M., Shehan, C.L., Boss, P., Doherty, W., LaRossa, R., Schumm, W., & Steinmetz, S. (1993). *Sourcebook of family theories and methods: A contextual approach*: New York, NY: Plenum Press.

Sadruddin, A. F., Ponguta, L. A., Zonderman, A. L., Wiley, K. S., Grimshaw, A., & Panter-Brick, C. (2019). How do grandparents influence child health and development? A systematic review. *Social Science & Medicine*, *239*, 112476.

Sánchez, J., Hidalgo, V., López-Verdugo, I., & Jiménez, L. (2020). Beliefs about Child-Rearing and Development in Spain and Peru. A Comparative Analysis for Adapting Parenting Support Programs. *Sustainability*, *12*(18), 7268.

Sandstrom, H., & Huerta, S. (2013). *The Negtive effects of instability on child development: a research Sysnthesis*. Washington, DC: Urban Institute.

Sauerborn, R., Adams, A., & Hien, M. (1996). Household strategies to cope with the economic costs of illness. *Social science & medicine*, *43*(3), 291-301.

Scannapieco, M., Hegar, R.L., & McAlpine, C. (1997). Kinship care and foster care: A comparison of characteristics and outcomes. *Families in Society*, 78(5), 480-488.

Scannapieco, M., & Hegar, R.L. (2002). Kinship Care Providers: Designing an Array of Supportive Services. *Child and Adolescent Social Work Journal*, 19(4), 315-327.

Scarcella, C. A., Geen, R., & Ehrle, J. (2003). *Identifying and addressing the needs of children in grandparent care*: Urban Institute Washington, DC.

Schultz, P., & Shirindi, L. (2019). Reflections on the experiences and needs of grandparents caring for their grandchildren with a substance use disorder. *Social Work*, 55(4), 359-378.

Scott, S., Kendall, L., Gomez, P., Howie, S. R., Zaman, S. M., Ceesay, S., . . . Jasseh, M. (2017). Effect of maternal death on child survival in rural West Africa: 25 years of prospective surveillance data in The Gambia. *PloS one, 12*(2), e0172286.

Schrijner, S., & Smits, J. (2019). Paternity Uncertainty or Male Dominance? Paternal versus Maternal Grandmothers' Contribution to Children's Schooling in Sub-Saharan Africa. *Journal of Child and Family Studies*, 1-10.

Sear, R., Mace, R., & McGregor, I. A. (2000). Maternal grandmothers improve nutritional status and survival of children in rural Gambia. *Proceedings of the Royal Society of London B: Biological Sciences*, *267*(1453), 1641-1647.

Sear, R., Steele, F., McGregor, I. A., & Mace, R. (2002). The effects of kin on child mortality in rural Gambia. *Demography, 39*(1), 43-63.

Sear, R. (2006). *Kin and child survival in rural Malawi: Are matrilineal kin beneficial in a matrilineal society.* Paper presented at the annual meeting of the American Anthropological Association, San Jose, California.

Sear, R. (2007). *Kin and child survival in rural Malawi: Are matrilineal kin beneficial in a matrilineal society?* Manuscript under review.

Sear, R. (2008). Kin and child survival in rural Malawi. *Human Nature*, 19, 277–293.

Sear, R., & Mace, R. (2008). Who keeps children alive? A review of the effects of kin on child survival. *Evolution and human behavior, 29*(1), 1-18.

Sear, R., Allal, N., & Mace, R. (2009). Family matters: kin, demography and child health in a rural Gambian population. *Biological and social perspectives on alloparenting in human societies*, 3,50.

Sear, R. (2011). Parenting and families. In: *Evolutionary Psychology: A Critical Introduction*. Wiley-Blackwell, pp. 215-250.

Sear, R., & Coall, D. (2011). How much does family matter? Cooperative breeding and the demographic transition. *Population and Development Review*, 37, 81-112.

Sear, R. (2016). Beyond the nuclear family: an evolutionary perspective on parenting. *Current Opinion in Psychology*, 7, 98-103.

Sear, R. (2017). Family and fertility: does kin help influence women's fertility, and how does this vary worldwide? *Population Horizons,* 14(1), 1-17.

Sear, R. (2018). Family and fertility: does kin help influence women's fertility, and how does this vary worldwide? *Population Horizons,* 14(1), 18-34.

Sebopela, M. (2018). Department of Social Development Presentation to the National Child Care and Protection Forum, 18 April 2018. Slide 2.

Sechin Matouri, M., Ghadamkheir, K., Abedi, H. A., & Dashtinezhad, E. (2019). Surveillance of Family Care Function in Feeding of the Children under the Age of Six in Abadan 2015. *Journal of Nutrition and Food Security*, *4*(1), 26-33.

Selwyn, J., & Nandy, S. (2014). Kinship care in the UK: Using census data to estimate the extent of formal and informal care by relatives. *Child and Family Social Work*, 19(1), 44-54.

Seltzer, R. R., Johnson, S. B., & Minkovitz, C. S. (2017). Medical complexity and placement outcomes for children in foster care. *Children and Youth Services Review, 83*, 285-293.

Sen, R., & Broadhurst, K. (2011). Contact between children in out-of-home placements and their family and friends networks: A research review. *Child & Family Social Work, 16*(3), 298-309.

September, R. (2014). A new Children's Act for South Africa: making it work for children and families. *Social Work/Maatskaplike Werk, 44*(2).

Shaikh, B.T., & Hatcher, J. (2005). Health-seeking behaviour and health service utilisation in Pakistan: challenging the policy makers. *Journal of Public Health*, 27(1), 49-54.

Sharley, V., Leonard, E., Ananias, J., & Ottaway, H. (2020). Child fosterage in Namibia: The impact of informal care arrangements upon children's health and welfare. *Children and Youth Services Review*, *118*, 105368.

Sharma, N., Chakrabarti, S., & Grover, S. (2016). Gender differences in caregiving among family-caregivers of people with mental illnesses. *World journal of psychiatry*, *6*(1), 7.

Shelton, D.L. (2018, October 22). Kin Prop up Illinois' Foster Care System, With Limited Support. *The Imprint: Youth and Family News.*

Shenk, M.K., & Mattison, S.M. (2011). "The Rebirth of Kinship." *Human Nature* 22 (1–2).

Sheppard, P., & Sear, R. (2016). Do grandparents compete with or support their grandchildren? In Guatemala, paternal grandmothers may compete, and maternal grandmothers may cooperate. *Royal Society Open Science*, 3(4), 1-10.

Shoko, M., & Ibisomi, L. (2017). Orphanhood prevalence, living arrangements and orphanhood reporting in Lesotho, Malawi and Zimbabwe. *Child Indicators Research*, *10*(4), 929-943.

Simmons, J.G., Schwartz, O.S., & Whittle, S.L. (2017). Study protocol: families and childhood transitions study (FACTS) – a longitudinal investigation of the role of the family environment in brain development and risk for mental health disorders in community based children. *BMC P*ediatrics, 17(153).

Skodval, M., & Daniel, M. (2012). Resilience through participation and coping enabling social environments: The case of how affected children in sub-Saharan Africa. *African Journal of AIDS Research*, 11(3), 153-164.

Skoglund, J., & Thornblad, R. (2019). Kinship care or upbringing by relatives? The need for 'new' understandings in research. *European Journal of Social Work*, 22(3), 435-445.

Smith, M.S. (1991). An evolutionary perspective on grandparent-grandchild relationships. In Smith, P.K. (Ed.), *The psychology of grandparenthood* (pp. 157–176). New York: Routledge.

Snopkowski, K., & Sear, R. (2015). Grandparental help in Indonesia is directed preferentially towards needier descendants: a potential confounder when exploring grandparental influences on child health. *Social Science and Medicine*, 128, 105-114.

Sooryamoorthy, R., & Makhoba, M. (2016). The Family in Modern South Africa: Insights from Recent Research. *Journal of Comparative Family Studies*, 47(3), 309-321.

South African Human Rights Commission, & UNICEF. (2014). *Poverty traps and social exclusion among children in South Africa*. Pretoria: SAHRC.

Southern Africa Labour and Development Research Unit. National Income Dynamics Study 2014 - 2015, W. d. V. C. T. S. A. L. a. D. R.

Spence, N. (2004). Kinship care in Australia. *Child Abuse Review: Journal of the British Association for the Study and Prevention of Child Abuse and Neglect*, *13*(4), 263-276.

Sprang, G., Choi, M., Eslinger, J.G., & Whitt-Woosley, A.L. (2015). The pathway to grandparenting stress: Trauma, relational conflict, and emotional well-being. *Aging & mental health*, 19(4), 315-324.

Stacks, A. M., & Partridge, T. (2011). Infants placed in foster care prior to their first birthday: Differences in kin and nonkin placements. *Infant mental health journal*, *32*(5), 489-508.

Statistics South Africa. (2013). South Africa's young children: their family and home environment. Pretoria: Statistics South Africa, Retrieved from http://www.statssa.gov.za/publications/Report-03-10-07/Report-03-10-072012.pdf .

Statistics South Africa. (2021). Mid-year population estimates. Pretoria: Statistics South Africa. Retrieved from http://www.statssa.gov.za/publications/P0302/P03022021.pdf

Steele, F. (2005). Event history analysis. ESRC National Centre for Research Methods Briefing Paper. *NCRM Methods Review Papers (NCRM/004). Bristol, UK: University of Bristol*.

Steele, J.S., & Buchi, K.F. (2008). Medical and mental health of children entering the Utah foster care system. *Pediatrics*, 122(3), e703-e709.

Stein, R.K., Hurburt, M.S., Heneghan, A.M., Zhang, J., Rolls-Reutz, J., Landsverk, J., & McCue Horwitz, S. (2014). Health status and type of out-of-home placement: Informal kinship care in an investigated sample. *Academic Pediatrics*, 14(6), 559-564.

Stene, K. L., Dow-Fleisner, S. J., Ermacora, D., Agathen, J., Falconnier, L., Stager, M., & Wells, S. J. (2020). Measuring the quality of care in kinship foster care placements. *Children and Youth Services Review*, 105136.

Stevenson, E. G., & Worthman, C. M. (2014). Child well-being: Anthropological perspectives. *Handbook of child well-being. Theories, methods, and policies in global perspective. Dordrecht: Springer*, 485-512.

Stover, J., Bollinger, L., Walker, N., & Monasch, R. (2007). Resource needs to support orphans and vulnerable children in sub-Saharan Africa. *Health policy and planning*, 22(1), 21-27.

Strassmann, B.I., & Garrard, W. (2011). Alternatives to the grandmother hypothesis: a meta-analysis of the association between grandparental and grandchild survival in patrilineal populations. *Human Nature*, 22, 201-222.

Strong, P. T. (2001). To forget their tongue, their name, and their whole relation: Captivity, extra-tribal adoption, and the Indian Child Welfare Act. *Relative values: Reconfiguring kinship studies*, 468-493.

Strozier, A.L., & Krisman, K. (2007). Capturing caregiver data: An examination of kinship care custodial arrangements. *Children and Youth Services Review*, 29(2), 226-246.

Sullivan, K.M., Murray, K.J., & Ake, III, G.S. (2016). Trauma-informed care for children in the child welfare system: An initial evaluation of a trauma-informed parenting workshop. *Child maltreatment*, 21(2), 147-155.

Sun, Y. (2003). The well-being of adolescents in households with no biological parents. *Journal of Marriage and Family, 65*(4), 894-909.

Sykes, J., Sinclair, I., Gibbs, I., & Wilson, K. (2002). Kinship and stranger foster carers: How do they compare. *Adoption and Fostering*, 26(2), 38-48.

Szilagyi, M. A., Rosen, D. S., Rubin, D., & Zlotnik, S. (2015). Health care issues for children and adolescents in foster care and kinship care. *Pediatrics, 136*(4), e1142-e1166.

Tait, C. A., Parnia, A., Zewge-Abubaker, N., Wong, W. H., Smith-Cannoy, H., & Siddiqi, A. (2020). Did the UN convention on the rights of the child reduce child mortality around the world? An interrupted time series analysis. *BMC public health*, *20*(1), 1-9.

Tang, F., Jang, H., & Carr Copeland, V. (2015). Challenges and resilience in African American grandparents raising grandchildren: A review of the literature with practice implications. *GrandFamilies: The Contemporary Journal of Research, Practice and Policy, 2*(2), 2.

Tanskanen, A.O., Rotkirch, A., & Danielsbacka, M. (2011). Do grandparents favor granddaughters? Biased grandparental investment in UK. *Evolution and Human Behavior*, 32, 407-415.

Tanskanen, A.O., & Danielsbacka, M. (2015). Beneficial effects of grandparental involvement vary by lineage in the UK. *Personality and Individual Differences*, 53(8), 985-988.

Tanskanen, A.O. (2017). Intergenerational relations and child development in England. *Anthropological Review*, 80(1), 127-139.

Tashakkori, A., & Teddlie, C. (2010). *Sage handbook of mixed methods in social & behavioral research*: Sage.

Taylor, M. F., Marquis, R., Coall, D. A., & Werner, J. (2018). The enjoyment rewards of fulfilling a custodial grandparenting role in the lives of grandchildren removed from their parents' care. *Child Care in Practice*, *24*(1), 92-110.

Taylor, E. P., Di Folco, S., Dupin, M., Mithen, H., Wen, L., Rose, L., & Nisbet, K. (2020). Socioeconomic deprivation and social capital in kinship carers using a helpline service. *Child & Family Social Work*.

Testa, M. F. (2013). Systems of kinship care: Enduring challenges and emerging opportunities. *Journal of Family Social Work*, *16*(5), 349-363.

Teti, D., & Gelfand, D. (1991). Behavioural competence among mothers of infants in the first year: The mediational role of maternal self-efficacy. *Child Development*, 62, 918-929.

Thomas, P. A., Liu, H., & Umberson, D. (2017). Family relationships and well-being. *Innovation in Aging*, *1*(3), igx025.

Timmer, S.G., Sedlar, G., & Urquiza, A.J. (2004). Challenging children in kin versus non-kin foster care: perceived costs and benefits to caregivers. *Child Maltreatment*, 9(3), 251-262.

Townsend, L., & Dawes, A. (2004). Willingness to Care for Children Orphaned by HIV/AIDS: A Study of Foster and Adoptive Parents. *African Journal of AIDS Research*, 3(1), 69–80.

Trail Ross, M., Kang, D., & Cron, S. (2017). KINSHIP CAREGIVER STRESS, BURDEN, HEALTH, SOCIAL SUPPORT, AND NEEDS. *Innovation in Aging*, 1(suppl_1), 463-463.

Tymicki, K. (2004). Kin influence on female reproductive behavior: The evidence from reconstitution of the Bejsce parish registers, 18th to 20th centuries, Poland. *American Journal of Human Biology: The Official Journal of the Human Biology Association*, *16*(5), 508-522.

Tymicki, K. (2009). Correlates of infant and childhood mortality: A theoretical overview and new evidence from the analysis of longitudinal data of the Bejsce (Poland) parish register reconstitution study of the 18th-20th centuries. *Demographic Research*, *20*, 559-594.

Unicef, & World Health Organization. (2012). Care for child development: participant manual. *Geneva: World Health Organization*.

UNICEF. The under-five mortality rate: The indispensable gauge of child health. 2016. www.unicef.org/sowc08/docs/sowc08_panels.pdf. Accessed Mar 2020.

Uys, T., & Kaziboni, A. (2020). The views of designated Social Workers on the South African foster care system.

Vandervort, F. E., Henry, J., & Sloane, M. A. (2012). Building resilience in foster children: The role of the child's advocate. *Child. Legal Rts. J.*, *32*, 1.

Van Bodegom, D., Eriksson, U. K., Houwing-Duistermaat, J. J., & Westendorp, R. G. (2012). Clustering of child mortality in a contemporary polygamous population in Africa. *Biodemography and social biology*, *58*(2), 162-172.

van Groenou, M. I. B., & De Boer, A. (2016). Providing informal care in a changing society. *European Journal of Ageing*, *13*(3), 271-279.

Van Rensburg, H.C.J., & Englebrecht, M.C. (2012). Transformation of the South African health system-post-1994. *Health and health care in South Africa*, 2, 121-188.

Van Vleet, K.E. (2009). "We had already come to love her": A doption at the margins of the Bolivian state. *The Journal of Latin American and Caribbean Anthropology*, 14(1), 20-43.

Vandivere, S., Yrausquin, A., Allen, T., Malm, K., & McKlindon, A. (2012). Children in nonparental care: A review of the literature and analysis of data gaps. *Children, 12*, 01.

Verguet, S., Jassat, W., Hedberg, C., Tollman, S., Jamison, D. T., & Hofman, K. J. (2012). Measles control in Sub-Saharan Africa: South Africa as a case study. *Vaccine, 30*(9), 1594-1600.

Voland, E., & Beise, J. (2005). The helping and the helpful grandmother: the role of maternal and paternal grandmothers in child mortality in the 17th and 18th century population of French Settlers in Quebec, Canada: Grandmotherhood: the evolutionary significance of the second half of the female life. New Brunswick, NJ: Rutgers University Press.

Voland, E., Chasiostis, A., & Schiefenho' vel, W. (2005). *Grandmotherhood: The evolutionary significance of the second half of female life*. New Brunswick, NJ: Rutgers University Press.

Von Backström, M. (2015). *Exploring family functioning from a family resilience perspective.* University of Pretoria.

Von Bertalanffy, L. (1975.). Perspectives On General Systems Theory, George Braziller, New York.

Voorhees, B., Read, D., & Gabora, L. (2018). Identity, kinship, and the evolution of cooperation. *arXiv preprint arXiv:1809.06530.*

Vuolanto, V. (2017). Grandmothers in Roman Egypt. *Greek, Roman and Byzantine Studies*, 57, 372-402.

Wakhweya, A., Dirks, R., & Yeboah, K. (2008). Children thrive in families: Family centered models of care and support for orphans and other vulnerable children affected by HIV and AIDS. *AIDS JLICA*.

Walford, M. *Early childhood development practices from the perspective of caregivers in Ga-Dikgale community* (Doctoral dissertation).

Walmsley, E. (2008). Raised by another mother: Informal fostering and kinship ambiguities in Northwest Ecuador. *The Journal of Latin American and Caribbean Anthropology*, *13*(1), 168-195.

Walsh, W.A. (2013). Informal kinship care most common out-of-home placement after an investigation of child treatment.

Wambui, W.M., Kimani, S., & Odhiambo, (2015). Determinants of Health Seeking Behaviour among Caregivers of Infants Admitted with Acute Childhood Illnesses at Kenyatta National Hospital, Nairobi, Kenya. *International Journal of Pediatrics*, 2018, 1-11.

Waynforth, D. (2012). Grandparental investment and reproductive decisions in the longitudinal 1970 British cohort study. *Proceedings of the Royal Society B: Biological Sciences*, 27991731), 1155-1160.

Waynforth, D. (2020). Kin-based alloparenting and infant hospital admissions in the UK Millennium cohort. *Evolution, Medicine, and Public Health*, 2020(1), 72-81.

Webair, H.H., & Bin-Gouth, A.S. (2013). Factors affecting health seeking behavior for common childhood illnesses in Yemen. *Patient preference and adherence*, 7, 1129-1138.

Weissman, J.F. (2016). Imoact of support groups on kinship care providers: a project based on an investigation at Community Coalition, Los Angeles, California.

West, S.A., Pen, I., & Griffin, A. (2008). Cooperation and competition between relatives. *Science*, 296, 72-75.

Whitley, D.M., Kelley, S.J., Williams, C., & Mabry, D. (2001). Grandmothers raising grandchildren: Are they at increased risk of health problems? *Health & Social Work*, 26(2), 105-114.

Whitley, D.M., Kelley, S.J., Williams, C., & Mabry, D. (2007). *Grandparents raising grandchildren: A call to action*. Region IV: Administration for Children and Families.

Whitley, D.M., Fuller-Thomson, E., & Brennenstuhl, S. (2015). Health Characteristics of Solo Grandparent Caregivers and Single Parents: A Comparative Profile Using the Behavior Risk Factr Surveillance Survey. *Current Gerontology and Geriatrics Research*, 2015, 630717.

Wilkinson, J., Bowyer, S., & Research in Practice (Organization). (2017). *The Impacts of Abuse and Neglect on Children: And Comparison of Different Placement Options: Evidence Review*. Department for Education.

Williams, G.C. (1957). Pleiotropy, natural selection and the evolution of senescence. *Evolution*, 11, 398–411.

Winokur, M., Crawford, G., Longobardi, R., & Valentine, D. (2008). Matched comparison of children in kinship care and foster care on child welfare outcomes. *Families in Society: The Journal of Contemporary Social Services, 89*(3), 338-346.

Winokur, M., Holtan, A., & Batchelder, K. E. (2014). Kinship care for the safety, permanency, and well-being of children removed from the home for maltreatment. *Cochrane Database of Systematic Reviews*, (1).

Winokur, M. A., Holtan, A., & Batchelder, K. E. (2018). Systematic review of kinship care effects on safety, permanency, and well-being outcomes. *Research on Social Work Practice, 28*(1), 19-32.

Witt, W. P., & DeLeire, T. (2009). A family perspective on population health: The case of child health and the family. *WMJ: official publication of the State Medical Society of Wisconsin, 108*(5), 240.

World Health Organization. (2018). Nurturing care for early childhood development: a framework for helping children survive and thrive to transform health and human potential.

Worku, Z. (2009). *Factors that affect under-five mortality among South African children: analysis of the South African Demographic and Health Survey Data Set.* Paper presented at the Proceedings of the World Congress on Engineering and Computer Science.

Worku, Z. (2011). A survival analysis of South African children under the age of five years. *Health SA Gesondheid, 16*(1).

World Health Organization. (2010). A conceptual framework for action on the social determinants of health. Retrieved from https://www.who.int/sdhconference/resources/ConceptualframeworkforactiononSDH_eng.pdf

Worrall, J. (2009). Grandparents and whanau/extended families raising kin children in Aotearoa/New Zealand. *Auckland, Grandparents Raising Grandchildren Trust New Zealand.*

Wu, Q., White, K. R., & Coleman, K. L. (2015). Effects of kinship care on behavioral problems by child age: A propensity score analysis. *Children and Youth Services Review, 57*, 1-8.

Wu, Q. (2016). Understanding kinship diversion and its relationship with child health and behavior problems.

Xu, Y., Wu, Q., Levkoff, S. E., & Jedwab, M. (2020). Material hardship and parenting stress among grandparent kinship providers during the COVID-19 pandemic: The mediating role of grandparents' mental health. *Child Abuse & Neglect, 110*, 104700.

Yakubu, Y. A., & Schutte, D. W. (2018). Caregiver attributes and socio-demographic determinants of caregiving burden in selected low-income communities in cape town, South Africa. *Journal of Compassionate Health Care*, *5*(1), 3.

Yancura, I.A. (2013). Service use and unmet service needs in grandparents raising grandchildren. *Journal of Gerontological Social Work*, 56(6), 473-486.

Yrausquin, A., & Allen, T. (2012). CHILDREN IN NON-PARENTAL CARE.

Zagheni, E. (2011). The Impact of the HIV/AIDS Epidemic on Kinship Resources for Orphans in Zimbabwe. *Population and Development Review*, 37(4), 761–783.

Zewdie, S. A. (2014). *Spatial analysis of child mortality in South Africa in relation to poverty and inequality: evidences from the 2011 census.* University of Cape Town.

Zimmerman, F.J. (2003). Cinderella goes to school: The effects of child fostering on school enrollment in South Africa. *The Journal of Human Resources*, 38(3), 557–590.

APPENDICES

APPENDIX A: Kaplan-Meier estimates of the level of under-five mortality by selected grandparent, aunt/uncle and other family individual and household characteristics and child characteristics, Wave 5, 2017

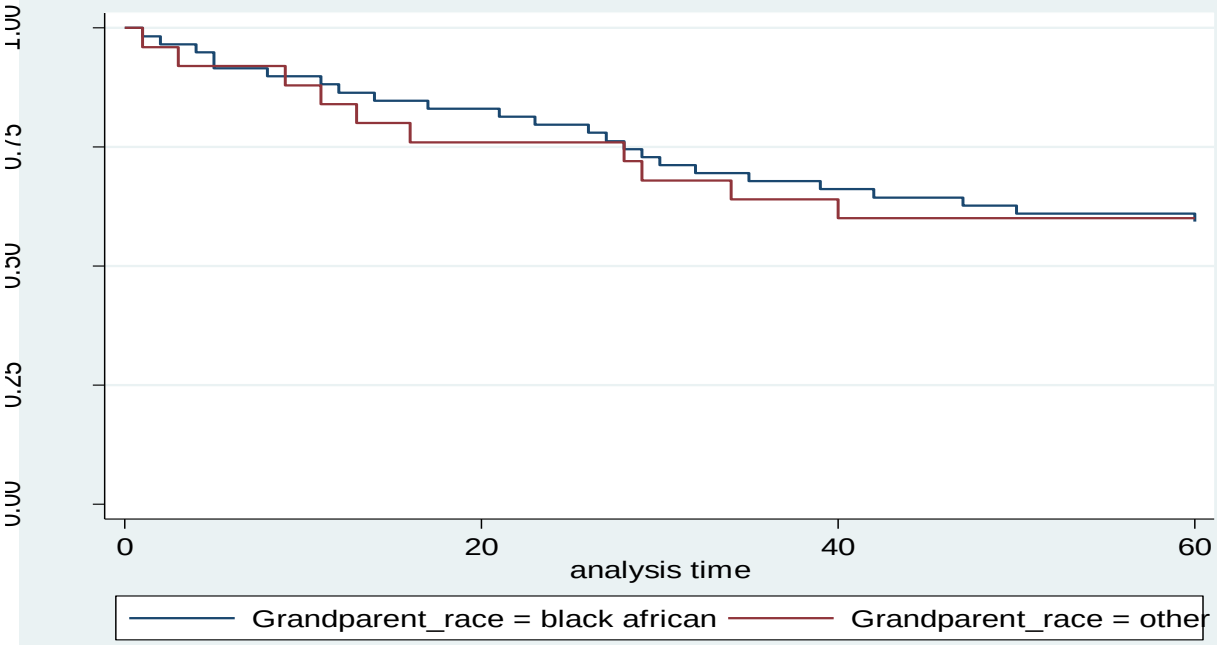


Figure A1.1: *Kaplan Meier survival estimate showing grandparent population group*

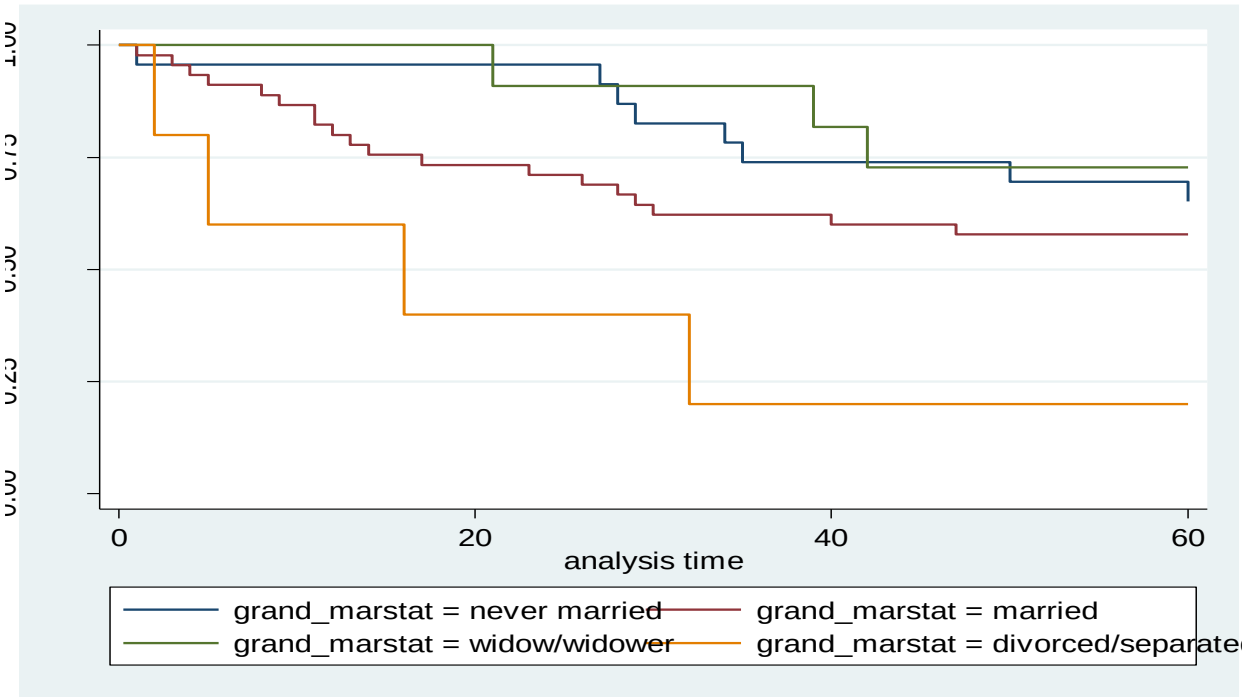


Figure A1.2: *Kaplan Meier survival estimate showing grandparent marital status*

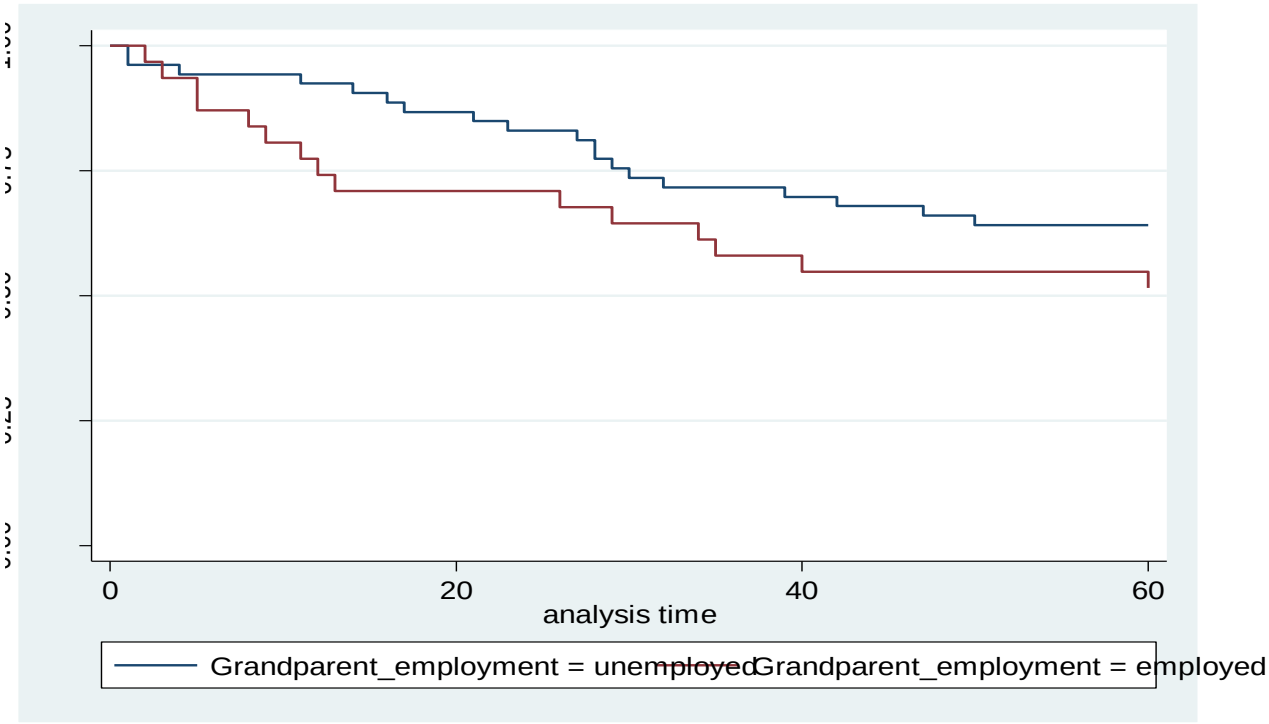


Figure A1.3: *Kaplan Meier survival estimate showing grandparent employment status*

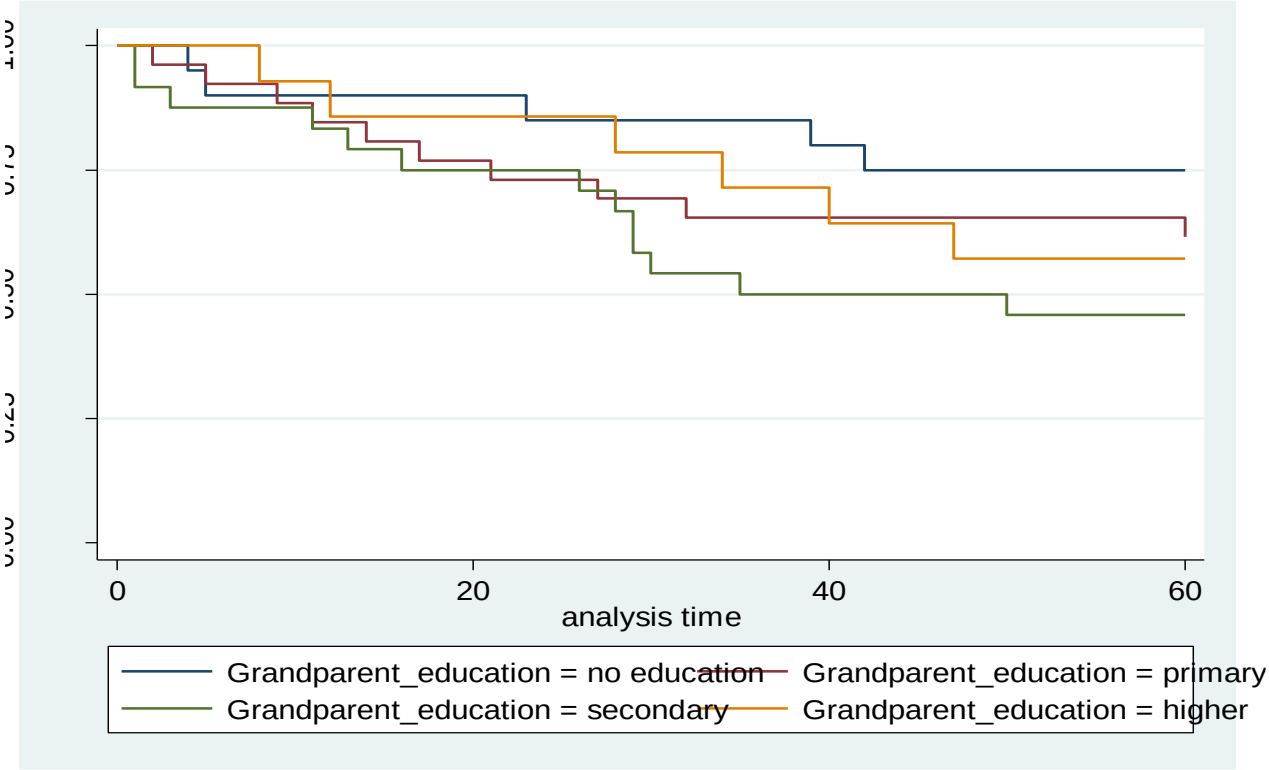


Figure A1.4: *Kaplan Meier survival estimate showing grandparent level of education*

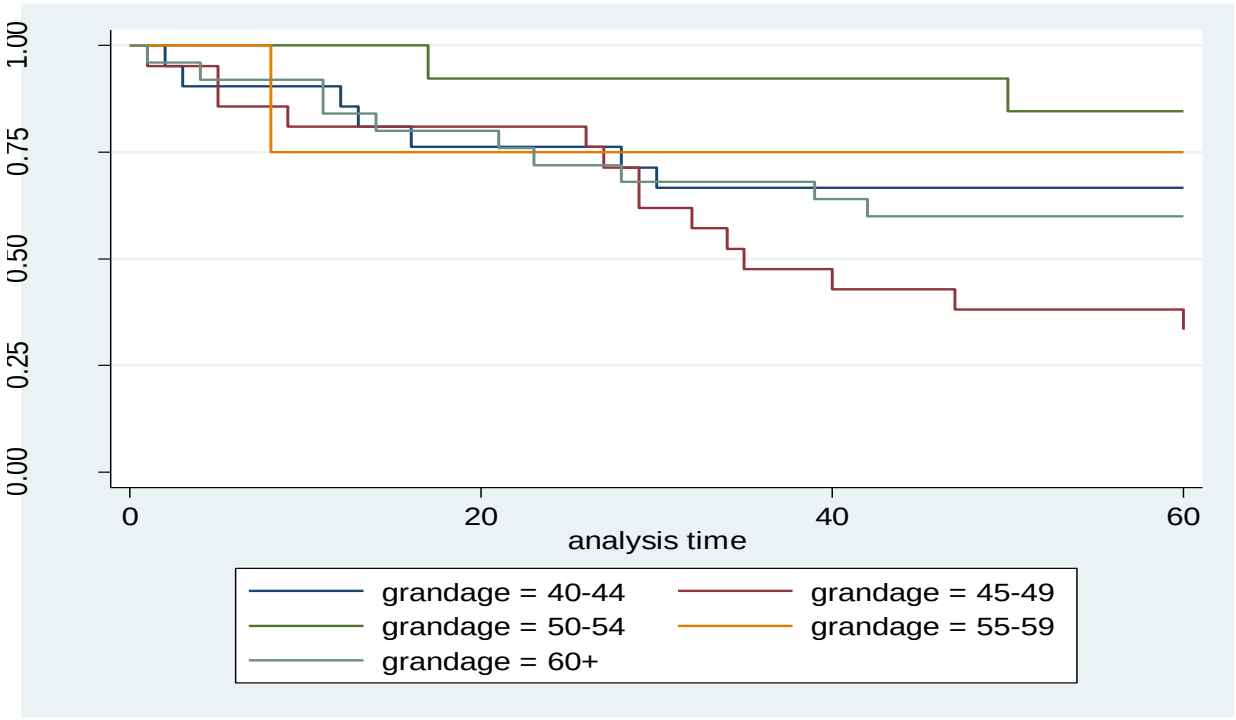


Figure A1.5: *Kaplan Meier survival estimate showing grandparent age*

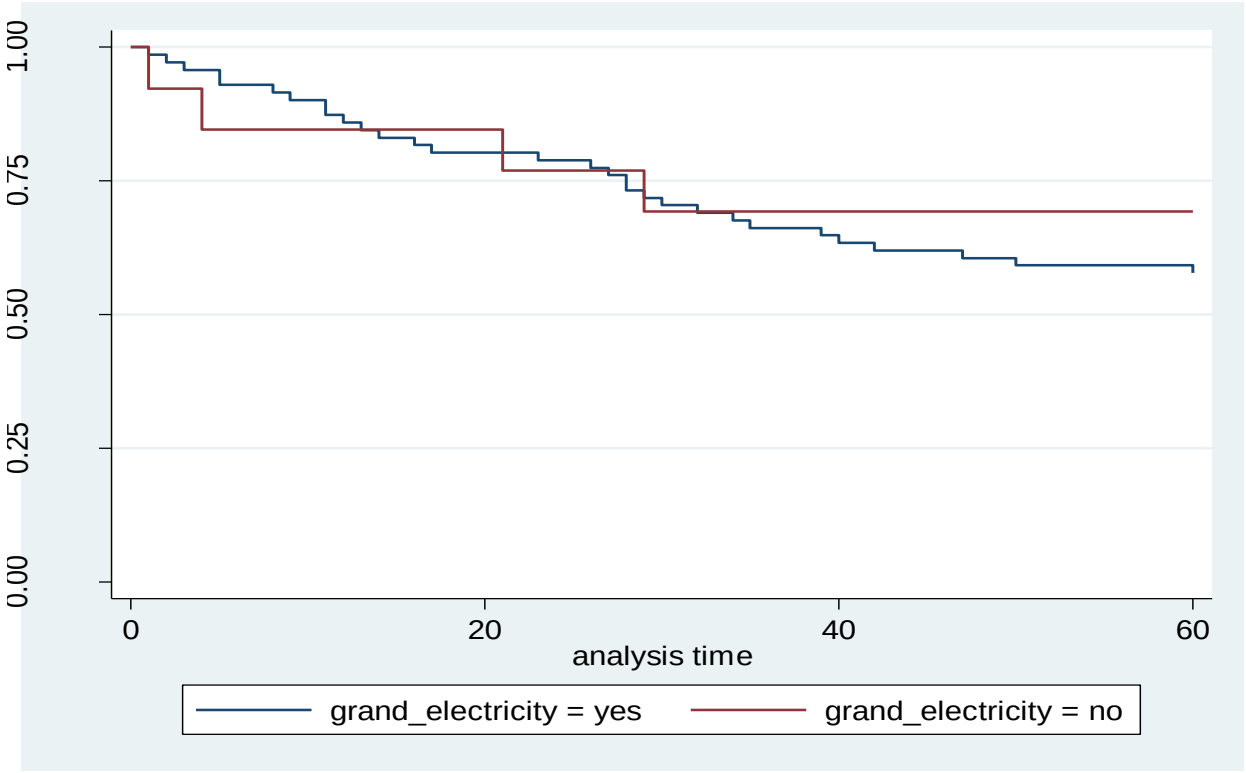


Figure A1.6: *Kaplan Meier survival estimate showing grandparents' access to electricity*

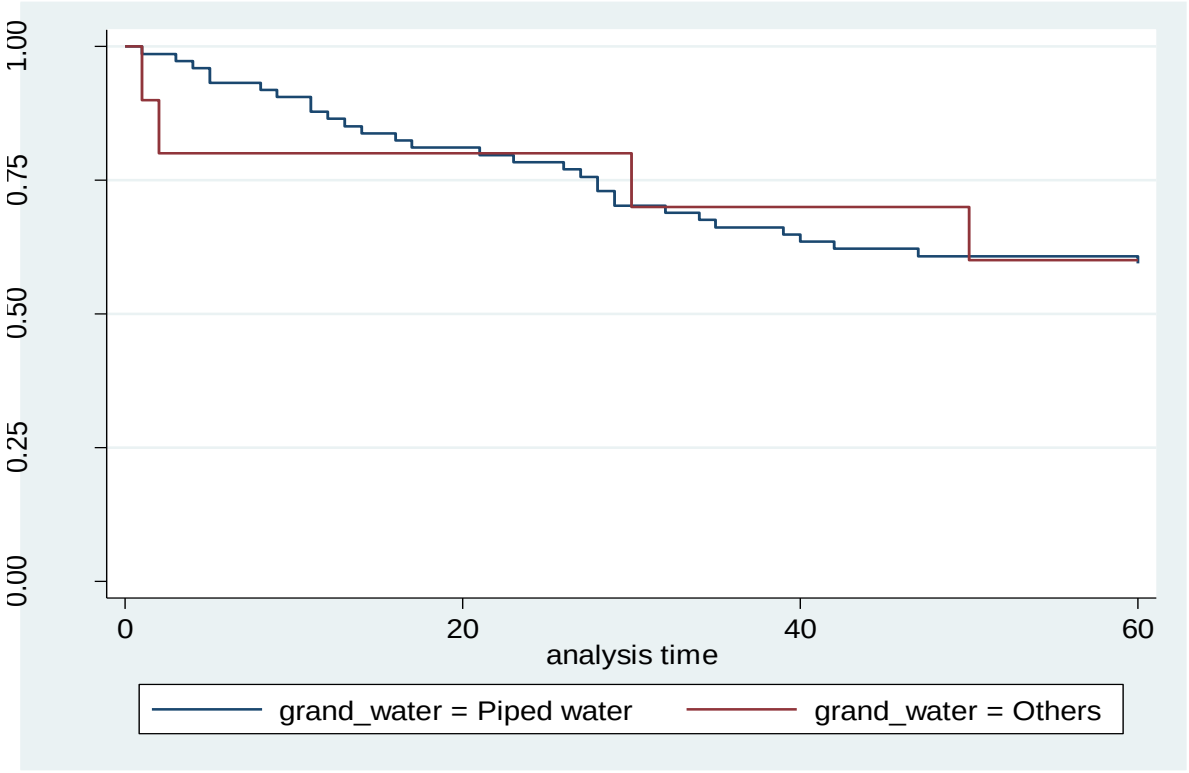


Figure A1.7: *Kaplan Meier survival estimates showing grandparents household main water source*

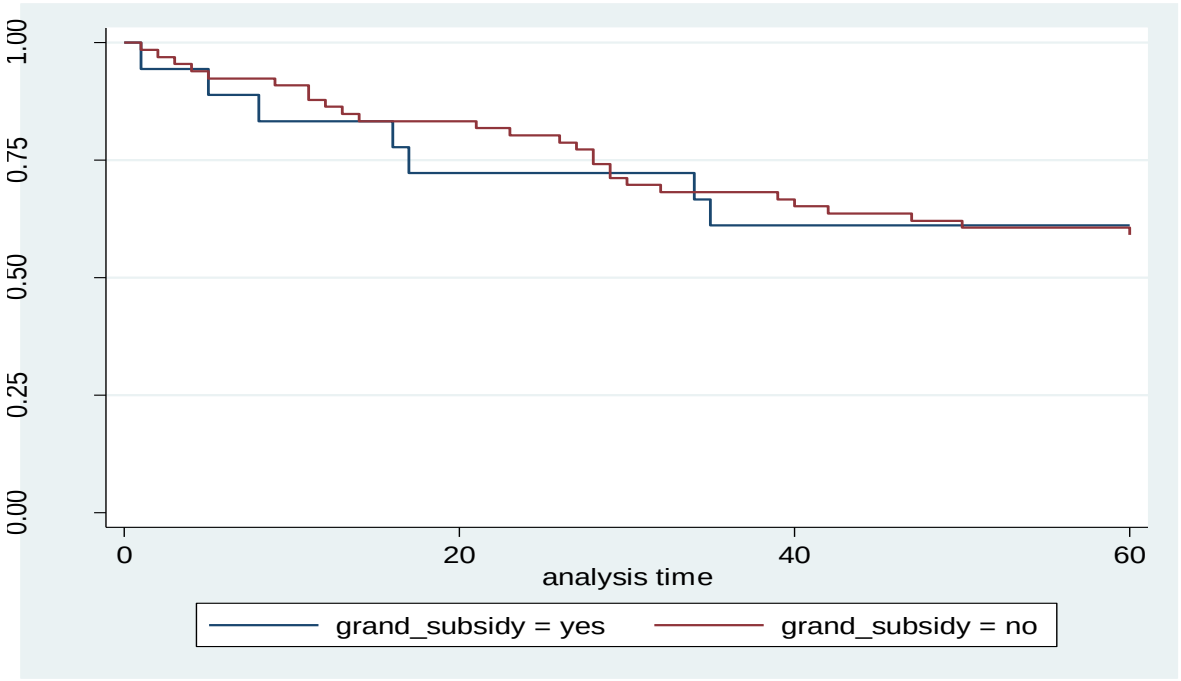


Figure A1.8: *Kaplan Meier survival estimates showing grandparents' recipients of government household subsidy*

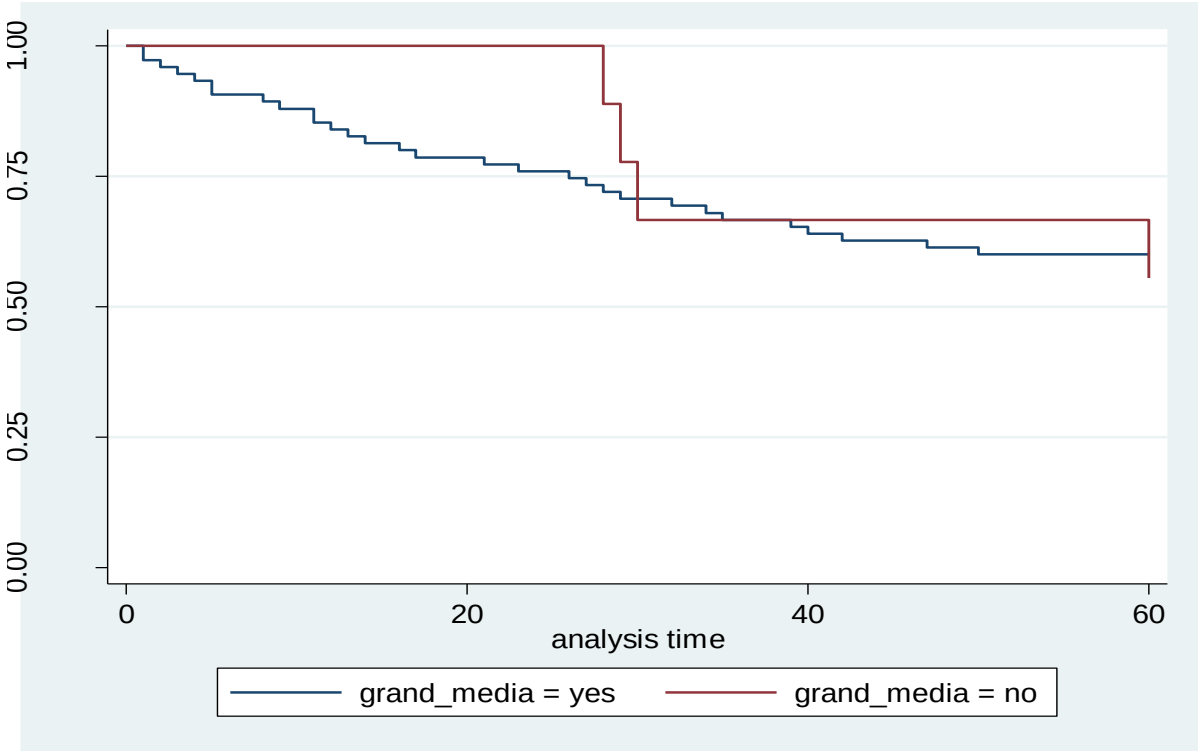


Figure A1.9: *Kaplan Meier survival estimate of grandparents' access to media programmes*

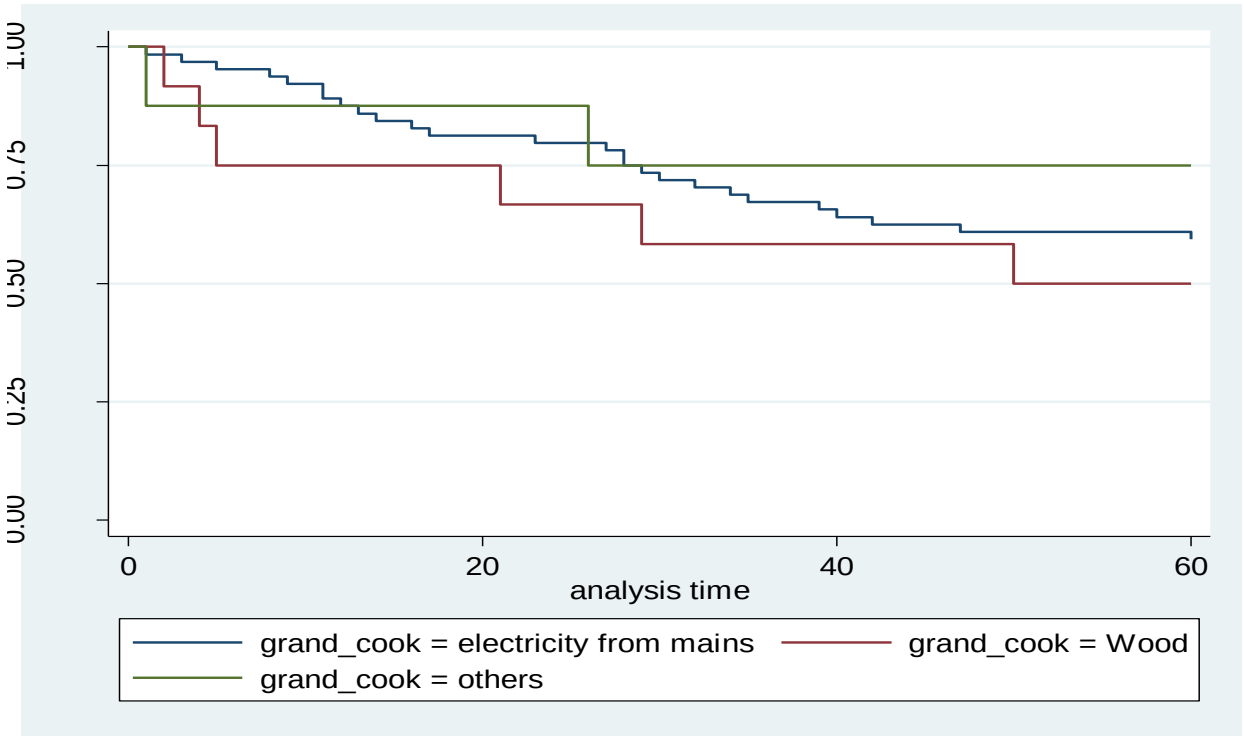


Figure A1.10: *Kaplan Meier survival estimate of grandparents' household source of energy*

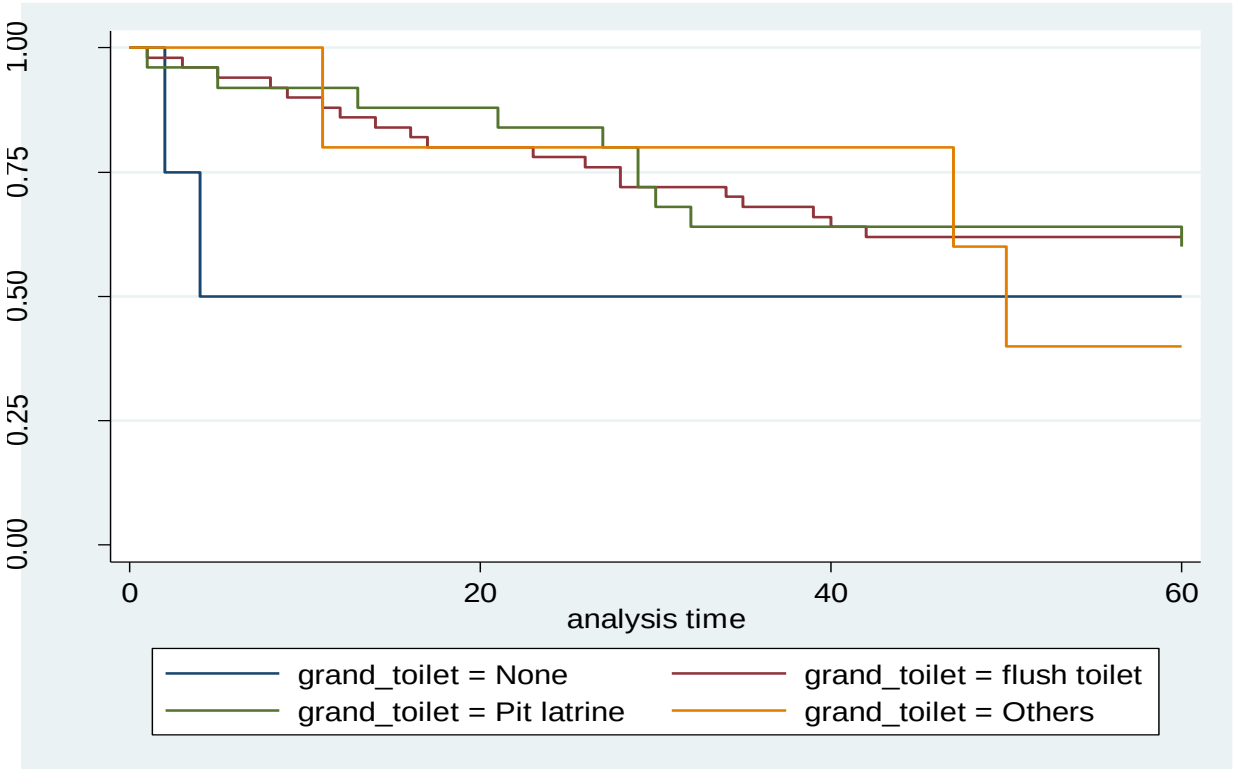


Figure A1:11: *Kaplan Meier survival estimate of grandparent household type of toilet facility*

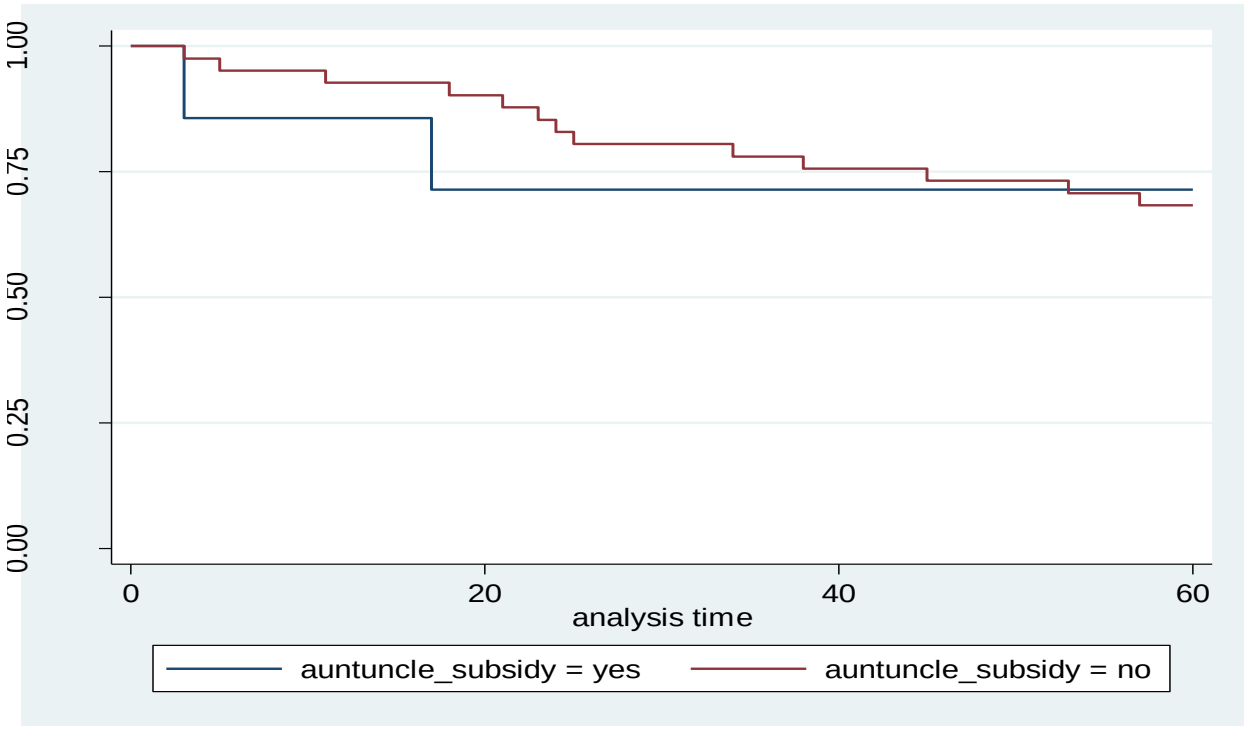


Figure A1.12: *Kaplan Meier survival estimate of aunt or uncle recipient of government household subsidy status*

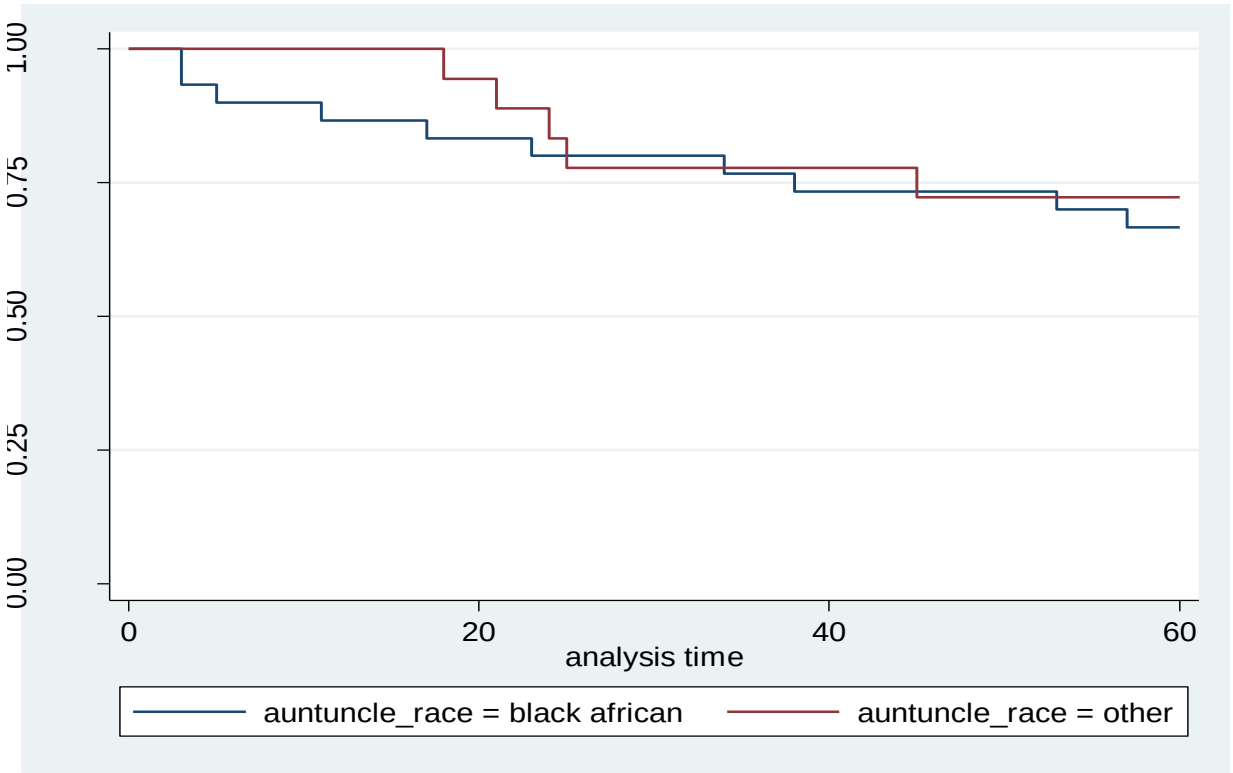


Figure A1.13: *Kaplan Meier survival estimate of aunt or uncle population group*

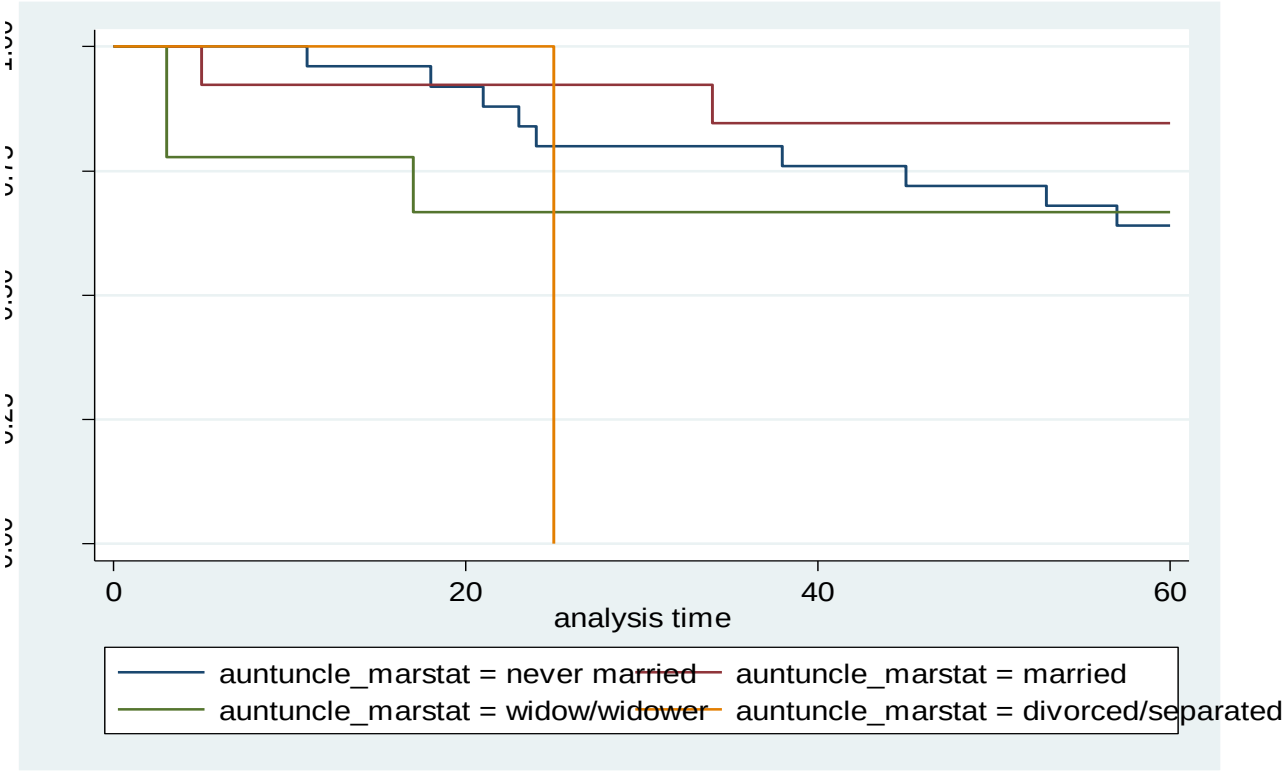


Figure A1.14: *Kaplan Meier survival estimate of aunt or uncle marital status*

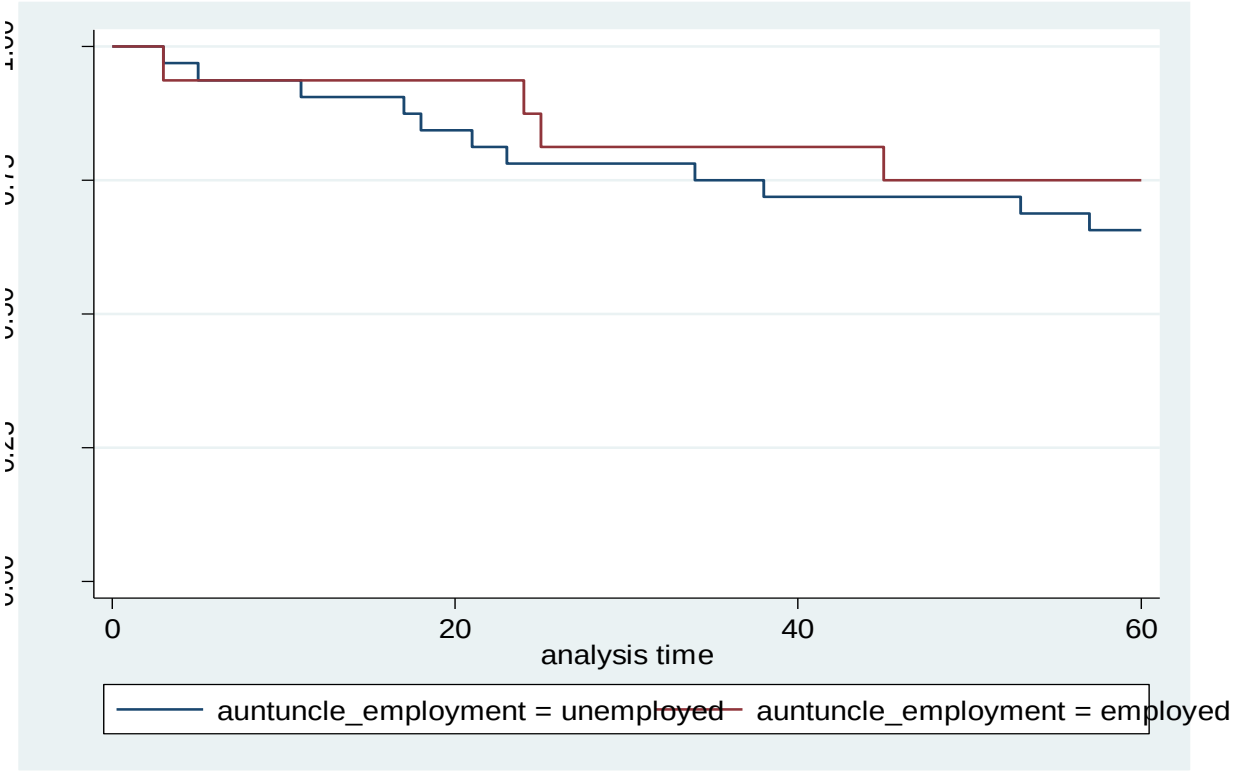


Figure A1.15: *Kaplan Meier survival estimate of aunt or uncle employment status*

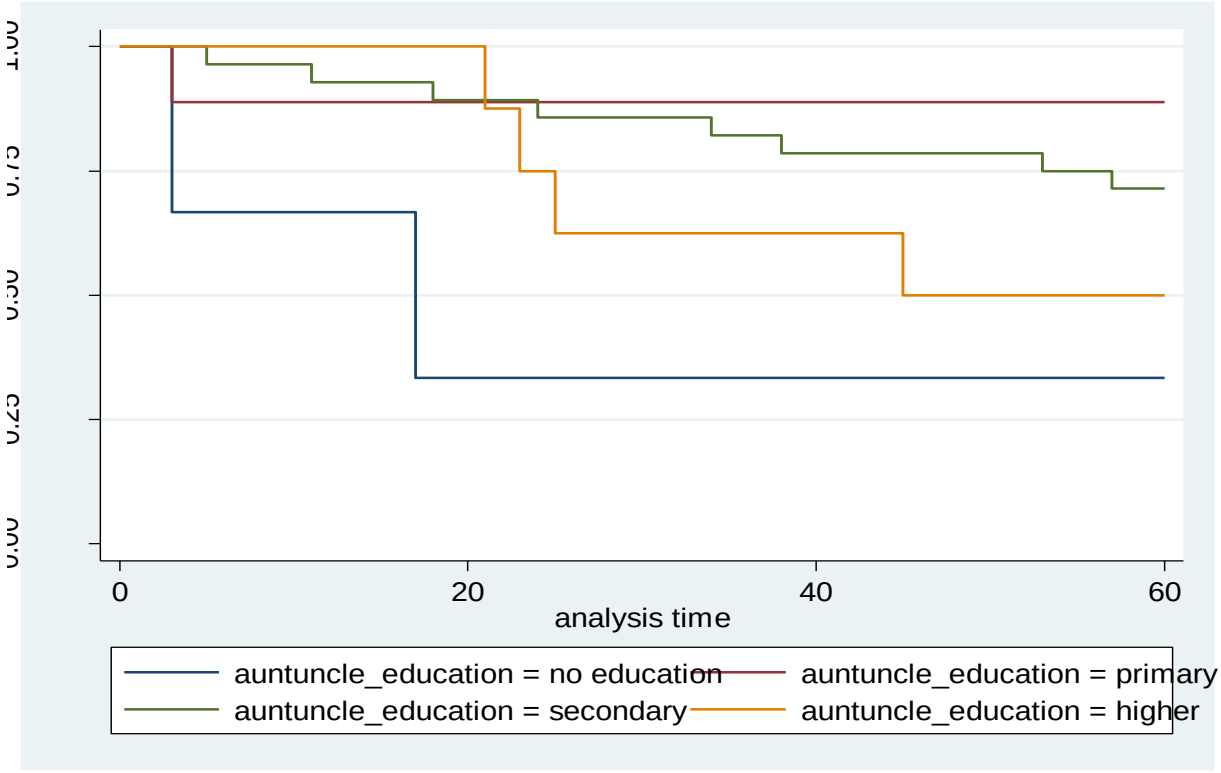


Figure A1.16: *Kaplan Meier survival estimate of aunt or uncle level of education*

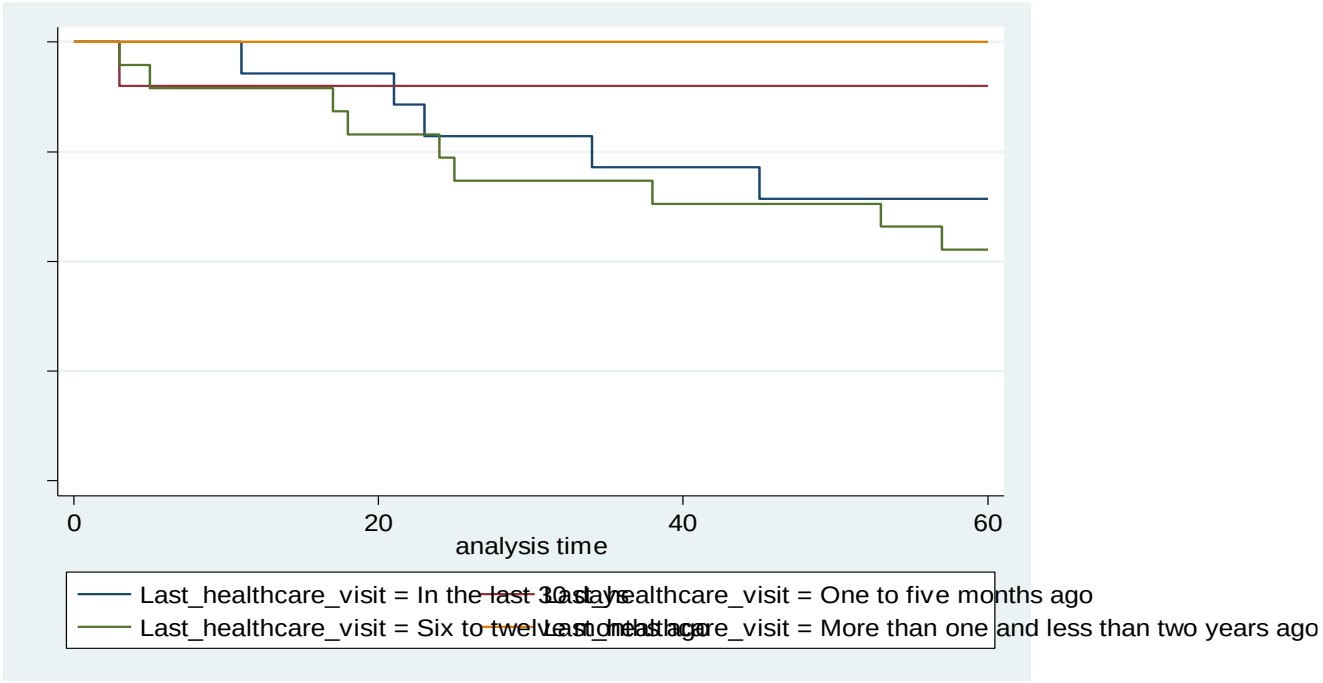


Figure A1.17: *Kaplan Meier survival estimate by aunt or uncle last clinic consultation*

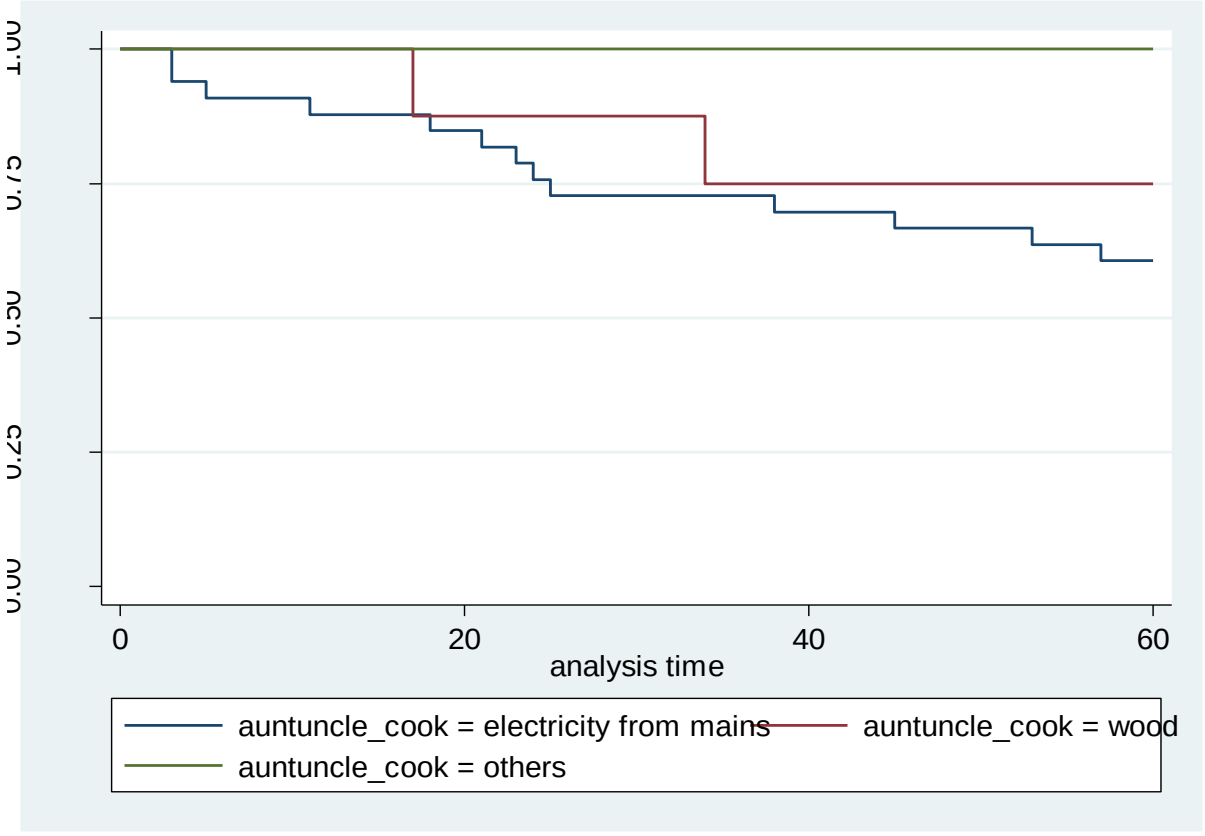


Figure A1.18: *Kaplan Meier survival estimate by aunt or uncle household source of energy*

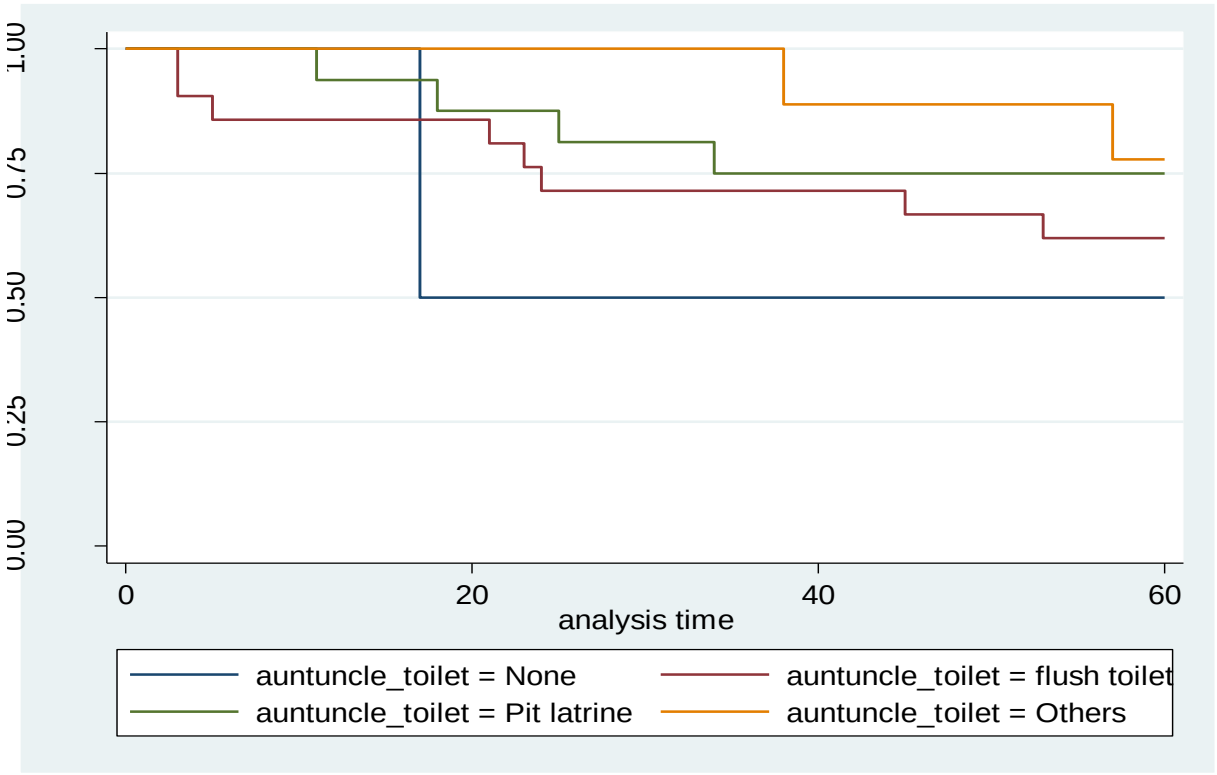


Figure A1.19: *Kaplan Meier survival estimate by aunt or uncle household type of toilet facility*

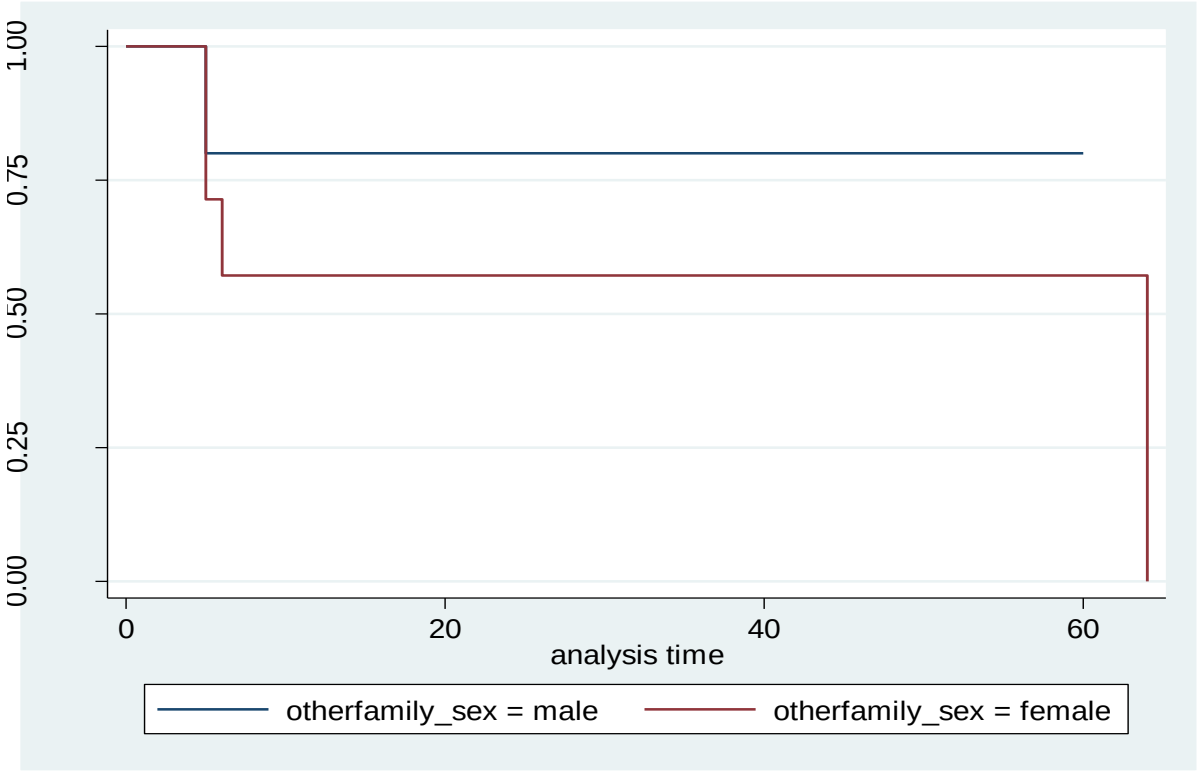


Figure A1.20: *Kaplan Meier survival estimate by other family sex*

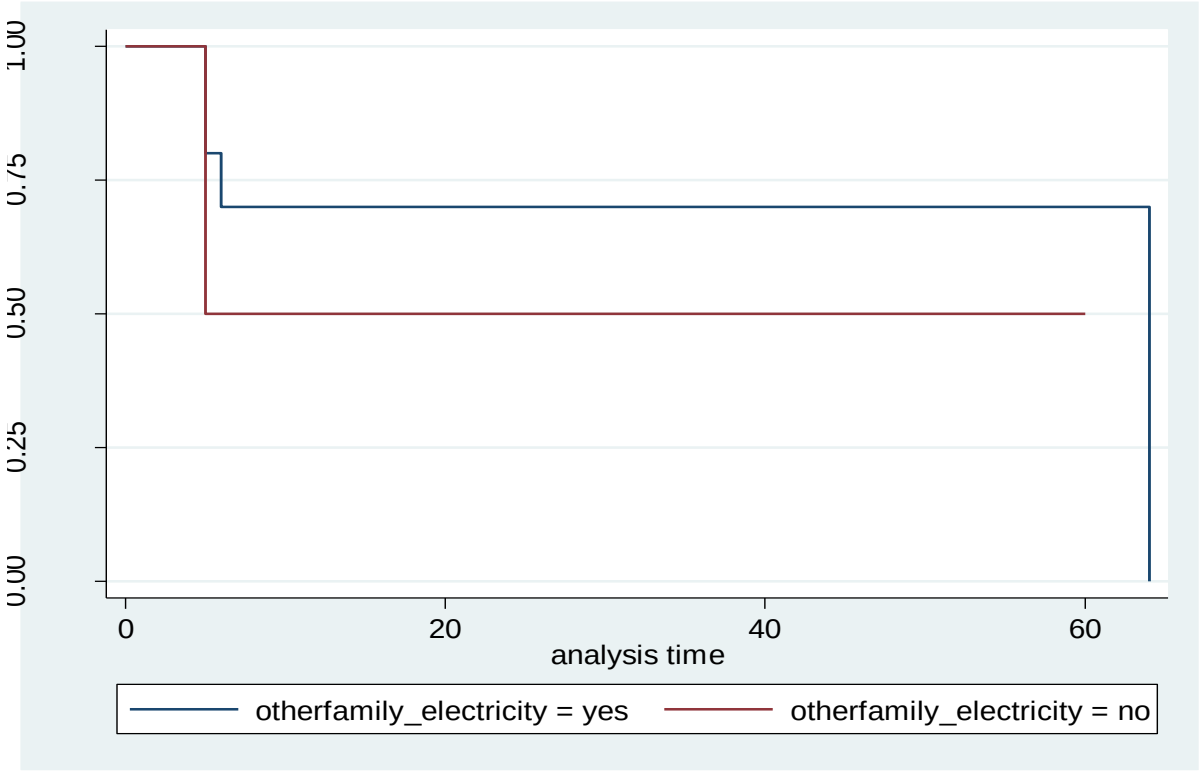


Figure A1.21: *Kaplan Meier survival estimate by other family access to electricity*

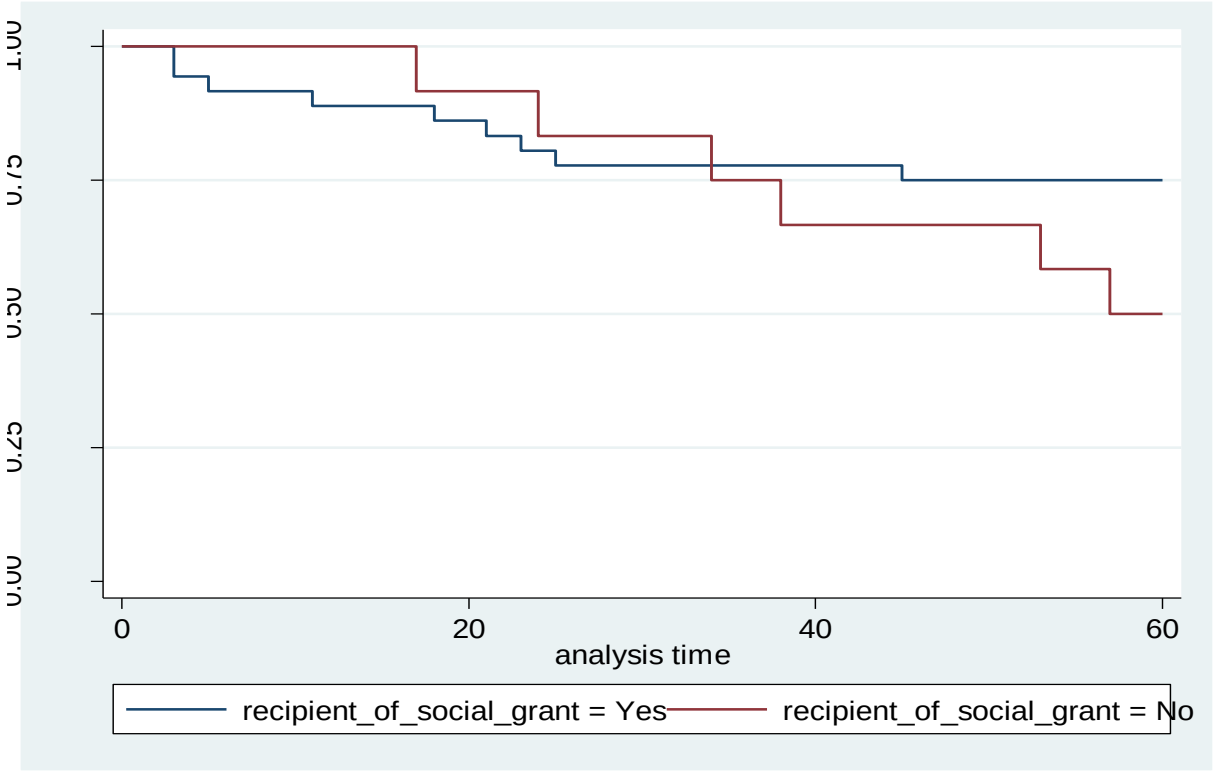


Figure A1.22: *Kaplan Meier survival estimate of children who are recipients of social grants raised by aunts or uncles*

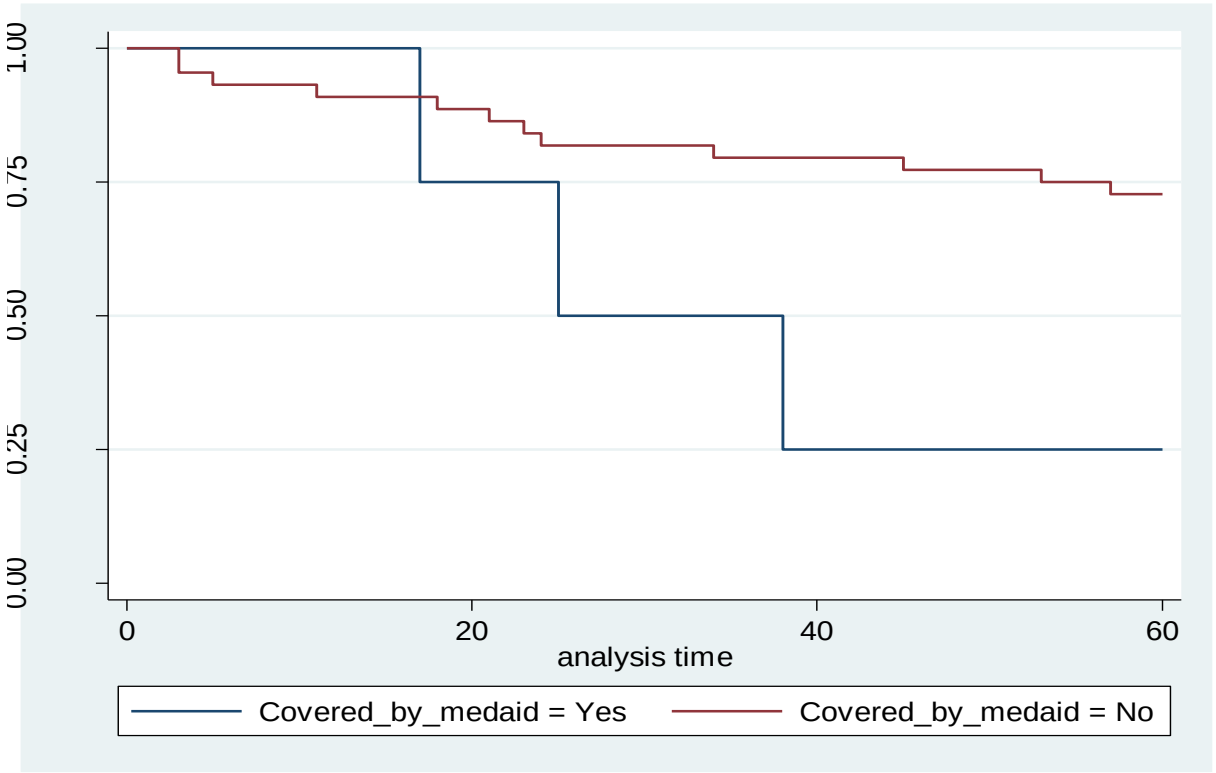


Figure A1.23: *Kaplan Meier survival estimate of children who are covered by medical aid raised by aunts or uncles*

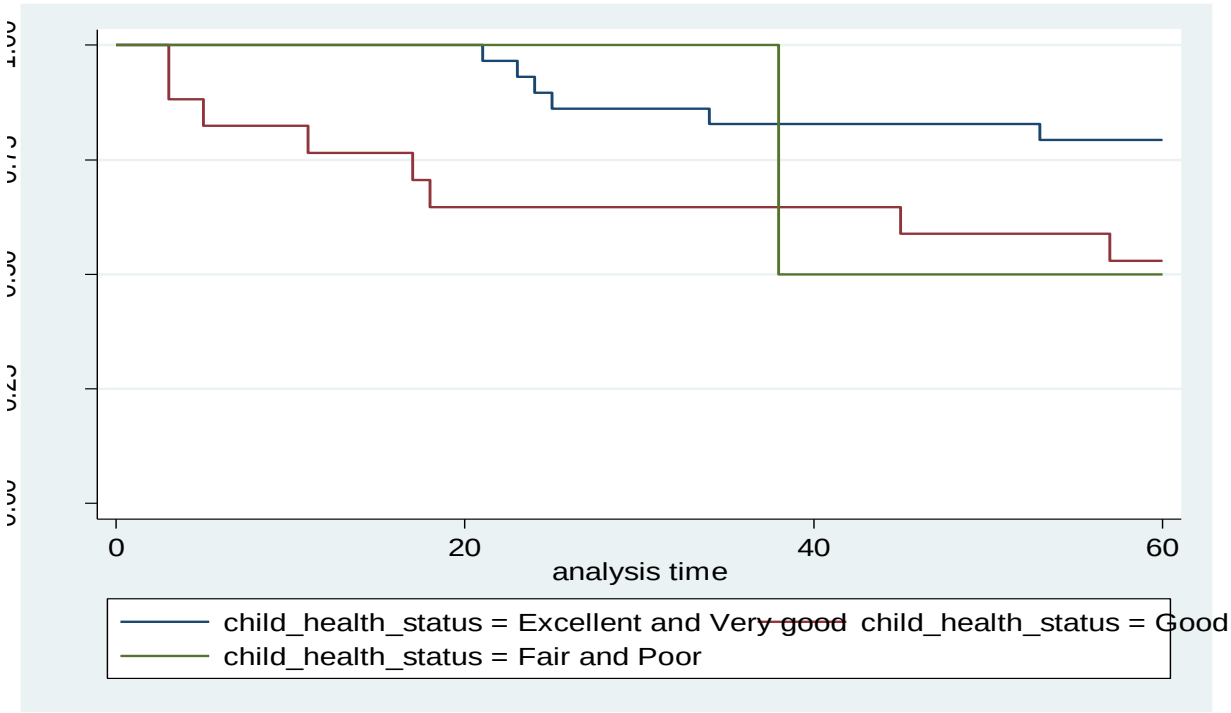


Figure A1.24: *Kaplan Meier survival estimate of children raised by aunts or uncles by perceived health status*

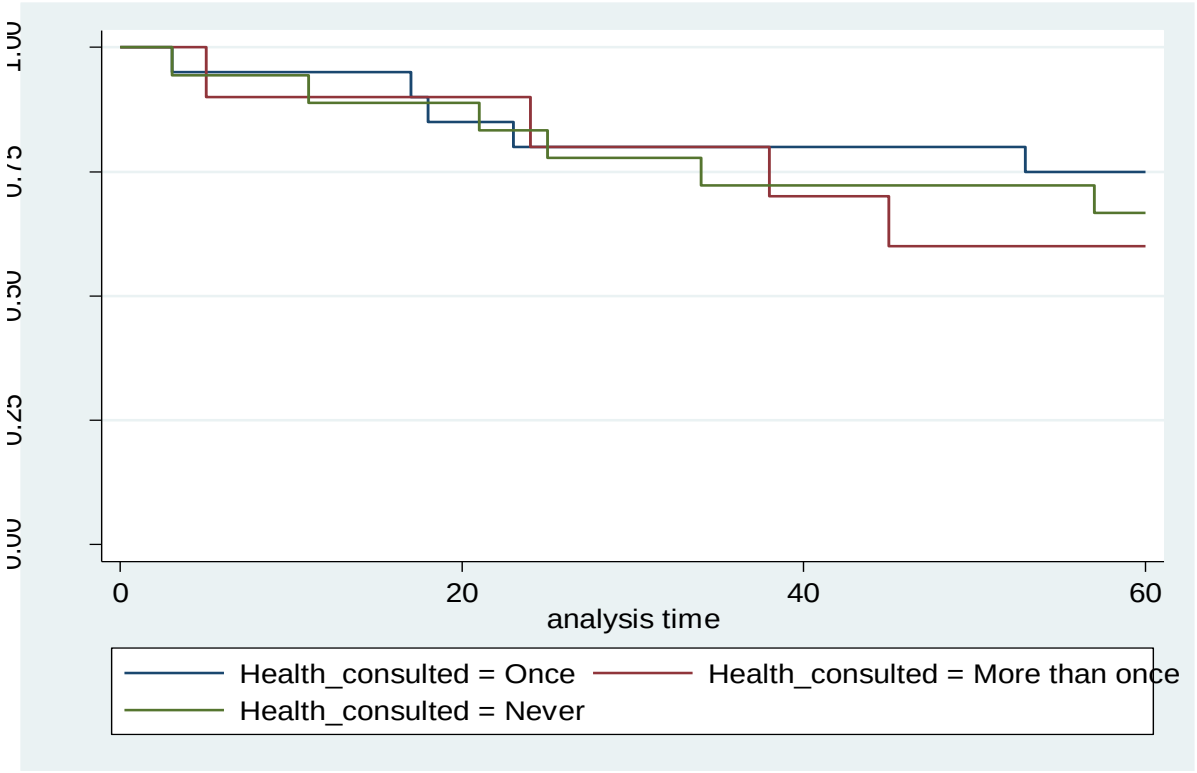


Figure A1.25: *Kaplan Meier survival estimate of children raised by aunts or uncles by the last time a healthcare professional was consulted for the child*

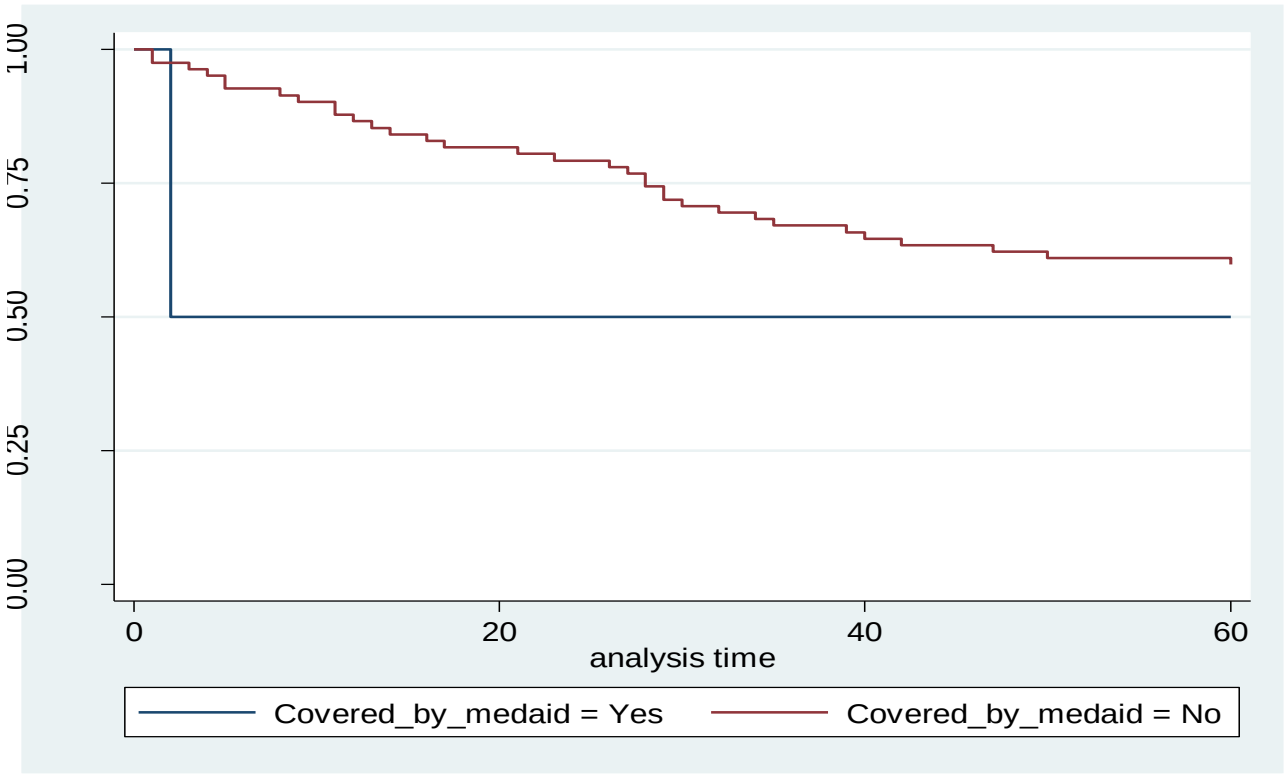


Figure A1.26: *Kaplan Meier survival estimate of child covered by medical aid*

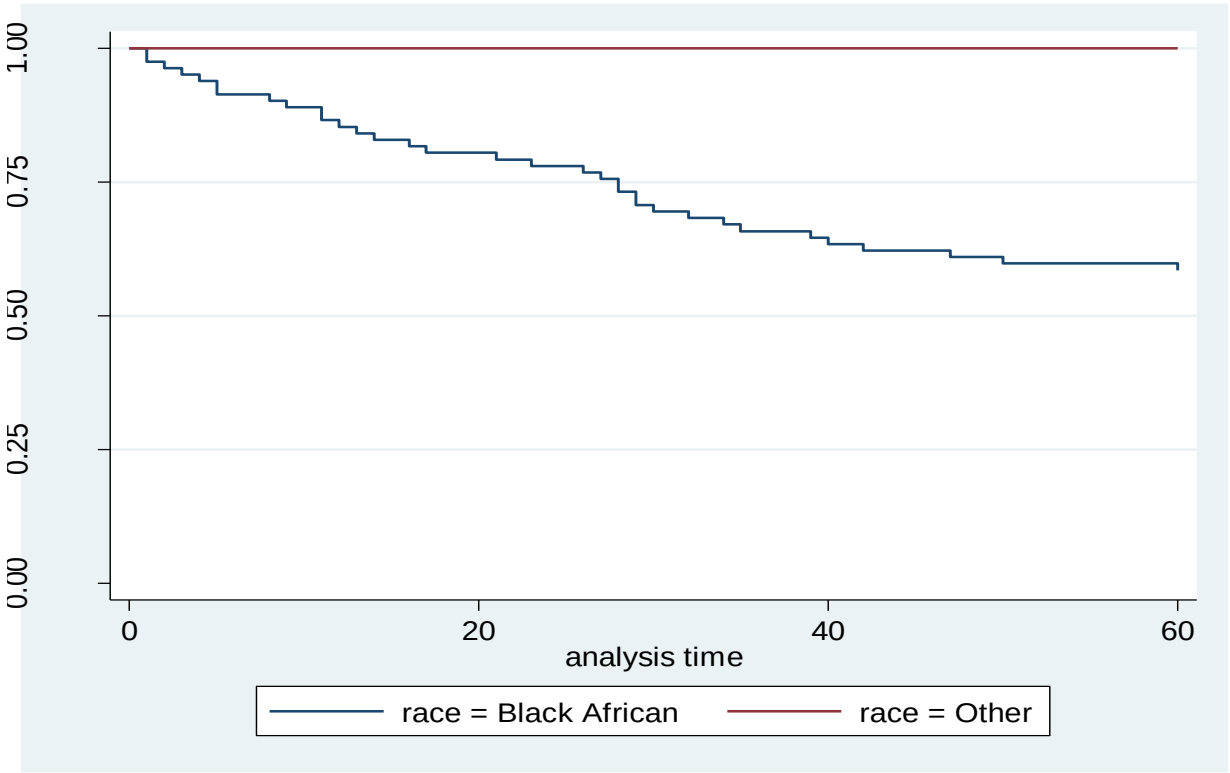


Figure A1.27: *Kaplan Meier survival estimate by the child's population group*

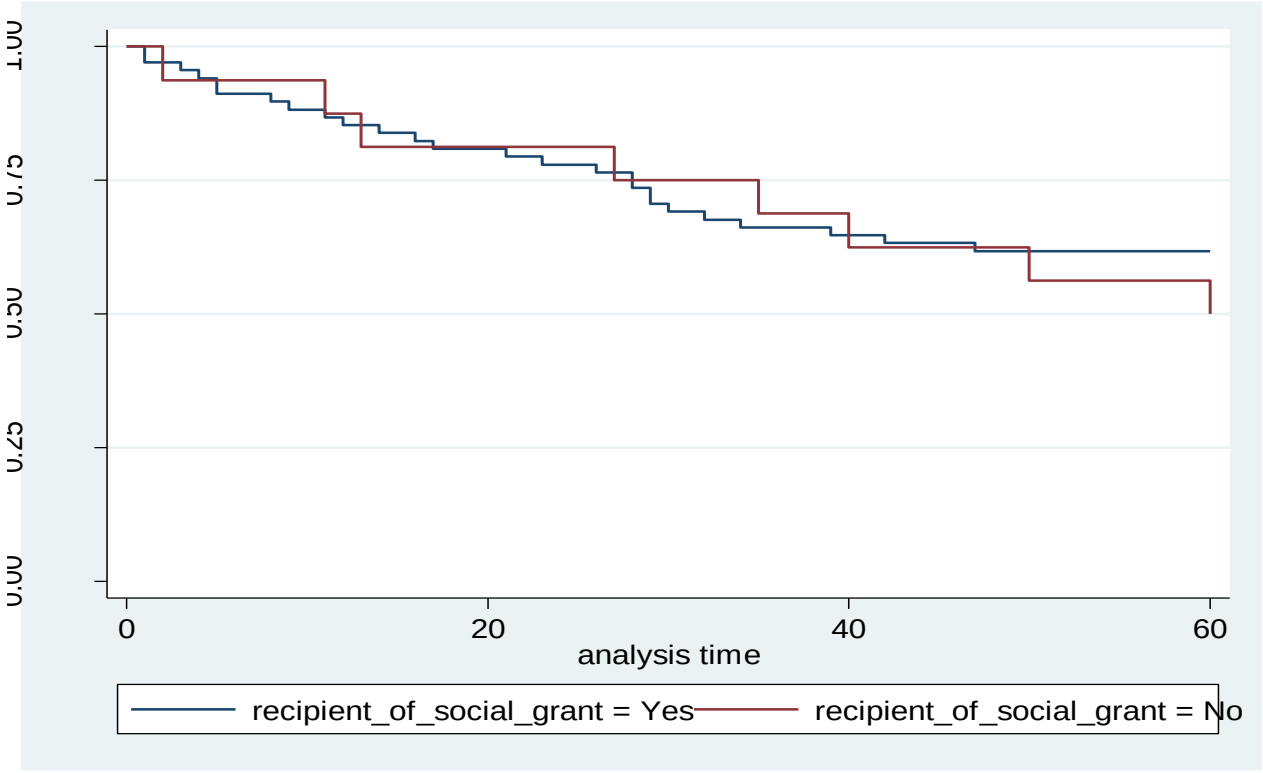


Figure A1.28 *Kaplan Meier survival estimate by child recipient of social grant*

Table A1.1: *Effects of children's characteristics (Wave 4) on under-five mortality among children who died under the care of various kin caregivers in Wave 5, 2017*

	Type of kin caregiver					
	Grandparent		Aunt/uncle		Other family	
Characteristics	Model 1 (UHR)	Model 2 (AHR)	Model 3 (UHR)	Model 4 (AHR)	Model 5 (UHR)	Model 6 (AHR)
Sex						
Male	1	1	1	1	1	1
Female	1.04 (0.68-1.57)	0.77 (0.49-1.21)	1.56 (0.50-4.84)	0.18 (0.02-1.68)	2.23 (0.23-21.6)	3.41 (0.24-49.2)
Population group						
Black African	1	1	1	1	1	1
Others	0.76 (0.24-2.41)	0.51 (0.16-1.70)	-	-	0.33 (0.03-3.67)	0.82 (2.39-6.10)
Perceived health status						
Excellent	1	1	1	1	1	1
Very good	2.04 (0.43-9.63) *	22.9 (1.98-265) *	1.54 (1.34-1.88)	1.48 (1.23-1.99) *	0.87 (0.08-9.22)	0.67 (0.02-19.2)
Good	1.26 (0.37-4.23)*	10.3 (1.26-84.8)*	1.53 (1.27-1.78)	1.45 (1.27-1.77)*	-	-
Child has clinic card						
Yes	1	1	1	1	1	1
No	0.38 (0.09-1.60)	0.14 (0.03-0.74) *	-	-	-	-
Yes, but not available	1.26 (0.82-1.94)	1.47 (1.11-1.60)*	0.78 (0.27-2.22)	0.68 (0.17-2.73)	0.33 (0.03-3.67)	0.33 (0.02-4.55)
Child has/had any illnesses or disabilities						
No	1	1	1	1	-	-
Yes	1.12 (0.35-3.56)	44.9 (1.51-803)	1.53 (0.42-5.57)	1.09 (0.33-3.62)	-	-
Number of times health professional consulted						
Once	1	1	1	1	1	1
More than once	1.33 (0.76-2.33)	1.67 (1.83-1.95) *	0.89 (0.25-3.19)	1.51 (1.21-1.70) *	-	-
Never	1.49 (0.90-2.46)	1.52 (1.05-1.78) *	0.93 (0.27-3.22)	1.11 (1.02-1.79) *	1.15 (0.11-12.2)	2.41 (0.13-44.4)
Child covered by medical aid						
Yes	1	1	1	1	-	-
No	1.54 (0.66-3.59)	1.53 (0.60-3.94)	1.17 (0.32-4.31)	0.19 (0.02-1.62)	-	-

Table A1.2: *Effects of various kin caregivers' individual characteristics (Wave 4) on under-five mortality in Wave 5, 2017*

	Type of kin caregiver					
	Grandparent		Aunt/uncle		Other family	
Characteristics	Model 1 (UHR)	Model 2 (AHR)	Model 3 (UHR)	Model 4 (AHR)	Model 5 (UHR)	Model 6 (AHR)
Sex						
Male	1	1	1	1	1	1
Female	0.74 (0.49-1.12)	0.62 (0.37-1.03)	1.46 (0.51-4.16)	1.33 (0.23-7.84)	0.05 (0.04-5.51)	0.29 (0.01-5.92)
Population group						
Black African	1	1	1	1	1	1
Others	0.98 (0.64-1.52)	0.95 (0.52-1.73)	0.80 (0.26-2.43)	2.58 (0.20-33.2)	2 (0.18-22.0)	2.41 (0.10-60.7)
Type of place of residence						
Urban	1	1	1	1	1	1
Rural	1.57 (1.03-2.40)*	2.47 (1.45-4.18)*	1.11 (0.37-3.39)	0.82 (0.14-4.92)	2.23 (0.23-21.6)	3.41 (0.17-69.0)
Marital status						
Never Married	1	1	1	1	1	1
Married	1.14 (0.71-1.82)	1.65 (0.89-3.08)	31.9 (2.99-340) *	55.9 (2.29-13.63) *	2 (0.17-23.9)	0.01 (0.06-15.9)
Widow/widower	1.07 (0.45-2.51)	0.77 (0.20-2.91)	11.4 (1.81-71.4) *	46.9 (1.69-13.05) *	1 (0.08-11.9)	0.41 (0.01-10.4)
Divorced/separated	2.11 (0.89-5.00)	5.22 (1.59-17.2)*	1.07 (0.13-9.03)	1.42 (0.14-14.2)	-	-
Employment status						
Unemployed	1	1	1	1	1	1
Employed	0.81 (0.53-1.23)	1.45 (0.82-2.57)	0.85 (0.26-2.76)	0.72 (0.33-15.5)	1.36 (0.19-9.70)	0.02 (0.18-22.0)
Highest level of education						
No education	1	1	1	1	1	1
Primary	1.03 (0.39-2.77)	1.20 (0.31-4.66)	2.43 (0.18-32.8)	10.1 (0.11-966.9)	-	-
Secondary	0.85 (0.36-1.98)	0.52 (0.11-2.47)	0.24 (0.04-1.38)	0.04 (0.00-1.27)	0.74 (0.10-5.27)	0.71 (0.04-11.8)
Higher	0.70 (0.27-1.84)	0.36 (0.07-1.80)	0.22 (0.03-1.47)	0.00 (0.00-0.69)*		-
Income classification of household						
Above average income	1	1	1	1	1	1
Average income	0.55 (0.22-1.38)	0.81 (0.23-2.79)	0.28 (0.03-2.79)	1.01 (1.00-1.51) *	0.05 (0.04-5.51)	0.33 (0.02-5.97)
Below average income	0.47 (0.18-1.20)	0.64 (0.18-2.28)	0.51 (0.06-4.56)	1.10 (1.00-1.84)*	-	-
Perceived health status	1	1	1	1	1	1
Excellent	0.22 (0.73-2.04)	0.65 (1.13-1.70) *	5.85 (0.47-72.5)	1.10 (1.06-1.15) *	6.66 (0.11-1.45)	6.66 (0.11-4.70)

Very good	0.98 (0.54-1.76)	0.08 (1.16-1.26) *	0.58 (0.18-1.86)	0.89 (0.84-0.95) *	2 (0.18-22.0)	2.2 (0.12-31.9)
Good	0.50 (0.24-1.02)	0.48 (0.84-0.91)*	2.13 (0.22-20.9)	0.49 (0.42-0.57)*	-	-
Fair						
Poor	0.46 (0.11-1.96)	0.32 (0.06-1.70)	-	-	-	-
Number of household members					-	-
1			1	1	1	-
2			1.76 (0.16-19.4)	3.44 (0.15-77.3)	0.74 (0.10-5.27)	-
3			3.52 (0.36-33.9)	9.33 (0.56-155)	-	-
4+			2.87 (0.36-22.7)	10.7 (0.65-177)		

Last time consulted someone about health						
Never						
Over two to five months ago						
Six to twelve months	1	1	1	1	1	
ago	1.22 (0.73-2.04)	1.08 (0.98-1.19) *	5.85 (0.47-72.5)	1.09 (1.15-1.38) *	6.66 (0.11-1.45)	
More than one and less	0.97 (0.54-1.76)	1.12 (1.02-1.22) *	0.58 (0.18-1.86)	1.38 (1.42-1.82) *	2 (0.18-22.0)	
than two years ago	0.50 (0.24-1.02)	1.18 (1.06-1.31) *	2.13 (0.22-20.9)	1.43 (1.50-1.75) *	-	
Two to four years ago	0.46 (0.11-1.96)	1.24 (1.13-1.36)*	-	-	-	

Age						
15-19			1	1	1	-
20-24			0.10 (0.00-2.80)	0.01 (0.00-2.11)	1	-
25-29			0.03 (0.00-0.96) *	0.23 (0.01-7.55)	-	-
30-34			6.87 (0.05-2.00)	0.00 (0.21-1.95)	-	-
35-39			2.92 (0.11-1.03)	0.00 (0.79 (1.34)	-	-
40-44	1		0.03 (0.00-0.92) *	0.00 (0.00-1.10)	1 (0.06-16.0)	-
45-49	0.09 (0.03-0.30) *	10.02 (0.00-0.12) *	0.61 (0.03-10.9)	0.12 (0.00-9.83)	-	-
50-54	0.24 (0.27-2.23)	0.04 (0.00-0.53) *	4.20 (0.14-127.0)	0.28 (0.00-28.9)	-	-
55-59	0.66 (0.07-5.92)	0.20 (0.01-2.47)	4.20 (0.14-127.0)	0.14 (0.00-6.84)	-	-
60+	1.22 (0.06-0.73) *	1.07 (1.01-1.47) *	2.05 (0.09-46.1)	0.98 (0.03-27.3)	-	-
Child recipient of social grant	1	1	1	1	1	1
Yes	0.72 (0.41-1.24)	0.96 (0.51-1.79)	0.37 (0.11 (1.24)	1.03 (1.00-1.29) *	1.36 (0.19-9.70)	3.82 (2.39-6.10) *
No						

*UHR=Unadjusted hazard ratios; AHR=Adjusted hazard ratios; *p<0.05*

Table A1.2: *Effects of various kin caregivers' household characteristics (Wave 4) on under-five mortality in Wave 5, 2017*

	Type of kin caregiver					
	Grandparent		**Aunt/uncle**		**Other family**	
Characteristics	Model 1 (UHR)	Model 2 (AHR)	Model 3 (UHR)	Model 4 (AHR)	Model 5 (UHR)	Model 6 (AHR)
Household has electricity						
Has electricity	1	1			1	
No electricity	0.61 (0.30-1.24)	1.15 (1.04-1.57)			0.02 (0.18-22.0)	
Type of household toilet facilities						
None	1	1	1	1		
Flush toilet	0.63 (0.30-1.35)	0.27 (0.10-1.72)	0.49 (0.05-4.36)	0.19 (0.47-1.94)		
Pit latrine	0.58 (0.26-1.29)	0.28 (0.11-1.72)	0.85 (0.09-8.08)	4.01 (3.70-4.35) *		
Others	0.41 (0.13-1.25)	0.10 (0.03-1.40)	0.10 (0.00-1.91)	5.16 (0.03-1.74)		
Household's main water source						
Piped water	1	1	1	1		
Others	1.68 (0.77-3.67)	1.81 (0.63-5.18)	1.97 (0.24-16.4)	1.80 (0.21-15.0)		
Household's source of energy for cooking or heating						
Electricity	1	1	1	1	1	
Wood	0.87 (0.48-1,56)	2.02 (0.66-6.16)	4.92 (0.89-27.1)	3.61 (1.00-3.92)	2.58 (1.34-2.84)	
Others	0.64 (0.16-2.63)	1.08 (0.22-5.35)	3.37 (0.36-31.1)	4.95 (1.40-4.80)	-	
Access to media programmes						
Yes	1	1				
No	0.66 (0.35-1.24)	0.62 (0.30-1.27)				
Recipient of government household subsidy	1	1	1	1		
	0.76 (0.46-1.25)	0.81 (0.48-1.37)	0.29 (0.05-1.53)	0.05 (0.00-0.94)*		

Yes						
No						
Household received government grant						
Yes	1	1	1	1		
No	0.66 (0.43-1.01)	0.66 (0.41-1.06)	0.74 (0.23-2.39)	0.96 (0.22-4.19)		

Correlation Matrices

Table A1.3: *Correlation matrix of the characteristics of children raised by grandparents*

Characteristic	**VIF**	**1/VIF**
Child's sex	1.67	0.598572
Child's population group	1.01	0.993013
Child's perceived health status	1.04	0.958241
Child has clinic card	1.01	0.991562
Healthcare professional consulted for child	1.04	0.960698
Child covered by medical aid	1.02	0.985027
Child recipient of social grant	1.02	0.979350
Child has/had any disabilities	1.88	0.598572
MEAN VIF	**1.21**	

Table A1.4: *Correlation matrix of the individual characteristics of grandparents*

Characteristic	**VIF**	**1/VIF**
Grandparent's sex	1.24	0.809081
Grandparent's level of education	1.18	0.847860
Grandparent's population group	1.03	0.970170
Grandparent's place of residence	1.04	0.961095
Grandparent's employment status	1.03	0.968422
Grandparent's perceived health status	1.02	0.982723

Last time grandparent consulted someone about his/her health	1.02	0.982723
Grandparent's current age	1.62	0.618016
Grandparent's marital status	1.48	0.675824
MEAN VIF	**1.18**	

Table A1.5: *Correlation matrix of the household resources of grandparents*

Characteristic	**VIF**	**1/VIF**
Grandparent's type of household electricity	1.31	0.764380
Grandparent's main water source	1.17	0.852304
Grandparent's type of toilet facility	1.04	0.961690
Grandparent's source of cooking	1.12	0.896397
Grandparent's access to media programmes	1.10	0.912362
Grandparent's family size	1.19	0.837377
Grandparent recipient of government household subsidy	1.07	0.931498
Grandparent recipient of government grant	1.12	0.890128
MEAN VIF	**1.14**	

Table A1.6: *Correlation matrix of the characteristics of children raised by aunts or uncles*

Characteristic	**VIF**	**1/VIF**
Child's population group	1.01	0.994335
Child's perceived health status	1.15	0.868684
Child has clinic card	1.01	0.992151
Healthcare professional consulted for child	1.01	0.988126
Child covered by medical aid	1.08	0.926459
Child recipient of social grant	1.07	0.931882
Child has/had any disabilities	1.15	0.870685
MEAN VIF	**1.07**	

Table A1.7: *Correlation matrix of the individual characteristics of aunts and uncles*

Characteristic	**VIF**	**1/VIF**
Aunt or uncle's level of education	1.32	0.756439
Aunt or uncle's population group	1.19	0.842908
Aunt or uncle's place of residence	1.10	0.906327
Aunt or uncle's employment status	1.37	0.728686
Aunt or uncle's perceived health status	8.29	0.120662
Last time aunt or uncle consulted someone about his/her health	7.83	0.127644
Aunt or uncle's current age	2.36	0.423691
Aunt or uncle's marital status	2.44	0.409830
MEAN VIF	**3.24**	

Table A1.8: *Correlation matrix of the household resources of aunts and uncles*

Characteristic	**VIF**	**1/VIF**
Aunt or uncle's main water source	1.16	0.861601
Aunt or uncle's type of toilet facility	1.12	0.892268
Aunt or uncle's source of cooking	1.26	0.794255
Aunt or uncle's access to media programmes	1.16	0.860496
Aunt or uncle's family size	1.22	0.822948
Aunt or uncle recipient of government household subsidy	1.22	0.820383
Aunt or uncle recipient of government grant	1.20	0.836556
MEAN VIF	**1.19**	

Table A1.9: *Correlation matrix of the characteristics of children raised by other extended kin*

Characteristic	**VIF**	**1/VIF**
Child's population group	1.01	0.994335
Child's perceived health status	1.15	0.868684
Child has clinic card	1.01	0.992151
Healthcare professional consulted for child	1.01	0.988126
Child covered by medical aid	1.08	0.926459

Child recipient of social grant	1.07	0.931882
Child has/had any disabilities	1.15	0.870685
MEAN VIF	**1.07**	

Table A1.10. *Correlation matrix of the individual characteristics of other extended family members*

Characteristic	**VIF**	**1/VIF**
Other family level of education	2.42	0.413990
Other family population group	1.69	0.590676
Other family place of residence	1.65	0.740366
Other family employment status	3.09	0.323720
Other family perceived health status	7.35	0.136069
Last time Other family member consulted someone about his/her health	6.37	0.156999
Other family current age	1.70	0.589484
Other family marital status	3.13	0.318996
MEAN VIF	**3.39**	

Table A1.11. *Correlation matrix of the household resources of other extended family members*

Characteristic	**VIF**	**1/VIF**
Other family main water source	1.64	0.609337
Other family type of toilet facility	1.55	0.645833
Other family source of cooking	1.38	0.723032
Other family access to media programmes	1.69	0.590125
Other family recipient of government grant	1.42	0.702052
MEAN VIF	**1.54**	

APPENDIX B: Ethics Certificate

Research Office

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

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER: H18/10/38**
PROJECT TITLE	Under-five mortality among children raised in non-orphaned kinship care in South Africa: A mixed method study
INVESTIGATOR(S)	Miss K Mabetha
SCHOOL/DEPARTMENT	Social Sciences/
DATE CONSIDERED	19 October 2018
DECISION OF THE COMMITTEE	Approved
EXPIRY DATE	19 December 2021

DATE 20 December 2018 **CHAIRPERSON** J. Knight

(Professor J Knight)

cc: Supervisor : Dr N De Wet

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 resubmit the protocol to the Committee. **I agree to completion of a yearly progress report.**

_____ Signature

____/____/____ Date

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

APPENDIX C: KwaZulu-Natal Department of Social Development Approval Letter

social development
Department:
Social Development
PROVINCE OF KWAZULU-NATAL

FAX : 033-264 2075
Telephone/Ucingo/Telefoon: 033 264 2078
Enquiries/Imibuzo/Navrae : Mr. VW Gumede
Email address : velaphi.gumede@kznsocdev.gov.za
Reference/ Inkomba/ Navrae: S6/2/1

HUMAN RESOURCE DEVELOPMENT
174 Mayors Walk Road
Private Bag X9144
Pietermaritzburg
3200

Ms K Mabetha
School of Social Sciences
Private Bag 3,
Wits
2050

Email: kmabetha@gmail.com

Dear Ms Mabetha

PERMISSION TO CONDUCT RESEARCH IN THE DEPARTMENT OF SOCIAL DEVELOPMENT

This matter has reference.

Kindly be informed that permission has been granted by the Head of Department for you to conduct research in the Department of Social Development to fulfill the requirement of your PhD in Demography and Population Studies.

The permission authorizes you to -

(a) Approach and distribute your survey questionnaires to foster care parents and children's that are willing to participate in your research at their consent deemed relevant to your research project and maintain high level of confidentiality; and
(b) Share your findings with the Department.

Wishing you success during your research project.

Yours Faithfully

MS NG KHANYILE
HEAD OF DEPARTMENT

DATE: 05/12/2018

APPENDIX D: Eastern Cape Department of Social Development Approval Letter

Province of the
EASTERN CAPE
SOCIAL DEVELOPMENT

Beacon Hill Office Park - Corner of Hargreaves Road and Hockley Close – Private Bag X0039 – Bhisho – 5605 – REPUBLIC OF SOUTH AFRICA
Tel: +27 (0)43 605 5440 - Email address: linda.saki@ecdsd.gov.za - Website: www.ecdsd.gov.za

23 JANUARY 2019

Khuthala Mabetha
University of the Witwatersrand
Faculty of Demography and Population Studies

Dear Madam

REQUEST FOR PERMISSION TO CONDUCT RESEARCH: INVESTIGATING UNDER-FIVE MORTALITY AMONG CHILDREN RAISED IN NON-ORPHANED KINSHIP CARE IN SOUTH AFRICA.

The Department considered your application for permission to conduct a research study in the Eastern Cape. The application is hereby approved.

You are requested to adhere to the following conditions:

1. You will laisse with:
   - Ms Linda Saki: Assistant Director: Population Research in the Provincial Office to keep her abreast of progress and any issues that might arise when conducting your research. Contact details are: linda.saki@ecdsd.gov.za / 043-605 5440.
   - Ms Ntsaluba, District Director at Amathole, to facilitate access to the identified respondents for the pilot study. Her contact details are: sekelwa.ntsaluba@ecdsd.gov.za/ 043 – 711 6607/ 082 411 5773
2. Interviews with the identified respondents must be conducted with the least disruption of service delivery.
3. The Department must be afforded a fair opportunity to respond to any issues that might arise from the research before publication.
4. After completion of your research, you must provide the Department (Population and Research Unit) with a written research report. The report will be used to inform departmental programmes.
5. The research be undertaken for academic purposes only.

6. Strictly adhere to ethical standards to make sure no harm comes to participants in the study.

7. You avail yourself, should the need arise, to make a presentation of the findings and recommendations to the Department.

Please acknowledge and sign this document to indicate that you agree to and accept the conditions as stated above. Return the signed document via email to the Director: Population Policy Promotion E-mail: linda.saki@ecdsd.gov.za

I wish you well with the research and look forward to the findings and recommendations.

Yours sincerely

MS N. BAART
HEAD OF DEPARTMENT
DATE: 05/02/2015

MS.K.MABETHA
PHD CANDIDATE: WITS UNIVERSITY
DATE:_____

APPENDIX E: Participant Information Sheet for Kin caregivers who have experienced a child death (English version)

PARTICIPANT INFORMATION SHEET

(for kin caregivers who have experienced a child death)

Dear Sir/Madam

My name is Khuthala Mabetha and I am a PhD candidate in Demography and Population Studies at the University of the Witwatersrand. As part of my PhD, I have to undertake a research thesis and the title of my study is "Under-five mortality among children raised in non-orphaned kinship care in South Africa: A Mixed-

Methods study". The aim of this research is to investigate how sociodemographic factors, health-seeking behaviours and familial characteristics of kin caregivers influence under-five mortality among children raised in non-orphaned kinship care in South Africa. I have a keen interest in interviewing you so as to share your experiences on the subject of study.

As part of this study, I would like to invite you to take part in an in-depth structured interview. This interview will take approximately between 90 minutes (1 hour 30 minutes) to 120 minutes (2 hours) as the interview questions are quite extensive. The interview will however not be terminated in the interest of time should you wish to share additional information beyond the estimated time. With your permission, I would also like to record the interview using an audio recorder. Please be informed that the interviews will be conducted in the Xhosa/ Zulu language and refreshments will be provided during the interview.

Please kindly note that your participation in the study is entirely voluntary and there are no direct benefits from participating in this study nor penalties should you wish not to participate in this study. You may withdraw from the study at any time. The interview will be completely confidential and anonymous as I will not be asking for your name or any identifying information. The information you share with me will be securely protected and will only be made accessible to my supervisor. I will be using a pseudonym (false name) to represent you as a participant in my final thesis. If you experience any psychological distress during the interviews, then we will stop the interview and resume at another time. Secondly, a trained counsellor will be made available to provide counselling services to you should you experience any distress. Counselling services will be offered free of charge and will be provided in the comfort of your home by a registered counsellor and social worker. Should you require

long-term psychosocial counselling services, you will be referred to a hospital where long-term post-trauma counselling services will be provided to you. If you agree to participate in the study, please kindly sign the consent form in the space allocated below.

This study will be written up as a research thesis which will be available online through the university library website. If you wish to receive a summary of this report, I will be happy to send it to you upon request (optional). You are most welcome to contact the University of the Witwatersrand Human Research Ethics Committee (Non-Medical) if you have any concerns or grievances regarding the ethical procedures of this study. Their details are as follows: +27(0) 11 717 1408, email: Shaun.Schoeman@wits.ac.za.

Please note that you will be required to sign a consent form after going through this document if you would like to participate in the research project.

Thanking you in this regard

Yours Sincerely

Khuthala Mabetha



Researcher: Khuthala Mabetha, Khuthala.mabetha@wits.ac.za, +27 78 749 2107

Supervisors: Professor Nicole De Wet-Billings, Nicole.dewet@wits.ac.za, +27(0) 11 717 4338

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

APPENDIX F: Participant Information Sheet for Kin caregivers who still have a child alive (English version)

PARTICIPANT INFORMATION SHEET

(for kin caregivers who still have a child alive)

Dear Sir/Madam

My name is Khuthala Mabetha and I am a PhD candidate in Demography and Population Studies at the University of the Witwatersrand. As part of my PhD, I have to undertake a research thesis and the title of my study is "Under-five mortality among children raised in non-orphaned kinship care in South Africa: A Mixed-

Methods study". The aim of this research is to investigate how sociodemographic factors, health-seeking behaviours and familial characteristics of kin caregivers influence under-five mortality among children raised in non-orphaned kinship care in South Africa. I have a keen interest in interviewing you as you are currently a kin caregiver to an under-five child and I would like to obtain your input as it will contribute immensely to this research study.

As part of this study, I would like to invite you to take part in an in-depth structured interview. This interview will take approximately between 90 minutes (1 hour 30 minutes) to 120 minutes (2 hours) as the interview questions are quite extensive. The interview will however not be terminated in the interest of time should you wish to share additional information beyond the estimated time. With your permission, I would also like to record the interview using an audio recorder. Please also be informed that the interviews will be conducted in the Xhosa/Zulu language and refreshments will be provided during the interview.

Please kindly note that your participation in the study is entirely voluntary and there are no direct benefits from participating in this study nor penalties should you wish not to participate in this study. You may withdraw from the study at any time. The interview will be completely confidential and anonymous as I will not be asking for your name or any identifying information. The information you share with me will be securely protected and will only be made accessible to my supervisor. I will be using a pseudonym (false name) to represent you as a participant in my final thesis. If you experience any psychological distress during the interviews, then we will stop the interview and resume at another time. Secondly, a trained counsellor will be made available to provide counselling services to you should you experience any distress.

Counselling services will be offered free of charge and will be provided in the comfort of your home by a registered counsellor and social worker. Should you require long-term psychosocial counselling services, you will be referred to a hospital where long-term post-trauma counselling services will be provided to you. If you agree to participate in the study, please kindly sign the consent form in the space allocated below.

This study will be written up as a research thesis which will be available online through the university library website. If you wish to receive a summary of this report, I will be happy to send it to you upon request (optional). You are most welcome to contact the University of the Witwatersrand Human Research Ethics Committee (Non-Medical) if you have any concerns or grievances regarding the ethical procedures of this study. Their details are as follows: +27(0) 11 717 1408, email: Shaun.Schoeman@wits.ac.za.

Please note that you will be required to sign a consent form after going through this document if you would like to participate in the research project.

Thanking you in this regard

Yours Sincerely

Khuthala Mabetha



Researcher: Khuthala Mabetha, khuthala.mabetha@wits.ac.za, +27 78 749 2107

Supervisors: Professor Nicole De Wet-Billings, Nicole.dewet@wits.ac.za, +27(0) 11 717 4338

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

APPENDIX G: Informed Consent Form (English version)

INFORMED CONSENT FORM
(Suitable for both kin caregivers who still have children who are alive and those who have experienced child death)

I…….. on the day of……2019 have agreed to participate and provide information in the study entitled "Under-five mortality among children raised in non-orphaned kinship care in South Africa: A Mixed-methods study". I have discussed this research project with Khuthala Mabetha and fully understand the intention and nature of the project. Thus, I provide my full consent to participate in this research project. I understand that my participation is voluntary and thus have the complete right to withdraw from the study at any time. I understand that I will not incur any penalties upon refusal to participate or withdraw from the study.

If I have any enquiries about this study, I can freely contact Khuthala Mabetha (kmabetha@gmail.com, 0787492107), ProfessorNicole De Wet-Billings (Nicole.dewet@wits.ac.za) or Professor Clifford Odimegwu (Clifford.Odimegwu@wits.ac.za). If I have any concerns or grievances regarding the ethical procedures of this study, I can contact the University of the Witwatersrand Human Research Ethics Committee (Non-medical) at +27(0) 11 717 1408, email: Shaun.Schoeman@wits.ac.za.

By signing below, I am indicating my consent to (please tick):

☐ Participate in the study
Have this interview recorded

☐ Secondly,

I agree that my participation will remain anonymous YES NO (Please tick)

I agree that the researcher may use anonymous quotes in his / her research report YES NO (Please tick)

I agree that the information I provide may be used other researchers following this project YES NO (Please tick) anonymously by

…… (signature)
…… (name of participant)
…… (date)

Researcher obtaining consent: Khuthala Mabetha

Signature…… Date……

APPENDIX H: Interview guide (kin caregivers who experienced a child death) (English version)

(For kin caregivers who have experienced a child death)

Interviewee Information

Part 1: Demographic information

Relationship to deceased child: …….

Age: …….

Sex: ……..

Level of education……..... Occupation…….

Marital status……

Date of Interview…… Duration of Interview……

Place of Interview……...

Age of deceased at death…….

Part 2: Health-seeking behaviours of kin caregivers and challenges facing kin caregivers

1. How would you describe your overall wellbeing, physically and emotionally, prior to the child's death?
2. Would you say your wellbeing changed at all when you started taking care of the deceased child? How so?
3. Has your health ever prevented you from providing care to the deceased child? If so, in what way?
4. Where do you go or whom do you consult when you are ill?
5. How regularly do you visit the clinic and how do you feel about going to the clinic when you are ill?
6. Is it easy to access the clinic? If not, what would you say are the main factors that hinder easy access to the clinic?

7. Did the deceased child have any known ongoing health issues that required the child to visit a healthcare provider regularly? If so, did the deceased child have any health insurance?
8. Please describe any challenges that could have prevented you from seeking regular medical care and treatment for the deceased child.
9. What did you do when the deceased child fell ill?
10. Please explain any other special needs that the deceased had that you believe required specialised care and support?
11. Would you say you felt somehow equipped to care effectively for the deceased child? If so, how? And if not, why?
12. What did you find difficult about providing care to the deceased child?
13. What other challenges (other than health-related challenges) did you experience while providing care to the deceased child?
14. How did you deal with the challenges of providing care to the deceased child?
15. What do you think could have been done to overcome these challenges?
16. What was the most meaningful part of taking care of the deceased child?
17. Moving forward, what resources would you need to take care of any other children that may be in your care, as well as to overcome any challenges you may encounter in your caregiving?

Part 3: Family environment/ functioning of kin caregivers

1. Could you please share why the deceased child was placed under your care? How long was the deceased child under your care?
2. Did the deceased child have any contact with the biological parents prior to his or her death? If not, why not?
3. What did your roles and responsibilities as a caregiver to the deceased child entail? Did these roles adjust when you became the primary caregiver?
4. Is there anyone else who assisted you in taking care of the deceased child? If so, what is the relationship of the person to the child and in what ways did this person assist in taking care of the deceased child? If not, how did solely providing care have an effect on both you and the deceased child?
5. Can you walk me through a day in your family/ household?
6. Could you please tell me about the quality of your relationship with the deceased child, including that of the deceased child with other members of the family?
7. How did the members of your family feel when the deceased child first started living with you?
8. Were there any changes in the relationships within your family ever since you assumed care of the deceased child? If so, please describe how the relationships within your family changed since taking on the care of the deceased child?
9. Please describe any challenges that you experienced as a family while the deceased child was under your care?
10. Have you ever experienced any problems or dysfunctions in your family while the deceased child was under your care? If so, what problems did you come across?
11. Please describe your family's living and financial situation prior to the child's death.

APPENDIX I: Interview guide (kin caregivers who still have a child alive) (English version)

(For kin caregivers who still have a child alive)

Interviewee Information

Part 1: Demographic information

Relationship to child: …….
Age: …….
Sex: …….....
Level of education……..... Occupation…….
Marital status……
Date of Interview……
Duration of Interview……
Place of Interview……...
Age of child…….

Part 2: Health-seeking behaviours of kin caregivers and challenges facing kin caregivers

1. How would you describe your overall wellbeing, physically and emotionally, ever since you started taking care of this child?
2. Would you say your wellbeing changed at all when you started taking care of this child? How so?
3. Has your health ever prevented you from providing care to the child? If so, in what way?
4. Where do you go or whom do you consult when you are ill?
5. How regularly do you visit the clinic and how do you feel about going to the clinic when you are ill?
6. Is it easy to access the clinic? If not, what would you say are the main factors that hinder easy access to the clinic?
7. Does the child you are providing primary care to have any known ongoing health issues that require the child to visit a healthcare provider regularly? If so, does the child have any health insurance?
8. Please describe any challenges that prevent you from seeking regular medical care and treatment for the child.
9. What do you normally do when the child falls ill?
10. Please explain any other special needs that the child has that you believe require specialised care and support?
11. Would you say you feel somehow equipped to care effectively for the child? If so, how? And if not, why?
12. What do you find difficult about providing care to the child?
13. What other challenges (other than health-related challenges) do you experience while providing care to the child?
14. How do you deal with the challenges of providing care to the child?

15. What do you think should be done to overcome these challenges?
16. What is the most meaningful part of taking care of the child?
17. Moving forward, what resources would you need to take care of this child, as well as to overcome any challenges you may encounter in your caregiving?

Part 3: Family environment/ functioning of kin caregivers

1. Could you please share why the child was placed under your care? How long has the child been under your care?
2. Does the child have any contact with the biological parents? If no, why not?
3. What do your roles and responsibilities as a caregiver to the child entail? Did these roles adjust when you became the primary caregiver?
4. Is there anyone else who is assisting you in taking care of the child? If so, what is the relationship of the person to the child and in what ways does this person assist in taking care of the child? If not, how does solely providing care have an effect on both you and the child?
5. Can you walk me through a day in your family/ household?
6. Could you please tell me about the quality of your relationship with the child, including that of the child with other members of the family?
7. How did the members of your family feel when the child first started living with you?
8. Were there any changes in the relationships within your family ever since you assumed care of the child? If so, please describe how the relationships within your family changed since taking on the care of the child?
9. Please describe any challenges that you have experienced as a family while the child has been under your care?
10. Have you ever experienced any problems or dysfunctions in your family since the child has been under your care? If so, what problems did you come across?
11. Please describe your family's living and financial situation.

APPENDIX J: Participant Information sheet for kin caregivers who experienced a child death (Xhosa version)

IPHEPHA LOLWAZI

(Kubanakekeli abaye bafumana ukufa komntwana)

Mnumzana/ Nkosikazi othandekayo

Igama lam ndingu Khuthala Mabetha kwaye ndimgumfundi we PhD kwi Demography and Population Studies (Izifundo zoluntu) kwiyunivesithi yeWitwatersrand. Njengenxalenye yezifundo zam, kufuneka ndiqhube uphando lweengcaphephe kwaye isihloko sesifundo sam sithi "under-five mortality among children raised in non-orphaned kinship care in South Africa: A Mixed-Methods Study". Injongo yoluphando kukufumanisa indlela iimeko zentlalo-ntle, iziphumo zokufuna impilo kunye neempawu zentsapho zichaphazela njani ukufa kwabantwana abangaphantsi kwamahlanu abakhuliswe ngononophelo lwezontlalontle eMzantsi Afrika. Ndingathanda kakhulu ukuxoxisana nawe ukuze wabelane ngamava akho kwinqanaba lolufundo.

Njengenxalenye yalesifundo, ndingathanda ukumema ukuba uthathe inxaxheba kwingxoxo-ndlebe. Olu dliwano-ndlebe luza kuthatha phantse phakathi kwemizuzu engama 90 (1 iyure 30 imizuzu) ukuya kwii-120 imizuzu (2 iiyure) ngenxa yokuba imibuzo yodliwano-ndlebe ibanzi kakhulu. Udliwano-ndlebe aluyi kupheliswa ngentshiseko yexesha xa unqwenela ukwabelana ngolwazi olongezelelweyo ngaphaya kwexesha eliqikelelwayo. Kunye nemvume yakho, ndingathanda ukurekhoda udliwano-ndlebe ndisebenzisa i-rekodi yomsindo. Ndicela ukukwazisa ukuba udliwano-ndlebe luyakuqhutywa ngolwimi lwesiXhosa kwaye ukutya neziphuzo ziya kunikwa ngexesha lodliwano-ndlebe.

Nceda uqaphele ngokuqinisekileyo ukuba inxaxheba yakho kwisifundo iphela ngokuzithandela kwaye akukho zibonelelo ezizodwa ngokuthatha inxaxheba kulolu cwaningo okanye zihlwayo xa unqwenela ukuba ungathathi nxaxheba kule sifundo. Unemvume yokurhoxisa kwisifundo nanini na. Udliwano-ndlebe luya kuba yimfihlo ngokupheleleyo kwaye lungaziwa ngokuba andiyi kucela igama lakho okanye nayiphi na inkcazelo yokuchonga. Ingcasiso oyabelanayo nayo iya kukhuselwa ngokukhuselekileyo kwaye iya kufakwa kuphela kumphathi wam wesiphando. Ndiza kusebenzisa igama lobuxoki ukukumela njengothatha inxaxheba kwinqumle yam yokugqibela. Ukuba ufumana ubunzima okanye uxinzelelo ngexesha lodliwano-ndlebe, ngoko siya kumisa udliwano-ndlebe kwaye sibuyele kwakhona ngelinye ixesha. Okwesibini, umcebisi oqeqeshweyo uya kufumaneka ukubonelela ngeenkonzo zokunika iingcebiso kuwe ukuba ufumane nayiphi na inkxwaleko. Iinkonzo zokucebisa ziya kunikelwa ngaphandle kwentlawulo kwaye ziya kunikwa kwintuthuzelo yendlu yakho ngumcebisi obhalisiweyo kunye nentlalontle. Ukuba ufuna iinkonzo zengcebiso zesikhathi eside, uya kubhekiselwa esibhedlele apho kuya kunikwa khona iinkonzo zengcebiso emva kwexesha elide. Ukuba uyavuma ukuthatha inxaxheba kwisifundo, nceda usayine ifom yefom yemvume kwisithuba esabelwe ngezantsi.

Esi sifundo siyakubhalwa njengengqungquthela yophando eya kufumaneka kwi-intanethi kwiwebhusayithi yamathala eyunivesithi. Ukuba unqwenela ukufumana isishwankathelo sengxelo, ndiya kuvuyela ukwabelana nawe. Uyakwamkeleka kakhulu ukuqhagamshelana neYunivesithi yeWitwatersrand yoLuntu lweKomiti yeeNkcazo zoPhando (engeyonyango) ukuba unayo nayiphi na inkxalabo okanye izikhalazo malunga nemigaqo yokuziphatha kwesi sifundo. Iinkcukacha zabo zilandelayo: +27(0) 11 717 1408, imeyile: Shaun.Schoeman@wits.ac.za.

Nceda uqaphele ukuba uyakufunwa ukuba usayine ifomu yokuvuma emva kokuya kweli phepha ukuba unqwenela ukuthatha inxaxheba kwiprojekthi yophando.

Ndibulela kule nkalo

Ozithobileyo

Khuthala Mabetha



Umphandi: Khuthala Mabetha, Khuthala.mabetha@wits.ac.za, +27 78 749 2107

Abaphathi beephando: Professor Nicole De Wet-Billings, Nicole.dewet@wits.ac.za, +27(0) 11 717 4338

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

APPENDIX K: Participant Information sheet for kin caregivers who still have a child alive (Xhosa version)

IPHEPHA LOLWAZI

(Kubanakekeli abasenabantwana abaphilayo)

Mnumzana/ Nkosikazi othandekayo

Igama lam ndingu Khuthala Mabetha kwaye ndimgumfundi we PhD kwi Demography and Population Studies (Izifundo zoluntu) kwiyunivesithi yeWitwatersrand. Njengenxalenye yezifundo zam, kufuneka ndiqhube uphando lweengcaphephe kwaye isihloko sesifundo sam sithi "under-five mortality among children raised in non-orphaned kinship care in South Africa: A Mixed-Methods Study". Injongo yoluphando kukufumanisa indlela iimeko zentlalo-ntle, iziphumo zokufuna impilo kunye neempawu zentsapho zichaphazela njani ukufa kwabantwana abangaphantsi kwamahlanu abakhuliswe ngononophelo lwezontlalontle eMzantsi Afrika. Ndingathanda ukuxoxisana nawe njengamanje unakekela umntana uneminyaka engaphantsi kwemihlanu kwaye ndifuna ukufumana igalelo lakho njengoko liya kuba negalelo elikhulu kule sifundo.

Njengenxalenye yalesifundo, ndingathanda ukumema ukuba uthathe inxaxheba kwingxoxondlebe. Olu dliwano-ndlebe luza kuthatha phantse phakathi kwemizuzu engama 90 (1 iyure 30 imizuzu) ukuya kwii-120 imizuzu (2 iiyure) ngenxa yokuba imibuzo yodliwano-ndlebe ibanzi kakhulu. Udliwano-ndlebe aluyi kupheliswa ngentshiseko yexesha xa unqwenela ukwabelana ngolwazi olongezelelweyo ngaphaya kwexesha eliqikelelwayo. Kunye nemvume yakho, ndingathanda ukurekhoda udliwano-ndlebe ndisebenzisa i-rekodi yomsindo. Ndicela ukukwazisa ukuba udliwano-ndlebe luyakuqhutywa ngolwimi lwesiXhosa kwaye ukutya neziphuzo ziya kunikwa ngexesha lodliwano-ndlebe.

Nceda uqaphele ngokuqinisekileyo ukuba inxaxheba yakho kwisifundo iphela ngokuzithandela kwaye akukho zibonelelo ezizodwa ngokuthatha inxaxheba kulolu cwaningo okanye zihlwayo xa unqwenela ukuba ungathathi nxaxheba kule sifundo. Unemvume yokurhoxisa kwisifundo nanini na. Udliwano-ndlebe luya kuba yimfihlo ngokupheleleyo kwaye lungaziwa ngokuba andiyi kucela igama lakho okanye nayiphi na inkcazelo yokuchonga. Ingcasiso oyabelanayo nayo iya kukhuselwa ngokukhuselekileyo kwaye iya kufakwa kuphela kumphathi wam wesiphando.

Ndiza kusebenzisa igama lobuxoki ukukumela njengothatha inxaxheba kwinqumle yam yokugqibela. Ukuba ufumana ubunzima okanye uxinzelelo ngexesha lodliwano-ndlebe, ngoko siya kumisa udliwano-ndlebe kwaye sibuyele kwakhona ngelinye ixesha. Okwesibini, umcebisi oqeqeshweyo uya kufumaneka ukubonelela ngeenkonzo zokunika iingcebiso kuwe ukuba ufumane nayiphi na inkxwaleko. Iinkonzo zokucebisa ziya kunikelwa ngaphandle kwentlawulo kwaye ziya kunikwa kwintuthuzelo yendlu yakho ngumcebisi obhalisiweyo kunye nentlalontle. Ukuba ufuna iinkonzo zengcebiso zesikhathi eside, uya kubhekiselwa esibhedlele apho kuya

kunikwa khona iinkonzo zengcebiso emva kwexesha elide. Ukuba uyavuma ukuthatha inxaxheba kwisifundo, nceda usayine ifom yefom yemvume kwisithuba esabelwe ngezantsi.

Esi sifundo siyakubhalwa njengengqungquthela yophando eya kufumaneka kwi-intanethi kwiwebhusayithi yamathala eyunivesithi. Ukuba unqwenela ukufumana isishwankathelo sengxelo, ndiya kuvuyela ukwabelana nawe. Uyakwamkeleka kakhulu ukuqhagamshelana neYunivesithi yeWitwatersrand yoLuntu lweKomiti yeeNkcazo zoPhando (engeyonyango) ukuba unayo nayiphi na inkxalabo okanye izikhalazo malunga nemigaqo yokuziphatha kwesi sifundo. Iinkcukacha zabo zilandelayo: +27(0) 11 717 1408, imeyile: Shaun.Schoeman@wits.ac.za.

Nceda uqaphele ukuba uyakufunwa ukuba usayine ifomu yokuvuma emva kokuya kweli phepha ukuba unqwenela ukuthatha inxaxheba kwiprojekthi yophando.

Ndibulela kule nkalo

Ozithobileyo

Khuthala Mabetha



Umphandi: Khuthala Mabetha, Khuthala.mabetha@wits.ac.za, +27 78 749 2107

Abaphathi beephando: Professor Nicole De Wet-Billings, Nicole.dewet@wits.ac.za, +27(0) 11 717 4338

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

APPENDIX L: Informed Consent Form (Xhosa version)

IFOMU YOKUVUMA

(Ukufanelekela bobabini abanonophelo abasenabantwana abasaphila kunye nalabo abaye bafumana ukufa kwabantwana)

Mna…….. ngomhla we…… 2019 ndiyavuma ukuthatha inxaxheba kwaye ukunikezela ngolwazi kwisifundo esithi "Under-five mortality among children raised in nonorphaned kinship care in South Africa". Ndixubushe le projekthi yophando kunye noKhuthala Mabetha kwaye ndiyiqonda ngokupheleleyo injongo kunye nemvelo yeprojekthi. Ngaloo ndlela, ndinika imvume yam ngokugcweleyo yokuthatha inxaxheba kule projekthi yophando. Ndiyaqonda ukuba inxaxheba yam inokuzithandela kwaye ngoko ke inelungelo elipheleleyo lokurhoxisa kwisifundo nanini na. Ndiyaqonda ukuba andiyi kubakho naziphi na izigwebo ngenxa yokwenqaba ukuthatha inxaxheba okanye ukuhoxisa kwisifundo.

Ukuba ndinemibuzo malunga nale sifundo, ndiyakwazi ukuthetha ngokukhululekile no Khuthala Mabetha (kmabetha@gmail.com, +27 78 749 2107), uProf Nicole De Wet-Billings (Nicole.DeWet@wits.ac.za) okanye uProfesa Clifford Odimegwu (Clifford.Odimegwu@wits.ac.za). Ukuba ndineenkxalabo okanye izikhalazo malunga neenkqubo zokuziphatha zolu cwaningo,ndinokuqhaghamshelana neYunivesithi yaseWitwatersrand Komiti Yokuziphatha YoPhando (engeyonyango) kwi +27(0) 11 717 1408, imeyile: Shaun.Schoeman@wits.ac.za.

Ngokusayinela ngezantsi, ndibonisa imvume yam (sicela ucacise):

☐ Ukuthatha inxaxheba kwisifundo

☐ Ndiyavuma ukuba lo dliwano-ndlebe lubhalwe

Okwesibini,

Ndiyavuma ukuba inxaxheba yam iya kuhlala ingaziwa EWE HAYI (Sicela ucacise)

Ndiyavuma ukuba umphandi angasebenzisa izicaphuno ezingaziwa kwingxelo yakhe yophando EWE HAYI (Sicela ucacise)

Ndiyavuma ukuba ulwazi olunikelayo lungasetyenziswa ngabanye abaphandi.

APPENDIX M: Interview guide for kin caregivers who experienced a child death (Xhosa version)

(Kubanakekeli abaye bafumana ukufa komntwana)

Interviewee information

Inxalenye 1: Ulwazi lwabantu

Ubudlelwane nomntana ongasekho: …….

Ubudala: ……. Ngesini:

…….....

Nqanaba lemfundo……....

Msebenzi…….

Isimo sakho somtshato ……

Umhla wo dliwano-ndlebe……

Ixesha lo dliwano-ndlebe……

Indawo yo dliwano-ndlebe……...

Ubudala bomntana ongasekho ekufeni…….

<u>Inxalenye 2: Ukuziphatha okufunayo ngempilo kwintsapho kunye nemingeni ejongene nabanonophelo</u>

1. Ungayichaza njani impilo yakho yonke, ngokomzimba nangokomzwelo, ngaphambi kokusweleka komntana?
2. Ngaba ubungatsho ukuba impilo yakho yatshintsha na xa uqala ukunyamekela umntana ongasekho? Kanjani?
3. Ngaba impilo yakho ikuthintele/ phazamisile ekunakekeleni umntana ongasekho? Ukuba kunjalo, ngayiphi indlela?

4. Uya kuphi na xa ugula okanye uya kubani na xa ugula?
5. Uhlala u tyelela iklinikhi rhoqo kangakanani na kwaye uziva njani ngokuya kwiklinikhi xa ugula?
6. Ngaba kulula ukufikelela kwikliniki? Ukuba akunjalo, ungathi zeziphi izinto okanye izizathu ezithintela ukufikelela okulula kwiklinikhi?
7. Ingaba umtana ongasekho ebenemiba yempilo eqhubekayo eyaziwayo ebeyifuna ukuba umntana a tyelele ugqirha rhoqo? Ukuba kunjalo, ngaba umntana ebenayo nayiphi na inkxaso yonyango okanye inshuwalense yezempilo?
8. Nceda uchaze nayiphina imingeni ebenokukunqanda ukuba ufune unyango lomntana, ukuba kukho na.
9. Nceda uchaze nayiphi na enye imfuno ekhethekileyo le umntana ebenayo, okholwa ukuba ibidinga unakekelo nenkxaso ekhethekileyo?
10. Ngaba ubungathi uvakelelwe ngandlela-thile ukunyamekela umntana ongasekho? Ukuba kunjalo, njani? Ukuba akunjalo, kutheni?
11. Yintoni eyakufumanisa nzima ngokunyamekela umntana ongasekho?
12. Ziziphi ezinye iingxaki (ngaphandle kwemingeni enxulumene nempilo) owaye wafumana ngayo ngelixa unika unonophelo kumntana?
13. Unokuhlangabezana njani nemingeni yokunyamekela umntana ongasekho?
14. Ucinga ukuba bekunokwenziwa ntoni ukuze unqobe le mingeni?
15. Iyiphi inxalenye ongathi ibibalulekile kuwe ekunakekeleni umntana?
16. Ukuqhubela phambili, zeziphi izixhobo onokuzidingayo ukuba unakekele nawuphi na omnye umntana onokunyamekela kwakho, kunye nokunqoba nayiphi na imingeni ongayifumana nayo ekunyamekelweni kwakho?

Inxalenye 3: Imeko yosapho/ intsapho esebenzayo yabanakekeli

1. Ngaba unokwenza uxoxe ukuba kutheni umntana ongasekho ebekwe phantsi kwakho? Wahlala ixesha elingakanani nomtana?
2. Ngaba umntana ongasekho ebenonxibelelwano na nabazali bakhe ngaphambi kokusweleka kwakhe? Ukuba akunjalo, kutheni?
3. Ziziphi iimbophelelo/ iindima zakho kunye noxanduva lwakho kumntana ongasekho njengomgcini? Ngaba le misebenzi yahlengahlengiswa xa waba ngumncedisi oyintloko?
4. Ngaba bekukho nawuphi na oncedisayo ekunyamekeleni umntana ongasekho? Ukuba kunjalo, lubuphi ubudlelwane bomntu kumntana kanye naziphi na izindlela ayenceda ngazo lo mntu ekunyamekeleni komntana ongasekho? Ukuba akunjalo, ukubonelela ngononophelo kukuchaphazele njani wena nomtana?
5. Ngaba unganditshela ngomhla oqhelekileyo kwintsapho/ indlu yakho?

6. Ngaba nceda undixelele ngomgangatho wobudlelwane bakho nomntana ongasekho, kunye nobudlelwane bomntana ongasekho namanye amalungu entsapho?

7. Amalungu entsapho yakho azive njani xa umntana ongasekho eqala ukuhlala nawe?

8. Ngaba kukho na utshintsho kubudlelwane phakathi kwentsapho yakho ukususela xa uqale ukunyamekela umntana ongasekho? Ukuba kunjalo, nceda uchaze indlela ubuhlobo phakathi kwentsapho yakho batshintsha ngayo emva kokunyamekela umntana ongasekho?

8. Nceda uchaze nayiphina imingeni oye waba nayo njengentsapho ngelixa umntana ongasekho ephantsi kokunyamekela kwakho?

9. Ngaba wakha wafumana iingxaki okanye iintsholongwane kwintsapho yakho ngelixa umntana ongasekho ephantsi kokunyameke la kwakho? Ukuba kunjalo, zeziphi iingxaki owazifumanayo?

10. Nceda uchaze imeko yokuphila kunye nemali yentsapho yakho ngaphambi kokusweleka komntana.

APPENDIX N: Interview guide for kin caregivers who still have a child alive (Xhosa version)

(Kubanakekeli abasenabantwana abaphilayo)

Interviewee Information

Inxalenye 1: Ulwazi lwabantu

Ubudlelwane nomntana: …….

Ubudala: ……. Ngesini:

…….....

Nqanaba lemfundo……....

Msebenzi…….

Isimo sakho somtshato ……

Umhla wo dliwano-ndlebe……

Ixesha lo dliwano-ndlebe……

Indawo yo dliwano-ndlebe……...

Ubudala bomntana …….

Inxalenye 2: Ukuziphatha okufunayo ngempilo kwintsapho kunye nemingeni ejongene nabanonophelo

1. Ungayichaza njani impilo yakho yonke, ngokomzimba nangokomzwelo, ukususela ekubeni uqale ukunyamekela lo mntana?
2. Ngaba ubungatsho ukuba impilo yakho yatshintsha xa usuqala ukunyamekela lo mntana? Kanjani?

3. Ngaba impilo yakho ikuthintele/ phazamisile ekunakekeleni umntana? Ukuba kunjalo, ngayiphi indlela?
4. Uya kuphi na xa ugula okanye uya kubani na xa ugula?
5. Uhlala u tyelela iklinikhi rhoqo kangakanani na kwaye uziva njani ngokuya kwiklinikhi xa ugula?
6. Ngaba kulula ukufikelela kwikliniki? Ukuba akunjalo, ungathi zeziphi izinto okanye izizathu ezithintela ukufikelela okulula kwiklinikhi?
7. Ingaba umtana unikela ngononophelo olusisiseko kuye unayo nayiphi na imiba yempilo eqhubekayo efuna ukuba umntana a tyelele ugqirha rhoqo? Ukuba kunjalo, ngaba umntana unayo nayiphi na inkxaso yonyango okanye inshuwalense yezempilo?
8. Nceda uchaze nayiphina imingeni ekunqanda ukuba ufune unyango lwezempilo rhoqo lomntana, ukuba kukho na.
9. Yintoni oyenza njalo xa umntana egula?
10. Nceda uchaze nayiphi na enye imfuno ekhethekileyo enokuthi umntana uykholelwa ukuba unonophelo kunye nenkxaso ekhethekileyo.
11. Ngaba ungathi uziva ukhululekile ukunyamekela umntana? Ukuba kunjalo, njani? Ukuba akunjalo, kutheni?
12. Yintoni oyifumana nzima ekunyamekeleni umntana?
13. Ziziphi ezinye iingxaki (ngaphandle kwemingeni enxulumene nempilo) oyifumanayo ngelixa unika unonophelo kumntana?
14. Unokuhlangabezana njani nemingeni yokunyamekela umntana?
15. Yintoni ocinga ukuba yenziwe ukunqoba le miqobo?
16. Yintoni inxalenye ebaluleke kakhulu yokunyamekela umntana?
17. Ukuqhubela phambili, zeziphi izixhobo onokuzidingayo ukuba unakekele lo mntana, kunye nokunqoba nayiphi na imingeni ongayifumana nayo ekunyamekelweni kwakho?

Inxalenye 3: Imeko yosapho/ intsapho esebenzayo yabanakekeli

1. Ngaba unokwenza uxoxe ukuba kutheni umntana ebekwe phantsi kwakho? Umntana uhleli ixesha elingakanani phantsi kwakho?
2. Ingaba umntana unxibelelana nabazali bakhe? Ukuba akunjalo, kutheni?
3. Ziziphi iimbophelelo/ iindima zakho kunye noxanduva lwakho kumntana njengomgcini? Ngaba le misebenzi yahlengahlengiswa xa waba ngumncedisi oyintloko?
4. Ngaba kukho nawuphi na onokukunceda ekunyamekeleni umntana? Ukuba kunjalo, lubuphi ubudlelwane bomntu kumntana kanye ziziphi na izindlela anceda ngazo lo mntu ekunyamekeleni umntana? Ukuba akunjalo, ukunyamekela umntana wedwa kunokuchaphazela njani wena nomtana?
5. Ngaba unganditshela ngomhla oqhelekileyo kwintsapho/ indlu yakho?

6. Ngaba nceda undixelele ngomgangatho wobudlelwane bakho nomntana, kunye nobudlelwane bomntana namanye amalungu entsapho?

7. Amalungu entsapho yakho azive njani xa umntana eqala ukuhlala nawe?

8. Ngaba kukho na utshintsho kubudlelwane phakathi kwentsapho yakho ukususela xa uqale ukunyamekela umntana? Ukuba kunjalo, nceda uchaze indlela ubuhlobo phakathi kwentsapho yakho batshintsha ngayo emva kokunyamekela umntana?

8. Nceda uchaze nayiphina imingeni oye waba nayo njengentsapho ngelixa umntana ephantsi kokunyamekela kwakho?

9. Ngaba wakha wafumana iingxaki okanye iintsholongwane kwintsapho yakho ukususela umtana ephantsi kwenkathalo yakho? Ukuba kunjalo, yiziphi iingxaki ozifumanayo?

10. Nceda uchaze imeko yokuphila kunye neemeko zemali zentsapho yakho.

APPENDIX O: Participant Information Sheet for kin caregivers who experienced a child death (Zulu version)

(Kubanakekeli abaye babhekana nokufa kwengane)

Mnumzana / Nkosikazi othandekayo

Igama lami ngu Khuthala Mabetha futhi ngingumfundi we PhD ezifundweni ze Demography and Population Studies (ezifundweni zabantu) enyuvesi yase Witwatersrand. Njengengxenye ye PhD yami, kufanele ngenze ucwaningo lwesikhangiso futhi isihloko sesifundo sami sithi "Under-five mortality among children raised in non-orphaned kinship care in South Africa: A Mixed-Methods study". Inhloso yalolucwaningo ukuphenya ukuthi izici zamademographics, izimo zokufuna impilo kanye nezici zomndeni zokunakekelwa kwezingane zithonya ukufa kwabantu abangaphansi kweminyaka emihlanu phakathi kwezingane ezikhuliswe ekunakekelweni kohlobo lwezintandane eNingizimu Afrika. Nginesithakazelo esijulile ekuxoxeni nawe ukuze ngibelane ngokuhlangenwe nakho kwakho ngendaba yesifundo.

Njengengxenye yalolu cwaningo, ngingathanda ukumema ukuthi uhlanganyele kwingxoxo ejulile ehleliwe. Le ngxoxo izothatha cishe phakathi kwamaminithi angu 90 (ihora elingu 30 imizuzu) kuya kumaminithi angu 120 (amahora amabili) njengoba imibuzo yokuxoxisana iningi kakhulu. Le ngxoxo ngeke ichithe isikhathi esinqunyiwe uma ufisa ukwabelana ngolwazi olwengeziwe ngaphezu kwesikhathi esilinganiselwe. Ngemvume yakho, ngingathanda ukurekhoda ingxoxo ngokusebenzisa irekhoda yomsindo. Sicela wazi ukuthi izingxoxo zizoqhutshwa ngolimi lwesiZulu futhi ukudla neziphuzo zizobakhona ngesikhathi sokuxoxisana.

Sicela uthathe ngomusa ukuthi ukubamba iqhaza lwakho kulesi sifundo kuphelele ngokuzithandela futhi azikho izinzuzo ngqo ngokuhlanganyela kulolu cwaningo noma izijeziso uma ufisa ukungabambi iqhaza kulolu cwaningo. Ungase uhoxise isifundo nganoma yisiphi isikhathi. Le ngxoxo izoba yimfihlo ngokuphelele futhi ingaziwa ngoba ngeke ngibuze igama lakho nanoma yiluphi ulwazi oluhlonzayo. Ulwazi olwabelana name luzovikelwa ngokuvikelekile futhi luzofinyelelwa kuphela kumphathi wami wocwaningo. Ngizobe ngisebenzisa igama eliyimfihlo (igama elingamanga) ukukumela njengomhlanganyeli kumqondo wami wokugcina. Uma uhlangabezana nanoma yikuphi ukucindezeleka phakathi nesikhathi sokuxoxisana, khona ke sizoyeka ukuxoxisana bese siqhubeke ngesinye isikhathi. Okwesibili, umeluleki oqeqeshwe uzotholakala ukuhlinzeka ngezinsizakalo zokwelulekwa kuwe uma uhlangabezana nanoma yikuphi ukucindezeleka. Izinsizakalo zokweluleka zizonikwa mahhala futhi zizonikwa kwinduduzo yendlu yakho ngumeluleki obhalisiwe nesisebenzi sezenhlalakahle. Uma udinga izinsizakalo zokwelulekwa kwengqondo zesikhathi eside, uzothunyelwa esibhedlela lapho kuzohlinzekwa khona izinsizakalo zokweluleka ngemuva kwesikhathi eside. Uma uvuma ukubamba iqhaza esifundweni, sicela usayine ngomusa ifomu lesivumelwano kwisikhala esabelwe ngezansi.

Lolu cwaningo luzobhalwa njengengqungqunthela yocwaningo oluzotholakala ku intanethi ngewebhulali leyunivesithi. Uma ufisa ukuthola isifinyeto salombiko, ngizojabula ukusithumela kuwe ngenkathi yesicelo sakho (ngokuzithandela). Wamukelekile kakhulu ukuxhumana neyunivesithi yenkomfa yokuziphatha yocwaningo lomuntu (engeyona

yezokwelapha) uma unenkinga noma izikhalazo mayelana nezinqubo zokuziphatha zalesi sifundo. Imininingwane yabo ilandelayo: +27(0) 11 717 1408, imeyili: Shaun.Schoeman@wits.ac.za.

Sicela uqaphele ukuthi uzodingeka ukuthi usayine ifomu lokuvuma ngemuva kokungena kuleli dokhumenti uma ungathanda ukubamba iqhaza kuphrojekthi yokucwaninga.

Ngikubonga ngalokhu

Ozithobayo

Khuthala Mabetha



Umcwaningi: Khuthala Mabetha, Khuthala.mabetha@wits.ac.za, +27 78 749 2107

Abaphathi bocwaningo: Professor Nicole De Wet-Billings, Nicole.dewet@wits.ac.za, +27(0) 11 717 4338

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

APPENDIX P: Participant Information Sheet for kin caregivers who still have a child alive (Zulu version)

ISHIDI LOLWAZI LOMHLANGANYELI

(Kubanakekeli abasenayo ingane ephilayo)

Mnumzana / Nkosikazi othandekayo

Igama lami ngu Khuthala Mabetha futhi ngingumfundi we PhD ezifundweni ze Demography and Population Studies (ezifundweni zabantu) enyuvesi yase Witwatersrand. Njengengxenye ye PhD yami, kufanele ngenze ucwaningo lwesikhangiso futhi isihloko sesifundo sami sithi "Under-five mortality among children raised in non-orphaned kinship care in South Africa: A Mixed-Methods study". Inhloso yalolucwaningo ukuphenya ukuthi izici zamademographics, izimo zokufuna impilo kanye nezici zomndeni zokunakekelwa kwezingane zithonya ukufa kwabantu abangaphansi kweminyaka emihlanu phakathi kwezingane ezikhuliswe ekunakekelweni kohlobo lwezintandane eNingizimu Afrika. Nginesithakazelo esijulile ekuxoxeni nawe njengamanje njengoba ungumnakekeli wengane engaphansi kweminyaka emihlanu futhi ngingathanda ukuthola umbono wakho njengoba uzofaka kakhulu kulolu cwaningo locwaningo.

Njengengxenye yalolu cwaningo, ngingathanda ukumema ukuthi uhlanganyele kwingxoxo ejulile ehleliwe. Le ngxoxo izothatha cishe phakathi kwamaminithi angu 90 (ihora elingu 30 imizuzu) kuya kumaminithi angu 120 (amahora amabili) njengoba imibuzo yokuxoxisana iningi kakhulu. Le ngxoxo ngeke ichithe isikhathi esinqunyiwe uma ufisa ukwabelana ngolwazi olwengeziwe ngaphezu kwesikhathi esilinganiselwe. Ngemvume yakho, ngingathanda ukurekhoda ingxoxo ngokusebenzisa irekhoda yomsindo. Sicela wazi ukuthi izingxoxo zizoqhutshwa ngolimi lwesiZulu futhi ukudla neziphuzo zizobakhona ngesikhathi sokuxoxisana.

Sicela uthathe ngomusa ukuthi ukubamba iqhaza lwakho kulesi sifundo kuphelele ngokuzithandela futhi azikho izinzuzo ngqo ngokuhlanganyela kulolu cwaningo noma izijeziso uma ufisa ukungabambi iqhaza kulolu cwaningo. Ungase uhoxise isifundo nganoma yisiphi isikhathi. Le ngxoxo izoba yimfihlo ngokuphelele futhi ingaziwa ngoba ngeke ngibuze igama lakho nanoma yiluphi ulwazi oluhlonzayo. Ulwazi olwabelana name luzovikelwa ngokuvikelekile futhi luzofinyelelwa kuphela kumphathi wami wocwaningo. Ngizobe ngisebenzisa igama eliyimfihlo (igama elingamanga) ukukumela njengomhlanganyeli kumqondo wami wokugcina. Uma uhlangabezana nanoma yikuphi ukucindezeleka phakathi nesikhathi sokuxoxisana, khona ke sizoyeka ukuxoxisana bese siqhubeke ngesinye isikhathi. Okwesibili, umeluleki oqeqeshwe uzotholakala ukuhlinzeka ngezinsizakalo zokwelulekwa kuwe uma uhlangabezana nanoma yikuphi ukucindezeleka. Izinsizakalo zokweluleka zizonikwa mahhala futhi zizonikwa kwinduduzo yendlu yakho ngumeluleki obhalisiwe nesisebenzi sezenhlalakahle. Uma udinga izinsizakalo zokwelulekwa kwengqondo zesikhathi eside, uzothunyelwa esibhedlela lapho kuzohlinzekwa khona izinsizakalo zokweluleka ngemuva kwesikhathi eside. Uma uvuma ukubamba iqhaza esifundweni, sicela usayine ngomusa ifomu lesivumelwano kwisikhala esabelwe ngezansi.

Lolu cwaningo luzobhalwa njengengqungqunthela yocwaningo oluzotholakala ku intanethi ngewebhulali leyunivesithi. Uma ufisa ukuthola isifinyeto salombiko, ngizojabula ukusithumela kuwe ngenkathi yesicelo sakho (ngokuzithandela). Wamukelekile kakhulu ukuxhumana neyunivesithi yenkomfa yokuziphatha yocwaningo lomuntu (engeyona yezokwelapha) uma unenkinga noma izikhalazo mayelana nezinqubo zokuziphatha zalesi sifundo. Imininingwane yabo ilandelayo: +27(0) 11 717 1408, imeyili: Shaun.Schoeman@wits.ac.za.

Sicela uqaphele ukuthi uzodingeka ukuthi usayine ifomu lokuvuma ngemuva kokungena kuleli dokhumenti uma ungathanda ukubamba iqhaza kuphrojekthi yokucwaninga.

Ngikubonga ngalokhu

Ozithobayo

Khuthala Mabetha



Umcwaningi: Khuthala Mabetha, Khuthala.mabetha@wits.ac.za, +27 78 749 2107

Abaphathi bocwaningo: Professor Nicole De Wet, Nicole.dewet@wits.ac.za, +27(0) 11 717 4338

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

APPENDIX Q: Consent Form (Zulu version)

IFOMU LESIVUMELWANO

(Kufanelekile kubanakekeli abasenabantwana abaphilayo nalabo abantwana babo abangasekho)

Mina……..ngosuku……2019 ngiyavuma ukubamba iqhaza futhi nginikeze ulwazi esifundweni esinesihloko esithi "Under-five mortality among children raised in non-orphaned kinship care in South Africa: A Mixed-methods study". Ngixoxe ngalolu cwaningo locwaningo noKhuthala Mabetha futhi ngiyaqonda ngokugcwele injongo nenhlobo yephrojekthi. Ngakho ke, nginikeza imvume yami ephelele yokuhlanganyela kule phrojekthi yophenyo. Ngiyaqonda ukuthi ukubamba iqhaza kwami kungukuzithandela futhi ngakho ke kunelungelo eliphelele lokuhoxisa esifundweni nganoma yisiphi isikhathi. Ngiyaqonda ukuthi ngeke ngithole noma iyiphi inhlawulo yokwenqaba ukubamba iqhaza noma ukuhoxisa esifundweni.

Uma nginemibuzo ngalolu cwaningo, ngiyakwazi ukuxhumana ngokukhululekile noKhuthala Mabetha (kmabetha@gmail.com, 0787492107), Professor Nicole De Wet (Nicole.dewet@wits.ac.za) noma uProfessor Clifford Odimegwu (Clifford.Odimegwu@wits.ac.za). Uma nginezinkinga noma izikhalazo zokuziphatha zalesi sifundo, ngingathintana neKomidi leKomiti Yezokuziphatha Zomsebenzi Wocwaningo LwaseWitwatersrand (okungewona ukwelashwa) ku +27(0) 11 717 1408, i imeyili: Shaun.Schoeman@wits.ac.za.

Ngokusayina ngezansi, ngibonisa imvume yami (sicela ubhale):

☐ Bamba iqhaza esifundweni

☐ Yenza le ngxoxo ibhalwe phansi

Okwesibili,

Ngiyavuma ukuthi ukuhlanganyela kwami kuzohlala kungaziwa

YEBO CHA (Sicela ubhale)

Ngiyavuma ukuthi umcwaningi angasebenzisa izingcaphuno ezingaziwa embikweni wakhe wocwaningo

YEBO CHA (Sicela ubhale)

Ngiyavuma ukuthi ulwazi engikunikezayo lungasetshenziswa ngokungaziwa ngabanye abacwaningi kulandela le phrojekthi
YEBO CHA (Sicela ubhale)

…… (isignesha)
…… (igama lomhlanganyeli)
…… (usuku)

Umcwaningi othola imvume: Khuthala Mabetha

Isignesha…… Usuku……

APPENDIX R: Interview guide for kin caregivers who experienced a child death (Zulu version)

(Kubanakekeli abaye babhekana nokufa kwengane)

Ulwazi lwabantu abathintekayo

Ingxenye 1: Imininingwane yabantu

Ubuhlobo nengane eshonile: ……..

Ubudala: ……

Ubulili: …….....

Izinga lemfundo……. Umsebenzi…….....

Isimo sakho somshado……

Usuku lokuxoxa…….

Isikhathi sokuxoxa…….

Indawo yokuxoxisana……...

Ubudala bengane ekufeni…….

Ingxenye 2: Ukuziphatha kwempilo yabanakekeli kanye nezinselelo ezibhekene nabanakekeli

1. Ungayichaza kanjani impilo yakho yonke, ngokomzimba nangokomzwelo, ngaphambi kokushona kwengane?

2. Ungasho ukuthi impilo ishintshe nhlobo uma uqala ukunakekela ingane engasekho? Kanjani?

3. Ingabe impilo yakho ikuvimbele ekunakekeleni ingane engasekho? Uma kunjalo, ngayiphi indlela?

4. Uya kuphi noma uxhumana nobani uma ugula?

5. Uvakashela kangakanani emtholampilo futhi uzizwa kanjani ngokuya emtholampilo uma ugula?

6. Kulula ukufinyelela emtholampilo? Uma kungenjalo, ubungathi yiziphi izinto ezibalulekile ezivimbela ukufinyelela okulula emtholampilo?

7. Ingabe ingane engasekho ibinenkinga eqhubekayo yezempilo eyadingeka ukuthi ingane ivakashele umhlinzeki wezempilo njalo? Uma kunjalo, ingabe ingane ibinawo umshuwalense wezempilo?

8. Ngicela uchaze noma yiziphi izinselele ezakuvimbela ekutheni uthole ukwelashwa njalo kwengane engasekho?

9. Wenzenjani lapho ingane engasekho igula?

10. Ngicela uchaze noma yiziphi ezinye izidingo ezikhethekile zokunakekelwa nokusekelwa okukhethekile okholelwa ukuthi ingane engasekho ibizidinga?

11. Ingabe ungathi uzizwe ngandlela thile uhlomele ukunakekela kahle ingane engasekho? Uma kunjalo, kanjani? Futhi uma kungenjalo, ngani?

12. Yini etholakele inzima ngokunakekela ingane engasekho?

13. Yiziphi ezinye izinselele (ngaphandle kwezinselelo ezihlobene nezempilo) owake wazizwa ngenkathi unakekela ingane engasekho?

14. Uhlangabezane kanjani nezinselele zokunakekela ingane engasekho?

15. Ucabanga ukuthi ngabe kwenziwe kanjani ukunqoba lezi zinselele?

16. Bekuyiphi ingxenye ebaluleke kunazo zonke kuwe ekunakekeleni ingane engasekho?

17. Ukuqhubekela phambili, yiziphi izinsiza ongazidinga ekunakekeleni ezinye izingane ezingase zibe phansi kwesandla sakho, kanye nokunqoba noma yiziphi izinselele ongabhekana nazo ekunakekeleni kwakho?

Ingxenye 3: Imvelo yomndeni / Ukusebenza kwabanakekeli

1. Ngicela wabelane ukuthi bekungani ingane engasekho ibekwe ngaphansi kokunakekelwa kwakho? Ngabe ingane engasekho beyinesikhathi esingakanani ihlala nawe?

2. Ingabe ingane engasekho beyixhumana nabazali begazi ngaphambi kokushona kwayo? Uma kungenjalo, ngani?

3. Yayiziphi izindima zakho nemithwalo yemfanelo yakho njengomnakekeli kwingane engasekho?

4. Ukhona omunye umuntu osize ekunakekeleni ingane engasekho? Uma kunjalo, ubuhlobo bomuntu kwingane buyini nokuthi yiziphi izindlela umuntu azisiza ekunakekeleni ingane engasekho? Uma kungenjalo, ukuhlinzeka ngokunakekela ingane kubenomthelela kanjani kuwena nengane engasekho?

5. Ngicela ungitshele ngosuku olujwayelekile emndenini wakho/ ekhaya?

6. Ngicela ungitshele mayelana nekhwalithi yobuhlobo bakho nengane engasekho, kuhlanganise nengane engasekho namanye amalungu omndeni?

7. Amalungu omndeni wakho azizwe kanjani lapho ingane engasekho iqala ukuhlala nawe?

8. Ingabe kwakukhona izinguquko ebuhlotsheni phakathi komndeni wakho kusukela lapho unakekela ingane? Uma kunjalo, ngicela uchaze ukuthi ubuhlobo bomndeni wakho bushintshile kanjani kusukela ekunakekeleni ingane engasekho?

8. Ngicela uchaze noma yiziphi izinselelo enazizwa njengomndeni ngenkathi ingane engasekho isaphansi kwakho?

9. Ingabe wake wahlangabezana nanoma yiziphi izinkinga noma dysfunctions emndenini wakho kuyilapho ingane engasekho ingaphansi kokunakekelwa kwakho? Uma kunjalo, yiziphi izinkinga ohlangabezane nazo?

10. Ngicela uchaze isimo sokuphila komndeni wakho nesimo sezimali ngaphambi kokushona kwengane.

APPENDIX S: Interview guide for kin caregivers who still have a child alive (Zulu version)

(Kubanakekeli abasenayo ingane ephilayo)

Ulwazi lwabantu abathintekayo

Ingxenye 1: Imininingwane yabantu

Ubuhlobo nengane: ……...

Ubudala: ……

Ubulili: ……..…..

Izinga lemfundo……. Umsebenzi……

Isimo sakho somshado……...

Usuku lokuxoxa……

Isikhathi sokuxoxa……

Indawo yokuxoxisana……..

Iminyaka yobudala yengane……

Ingxenye 2: Ukuziphatha kwempilo yabanakekeli kanye nezinselelo ezibhekene nabanakekeli

1. Ungayichaza kanjani impilo yakho yonke, ngokomzimba nangokomzwelo, sukela uqala uknnakekela lengane?

2. Ungasho ukuthi impilo ishintshe nhlobo uma uqala ukunakekela le ngane? Uma kunjalo, kanjani?

3. Ingabe impilo yakho ikuvimbele ekunakekeleni ingane? Uma kunjalo, ngayiphi indlela?

4. Uya kuphi noma uxhumana nobani uma ugula?

5. Uvakashela kangakanani emtholampilo futhi uzizwa kanjani ngokuya emtholampilo uma ugula?

6. Kulula ukufinyelela emtholampilo? Uma kungenjalo, ubungathi yiziphi izinto ezibalulekile ezivimbela ukufinyelela okulula emtholampilo?

7. Ingabe ingane oyihlinzeka ngokuyinhloko ukuba nezindaba eziqhubekayo zezempilo ezidinga ukuthi ingane ivakashele umhlinzeki wezempilo njalo? Uma kunjalo, ingabe ingane inomshwalense wezempilo?

8. Yini ovame ukuyenza lapho ingane igula?

8. Ngicela uchaze noma yiziphi izinselele ezakuvimbela ekutheni uthole ukwelashwa njalo kwengane?

10. Ngicela uchaze noma yiziphi ezinye izidingo ezikhethekile nokusekelwa okukhethekile okholelwa ukuthi ingane iyazidinga?

11. Ungasho yini ukuthi uzizwa ngandlela-thile uhlonyelwe ukunakekela kahle ingane? Uma kunjalo, kanjani? Futhi, uma kungenjalo, ngani?

12. Yini okuthola kunzima ngokunakekela ingane?

13. Yiziphi ezinye izinselele (ngaphandle kwezinselelo ezihlobene nezempilo) ozizwayo wazizwa ngesikhathi unakekela ingane?

14. Ubhekana kanjani nezinselele zokunakekela ingane?

15. Ucabanga ukuthi kufanele kwenziweni ukuze unqobe lezi zinselele?

16. Yiyiphi ingxenye ebaluleke kunayo yonke yokunakekelwa kwengane?

17. Ukuqhubekela phambili, yiziphi izinsiza ozozidinga ukunakekela le ngane, kanye nokunqoba noma yiziphi izinselele ohlangabezana nazo ekunakekeleni kwakho?

Ingxenye 3: Imvelo yomndeni / Ukusebenza kwabanakekeli

1. Ngicela wabelane ukuthi kungani ingane ibekwe ngaphansi kokunakekelwa kwakho? Ngabe ingane seyinesikhathi esingakanani ihlala nawe?

2. Ngabe ingane iyaxhumana nabazali begazi? Uma kungenjalo, ngani?

3. Yiziphi izindima zakho nemithwalo yemfanelo yakho njengomnakekeli wengane

4. Ukhona yini osizayo ekunakekeleni ingane? Uma kunjalo, ubuhlobo bomuntu kwingane

5. Ngicela ungitshele ngemfanelo yobuhlobo bakho nengane, kuhlanganise neyengane namanye amalungu omndeni.

6. Amalungu omndeni wakho azizwa kanjani lapho ingane iqala ukuhlala nawe?

7. Ingabe kwakukhona izinguquko ebuhlotsheni phakathi komndeni wakho kusukela lapho uqala ukunakekela ingane? Uma kunjalo, ngicela uchaze ukuthi ubuhlobo bomndeni wakho bushintshile kanjani kusukela ekunakekelweni kwengane?

8. Ngicela uchaze noma yiziphi izinselelo enike nazizwa njengomndeni njengoba ingane isaphansi kwakho?

9. Ingabe uke wabhekana nezinkinga noma dysfunctions emndenini wakho kusukela ingane ingaphansi kokunakekelwa kwakho? Uma kunjalo, yiziphi izinkinga ohlangabezane nazo?

10. Ngicela uchaze isimo sokuphila komndeni wakho nesimo sezimali ngaphambi kokushona kwengane.

Appendix T: Synopsis of selected reviewed literature on under-five mortality in kinship care arrangements.

Title and Source	Author(s) and Year	Data Source	Method	Level of analysis	Findings	Missing gaps
Who keeps children alive? A review of the effects of kin on child survival.	Sear & Mace (2008)	Natural fertility populations-historical and contemporary	Systematic review	Communities	Different kin have a different effect on child survival. Maternal grandmothers improve child survival while effect of paternal grandmothers on child survives varies significantly.	The study focuces on children who are raised by biological parents who have enlisted the assistance of grandmothers to assist in the caregiving role (i.e. biological parents are present in the particular household). Secondly, study only focuses on effect of grandmothers only but does not include other kin caregivers. Thirdly, individual and household characteristcs of these grandmothers are not discussed.
Maternal grandmothers improve nutritional status and survival of children in rural Gambia. *Biological Sciences*.	Sear et al., (2000)	Primary data collected from one patrilineal and patrilocal farming community in rural Gambia (Longitudinal database)	Multilevel discrete-time event history analysis (Cox proportional hazards analysis)	Families	The only kin that improve child health significantly (apart from mothers) are maternal grandmothers and that is reflected in higher survival probabilities among children living with maternal grandmothers.	The study is limited only to children who are raised by their mothers in the presence of other kin. The study does not focus on the survival probabilities of children who are raised by kin in the absence of parental care. Also, the individual and household characteristics of the maternal grandmothers have not been investigated. In addition, the study is not population-based but mainly

						community-based. It is a survey-based study and lacks qualitative explanations.
The effects of kin on child mortality in rural Gambia. *Demography*.	Sear et al., (2002)	Longitudinal database of information obtained from West Kiang District of Gambia	Multilevel discrete-time event history analysis	Community	Having a living mother, maternal grandmother or older sisters has a significant positive effect on the survival probabilities of children. Conversely, having a living father, paternal grandmother, grandfather or elder brothers has no effect. A mother's remarriage to a new husband increases child mortality significantly.	The study examines the effects of kin (in the presence of the mother) on under-five mortality. This is investigated by examining the survivorship of each kin (mother, father, maternal grandmother, paternal grandmother, maternal grandfather, and paternal grandfather) in relation to child health. Additionally, the study is limited to maternal characteristics and does not investigate the individual and household characteristics of other kin. Moreover, the study does not focus exclusively on the mortality risks of children who are raised by kin in the absence of parental care. It is a survey-based study and

						lacks qualitative explanations.
Family matters: kin, demography and child health in a rural Gambian population. *Cambridge University Press*.	Sear et al., (2009)	Longitudinal database of data obtained from four villages in rural Gambia	Multilevel discrete-time event history analysis; Multilevel linear regression	Community	Relatives important to child survival over the first 5 years of the child's life although different relatives are important at different ages. Under-five mortality is higher among children with no maternal grandmothers in relation to children with maternal grandmothers. Children with sisters 10 years older than them are less likely to die than children with no older sisters. Fathers, paternal grandmothers, grandfathers and older brothers have no impact on child survival at any age.	The study has only been limited to four communities in rural Gambia. Thus, results are not generalizable as it is not a national study. Furthermore, the study also focuses on the effects of kin on child mortality in the presence of the biological parents and not exclusively on children living with kin in the absence of biological parents. The study does not investigate the characteristics of the kin and lacks qualitative explanations.
A multilevel event history analysis of the effects of	Beise & Voland, (2002)	Data obtained from church registers, tax	Multilevel event history models; random	Families	Survival rates are higher among children	The study is outdated. Additionally, the study was

grandmothers on child mortality in a historical German population. *Demographic Research.*		rolls and other records of the Krummhörn region in Germany.	effects models; Kaplan-Meier survival graphs		whose maternal grandmother was alive at the time of their birth. Children whose maternal and paternal grandmothers are both still alive have slightly lower survival. Children who only have a paternal grandmother have the lowest survival rates compared to those without a living grandmother.	conducted in a geographically restricted area and is restricted to families. It is thus not generalizable to the entire population. Grandmother survival used as a proxy to investigate her effect on child mortality. Individual and household characteristics that show quantity of support an individual grandparent contributes to a child or its mother are not investigated. The study has also focused mostly on maternal characteristics.
Opposite Effects of Maternal and Paternal grandmothers on Infant Survival in Historical Krummhörn. *Behavioural Ecology and Sociobiology*.	Voland & Beise, (2002).	Church register entries obtained from the Krummhörn region in Germany	Simple transition rate model	Families	The study found significant effects of the grandmothers on the survival of the children. The effects differ in direction conditional on whether the grandmother is related maternally or paternally. Maternal grandmothers reduce mortality when the child is between 6 and 12 months of age. The existence of the paternal grandmother doubles the relative risk of	Study only examines the presence of specific grandmothers and grandfathers (in the primary parental home) on under-five mortality. This has been done by creating dummy variables of the kin as predictor variables. The characteristics of these kin have not been investigated. The study is also outdated.

					death during the 1st month of the child's life.	
Kin and birth order effects on male child mortality: three East Asian populations, 1716-1945.	Dong (2017)	Individual-level panel data.	Discrete-time event history analysis.	Community	Examined only male child mortality risks by examining how presence / absence of co-resident parents, grandparents and other kin as well as their interaction effects with birth order. While the presence of parents is important for child survival, it is more beneficial to first born children than last born children. The effects of other co-resident kin were however found to be inconsistent between the three populations.	Focus is on how the presence of parents / or presence of kin caregivers in a household influences child mortality (dummy variable created to represent presence). The individual and household characteristics in conjunction with their presence of these kin has not been studies. Study also fouces on male children.
Will granny save me? Birth status, survival and the role of grandmothers in historical Finland	Nenko et al., 2020.	Pre-industrial demographic dataset (population register).	Event History analysis	Community	grandchildren whose next sibling was born after a short interval survived better when the maternal grandmother was present.	This study also focused on how the presence of a grandmother in the household of biological parents' influences child survival significantly. Biological parents are co-resident in the household. Also, does not focus on effect of other kin nor provide insight on how their individual and

						household characteristics influence child survival.
Alternatives to the grandmother hypothesis: a meta-analysis of the association between grandparental and grandchild survival in patrilineal populations.	Strassmann & Garrard (2011).	Meta-analysis	Retrospective design.	Patrilineal populations.	Survival of the maternal grandmother and grandfather, but not the paternal grandmother and grandfather is associated with decreased grandoffspring mortality.	Study focuses only on grandparent caregivers and examined their survival as a predictor of grandoffspring mortality, in the absence of their individual and household characteristics. Study has also not examined the effect of other kin caregivers on child mortality.
Do grandparents compete with or support their grandchildren? In Guatemala, paternal grandmothers may compete, and maternal grandmothers may cooperate.	Sheppard & Sear (2016).	Large-scale demographic Guatemalan Survey.	Multiple regression analyses (random effects models).	Families	Both cooperative and competitive relationships exist within the family. Having a living paternal grandmother is negatively associated with child survival. Conversely, contact with maternal kin is associated with improved child survival.	Study focuses on grandmothers who are co-resident in biological parents' households and focuses on how their survival and grandmother status (paternal or maternal) influences child survival. Influence of the sociodemographic characteristics and not coresiding with biological parents of these grandparents on child survival remains largely unknown.
Hamilton's rule and kin competition: the Kipsigis case.	Mulder, 2007	Retrospective interviews with members of all households.	Event history analysis (Cox regression model).	Land limited human population.	Wealth affects the extent of kin altruism, in that paternal relatives, appear to improve the survival chances of children who	Study focused on children whose biological parents resided within larger extended residential units of patrilieaneallly related kin and looked at biological parents' survival status,

					are raised in rich households compared to children who are raised in poor households.	residence, number of father's brothers, number of mother's sisters and mother's sociodemographic characteristics in relation to child survival. Effect of various kin (e.g. type of kin caregivers and their sociodemographic characteristics and how these influence child survivals have not been examined in this study). Only their presence has been examined.
Correlates of infant and childhood mortality: A theoretical overview and the new evidence from the analysis of longitudinal data of the Bejsce (Poland) parish register reconstitution study of the 18th-20th centuries. *Demographic Research*.	Tymicki (2009).	Longitudinal database of data obtained from church registers of Bejsce parish in Poland.	Lexis diagram, Univariate imputation, bootstrap method, Kaplan-Meier survival graphs, Logit regression, Gompertz hazard model.	Individual (Church institution)	The presence of grandparents influences the survival of a newborn child and this effect is strongest in the first month up to 12 months of life. The presence grandparent (irrespective of whether they are maternal or paternal) enhances infant survival. Absence of maternal grandfather increases hazard of death by 40%.	Study only examined "presence" of grandparents as a key predictor of child survival. Sociodemographic characteristics of in relation to child survival not examined.
Of grandmothers, grandfathers and wicked step-grandparents. Differential impact of	Kemkes-Grottenthaler, (2005)	Household-level data extracted from German village genealogies.	Binary logistic regression.	Families.	Paternal grandmothers have a positive effect on child survival. However, after the	Study only examined how kin relatedness influences child survival (paternal or maternal). Characteristics of these kin

paternal grandparents on grandoffspring survival. *Historical Social Research.*					infant's first birthday, the beneficial impact of the paternal grandmother has no statistical significance on child survival. Paternal grandfathers have a negative effect on child survival which may be due to resource conflicts.	caregivers not examined.
Kin and child survival in rural Malawi: Are matrilineal kin beneficial in a matrilineal society?	Sear (2006)	Single round demographic survey conducted by the author (primary data collection). Birth histories.	Binary logistic regression	Households	Child mortality rates found to be higher in the presence of maternal grandmothers and maternal aunts.	Study looks at children who are raised by biological parents with extended kin (grandmothers and aunts being co-resident) in biological parents' households. Study only examined the effect of the "presence" of maternal aunts and grandmothers on child survival, but did not focus on the sociodemographic characteristic of these kin that may influence the child's survival.

Appendix U: Dissemination Plan of submitted and planned Manuscripts and Conferences attended / Target conferences

Title	Conference	Target journal	Status
Investigating under-five mortality in non-orphaned kinship care in South Africa: Does type of kin caregiver matter?zz	1. Research Committee 41 (RS41) side meeting (IUSSP) (October 2017). 2. ICPD 2019: 21st International Conference on Population and Development (May 2019). 3. Population Association of Southern Africa (PASA) (June 2019). 4. National Institute for the Humanities and Social Sciences 5th Annual National Doctoral Conference (October 2019). 5. 8th African Population Conference: Harnessing Africa's Population Dynamics for Sustainable Development: 25 Years after Cairo and Beyond (UAPS) (November 2019).	Children & Youth Services Review	**Under review**
Healthcare beliefs and practices of kin caregivers in South Africa: Implications for Child survival?	1. National Institute for the Humanities and Social Sciences 5th Annual National Doctoral Conference (October 2019). 2. IUSSP International Population Conference	BMC Health Services Research	**Accepted for publication – 06 April 2021.**

	(IPC2021) (December 2021).		
Effect of kin caregivers' family functioning on child survival.	1. International Population Conference (IPC2021) (December 2021).	Journal of Child and Family Studies	**Draft. To be submitted on the 30th April 2021.**
Are children safer with kin? Assessing caregiver sociodemographic correlates in relation to child survival.	1. 3rd European Society of Historical Demography Conference (2021)	Journal of Population Research	To be drafted and submitted on May 2021
Assessing the association between duration of kinship care and under-five mortality in South Africa.	1. European Population Conference (June 2022)	Child Welfare	To be drafted and submitted on September 2021.
Sex differentials in under-five mortality among children raised in non-orphaned kinship care in South Africa.	1. European Population Conference (June 2022)	Child Care in Practice	To be submitted on January 2022.

APPENDIX V: Interview guide for kin caregivers who experienced a child death (Xhosa version)

(Kubanakekeli abaye bafumana ukufa komntwana)

Interviewee information

Inxalenye 1: Ulwazi lwabantu

Ubudlelwane nomntana ongasekho: …….

Ubudala: ……. Ngesini:
…….....

Nqanaba lemfundo……....

Msebenzi…….

Isimo sakho somtshato ……

Umhla wo dliwano-ndlebe……

Ixesha lo dliwano-ndlebe……

Indawo yo dliwano-ndlebe……...

Ubudala bomntana ongasekho ekufeni…….

<u>Inxalenye 2: Ukuziphatha okufunayo ngempilo kwintsapho kunye nemingeni ejongene nabanonophelo</u>

1. Ungayichaza njani impilo yakho yonke, ngokomzimba nangokomzwelo, ngaphambi kokusweleka komntana?
2. Ngaba ubungatsho ukuba impilo yakho yatshintsha na xa uqala ukunyamekela umntana ongasekho? Kanjani?
3. Ngaba impilo yakho ikuthintele/ phazamisile ekunakekeleni umntana ongasekho? Ukuba kunjalo, ngayiphi indlela?
4. Uya kuphi na xa ugula okanye uya kubani na xa ugula?
5. Uhlala u tyelela iklinikhi rhoqo kangakanani na kwaye uziva njani ngokuya kwiklinikhi xa ugula?
6. Ngaba kulula ukufikelela kwikliniki? Ukuba akunjalo, ungathi zeziphi izinto okanye izizathu ezithintela ukufikelela okulula kwiklinikhi?

7. Ingaba umtana ongasekho ebenemiba yempilo eqhubekayo eyaziwayo ebeyifuna ukuba umntana a tyelele ugqirha rhoqo? Ukuba kunjalo, ngaba umntana ebenayo nayiphi na inkxaso yonyango okanye inshuwalense yezempilo?
8. Nceda uchaze nayiphina imingeni ebenokukunqanda ukuba ufune unyango lomntana, ukuba kukho na.
9. Nceda uchaze nayiphi na enye imfuno ekhethekileyo le umntana ebenayo, okholwa ukuba ibidinga unakekelo nenkxaso ekhethekileyo?
10. Ngaba ubungathi uvakelelwe ngandlela-thile ukunyamekela umntana ongasekho? Ukuba kunjalo, njani? Ukuba akunjalo, kutheni?
11. Yintoni eyakufumanisa nzima ngokunyamekela umntana ongasekho?
12. Ziziphi ezinye iingxaki (ngaphandle kwemingeni enxulumene nempilo) owaye wafumana ngayo ngelixa unika unonophelo kumntana?
13. Unokuhlangabezana njani nemingeni yokunyamekela umntana ongasekho?
14. Ucinga ukuba bekunokwenziwa ntoni ukuze unqobe le mingeni?
15. Iyiphi inxalenye ongathi ibibalulekile kuwe ekunakekeleni umntana?
16. Ukuqhubela phambili, zeziphi izixhobo onokuzidingayo ukuba unakekele nawuphi na omnye umntana onokunyamekela kwakho, kunye nokunqoba nayiphi na imingeni ongayifumana nayo ekunyamekelweni kwakho?

Inxalenye 3: Imeko yosapho/ intsapho esebenzayo yabanakekeli

1. Ngaba unokwenza uxoxe ukuba kutheni umntana ongasekho ebekwe phantsi kwakho? Wahlala ixesha elingakanani nomtana?
2. Ngaba umntana ongasekho ebenonxibelelwano na nabazali bakhe ngaphambi kokusweleka kwakhe? Ukuba akunjalo, kutheni?
3. Ziziphi iimbophelelo/ iindima zakho kunye noxanduva lwakho kumntana ongasekho njengomgcini? Ngaba le misebenzi yahlengahlengiswa xa waba ngumncedisi oyintloko?
4. Ngaba bekukho nawuphi na oncedisayo ekunyamekeleni umntana ongasekho? Ukuba kunjalo, lubuphi ubudlelwane bomntu kumntana kanye naziphi na izindlela ayenceda ngazo lo mntu ekunyamekeleni komntana ongasekho? Ukuba akunjalo, ukubonelela ngononophelo kukuchaphazele njani wena nomtana?
5. Ngaba unganditshela ngomhla oqhelekileyo kwintsapho/ indlu yakho?
6. Ngaba nceda undixelele ngomgangatho wobudlelwane bakho nomntana ongasekho, kunye nobudlelwane bomntana ongasekho namanye amalungu entsapho?
7. Amalungu entsapho yakho azive njani xa umntana ongasekho eqala ukuhlala nawe?
8. Ngaba kukho na utshintsho kubudlelwane phakathi kwentsapho yakho ukususela xa uqale ukunyamekela umntana ongasekho? Ukuba kunjalo, nceda uchaze indlela ubuhlobo phakathi kwentsapho yakho batshintsha ngayo emva kokunyamekela umntana ongasekho?
9. Nceda uchaze nayiphina imingeni oye waba nayo njengentsapho ngelixa umntana ongasekho ephantsi kokunyamekela kwakho?
10. Ngaba wakha wafumana iingxaki okanye iintsholongwane kwintsapho yakho ngelixa umntana ongasekho ephantsi kokunyameke la kwakho? Ukuba kunjalo, zeziphi iingxaki owazifumanayo?
11. Nceda uchaze imeko yokuphila kunye nemali yentsapho yakho ngaphambi kokusweleka komntana.

APPENDIX W: Interview guide for kin caregivers who still have a child alive (Xhosa version)

(Kubanakekeli abasenabantwana abaphilayo)

Interviewee Information

Inxalenye 1: Ulwazi lwabantu

Ubudlelwane nomntana: …….

Ubudala: ……. Ngesini:
…….....

Nqanaba lemfundo……....

Msebenzi…….

Isimo sakho somtshato ……

Umhla wo dliwano-ndlebe……

Ixesha lo dliwano-ndlebe…… Indawo
yo dliwano-ndlebe……...

Ubudala bomntana …….

Inxalenye 2: Ukuziphatha okufunayo ngempilo kwintsapho kunye nemingeni ejongene nabanonophelo

1. Ungayichaza njani impilo yakho yonke, ngokomzimba nangokomzwelo, ukususela ekubeni uqale ukunyamekela lo mntana?
2. Ngaba ubungatsho ukuba impilo yakho yatshintsha xa usuqala ukunyamekela lo mntana? Kanjani?
3. Ngaba impilo yakho ikuthintele/ phazamisile ekunakekeleni umntana? Ukuba kunjalo, ngayiphi indlela?
4. Uya kuphi na xa ugula okanye uya kubani na xa ugula?
5. Uhlala u tyelela iklinikhi rhoqo kangakanani na kwaye uziva njani ngokuya kwiklinikhi xa ugula?

6. Ngaba kulula ukufikelela kwikliniki? Ukuba akunjalo, ungathi zeziphi izinto okanye izizathu ezithintela ukufikelela okulula kwiklinikhi?
7. Ingaba umtana unikela ngononophelo olusisiseko kuye unayo nayiphi na imiba yempilo eqhubekayo efuna ukuba umntana a tyelele ugqirha rhoqo? Ukuba kunjalo, ngaba umntana unayo nayiphi na inkxaso yonyango okanye inshuwalense yezempilo?
8. Nceda uchaze nayiphina imingeni ekunqanda ukuba ufune unyango lwezempilo rhoqo lomntana, ukuba kukho na.
9. Yintoni oyenza njalo xa umntana egula?
10. Nceda uchaze nayiphi na enye imfuno ekhethekileyo enokuthi umntana uykholelwa ukuba unonophelo kunye nenkxaso ekhethekileyo.
11. Ngaba ungathi uziva ukhululekile ukunyamekela umntana? Ukuba kunjalo, njani? Ukuba akunjalo, kutheni?
12. Yintoni oyifumana nzima ekunyamekeleni umntana?
13. Ziziphi ezinye iingxaki (ngaphandle kwemingeni enxulumene nempilo) oyifumanayo ngelixa unika unonophelo kumntana?
14. Unokuhlangabezana njani nemingeni yokunyamekela umntana?
15. Yintoni ocinga ukuba yenziwe ukunqoba le miqobo?
16. Yintoni inxalenye ebaluleke kakhulu yokunyamekela umntana?
17. Ukuqhubela phambili, zeziphi izixhobo onokuzidingayo ukuba unakekele lo mntana, kunye nokunqoba nayiphi na imingeni ongayifumana nayo ekunyamekelweni kwakho?

Inxalenye 3: Imeko yosapho/ intsapho esebenzayo yabanakekeli

1. Ngaba unokwenza uxoxe ukuba kutheni umntana ebekwe phantsi kwakho? Umntana uhleli ixesha elingakanani phantsi kwakho?
2. Ingaba umntana unxibelelana nabazali bakhe? Ukuba akunjalo, kutheni?
3. Ziziphi iimbophelelo/ iindima zakho kunye noxanduva lwakho kumntana njengomgcini? Ngaba le misebenzi yahlengahlengiswa xa waba ngumncedisi oyintloko?
4. Ngaba kukho nawuphi na onokukunceda ekunyamekeleni umntana? Ukuba kunjalo, lubuphi ubudlelwane bomntu kumntana kanye ziziphi na izindlela anceda ngazo lo mntu ekunyamekeleni umntana? Ukuba akunjalo, ukunyamekela umntana wedwa kunokuchaphazela njani wena nomtana?
5. Ngaba unganditshela ngomhla oqhelekileyo kwintsapho/ indlu yakho?
6. Ngaba nceda undixelele ngomgangatho wobudlelwane bakho nomntana, kunye nobudlelwane bomntana namanye amalungu entsapho?
7. Amalungu entsapho yakho azive njani xa umntana eqala ukuhlala nawe?
8. Ngaba kukho na utshintsho kubudlelwane phakathi kwentsapho yakho ukususela xa uqale ukunyamekela umntana? Ukuba kunjalo, nceda uchaze indlela ubuhlobo phakathi kwentsapho yakho batshintsha ngayo emva kokunyamekela umntana?
9. Nceda uchaze nayiphina imingeni oye waba nayo njengentsapho ngelixa umntana ephantsi kokunyamekela kwakho?
10. Ngaba wakha wafumana iingxaki okanye iintsholongwane kwintsapho yakho ukususela umtana ephantsi kwenkathalo yakho? Ukuba kunjalo, yiziphi iingxaki ozifumanayo?
11. Nceda uchaze imeko yokuphila kunye neemeko zemali zentsapho yakho.

APPENDIX X: Participant Information Sheet for kin caregivers who experienced a child death (Zulu version)

(Kubanakekeli abaye babhekana nokufa kwengane)

Mnumzana / Nkosikazi othandekayo

Igama lami ngu Khuthala Mabetha futhi ngingumfundi we PhD ezifundweni ze Demography and Population Studies (ezifundweni zabantu) enyuvesi yase Witwatersrand. Njengengxenye ye PhD yami, kufanele ngenze ucwaningo lwesikhangiso futhi isihloko sesifundo sami sithi "Under-five mortality among children raised in non-orphaned kinship care in South Africa: A Mixed-Methods study". Inhloso yalolucwaningo ukuphenya ukuthi izici zamademographics, izimo zokufuna impilo kanye nezici zomndeni zokunakekelwa kwezingane zithonya ukufa kwabantu abangaphansi kweminyaka emihlanu phakathi kwezingane ezikhuliswe ekunakekelweni kohlobo lwezintandane eNingizimu Afrika. Nginesithakazelo esijulile ekuxoxeni nawe ukuze ngibelane ngokuhlangenwe nakho kwakho ngendaba yesifundo.

Njengengxenye yalolu cwaningo, ngingathanda ukumema ukuthi uhlanganyele kwingxoxo ejulile ehleliwe. Le ngxoxo izothatha cishe phakathi kwamaminithi angu 90 (ihora elingu 30 imizuzu) kuya kumaminithi angu 120 (amahora amabili) njengoba imibuzo yokuxoxisana iningi kakhulu. Le ngxoxo ngeke ichithe isikhathi esinqunyiwe uma ufisa ukwabelana ngolwazi olwengeziwe ngaphezu kwesikhathi esilinganiselwe. Ngemvume yakho, ngingathanda ukurekhoda ingxoxo ngokusebenzisa irekhoda yomsindo. Sicela wazi ukuthi izingxoxo zizoqhutshwa ngolimi lwesiZulu futhi ukudla neziphuzo zizobakhona ngesikhathi sokuxoxisana.

Sicela uthathe ngomusa ukuthi ukubamba iqhaza lwakho kulesi sifundo kuphelele ngokuzithandela futhi azikho izinzuzo ngqo ngokuhlanganyela kulolu cwaningo noma izijeziso uma ufisa ukungabambi iqhaza kulolu cwaningo. Ungase uhoxise isifundo nganoma yisiphi isikhathi. Le ngxoxo izoba yimfihlo ngokuphelele futhi ingaziwa ngoba ngeke ngibuze igama lakho nanoma yiluphi ulwazi oluhlonzayo. Ulwazi olwabelana name luzovikelwa ngokuvikelekile futhi luzofinyelelwa kuphela kumphathi wami wocwaningo. Ngizobe ngisebenzisa igama eliyimfihlo (igama elingamanga) ukukumela njengomhlanganyeli kumqondo wami wokugcina. Uma uhlangabezana nanoma yikuphi ukucindezeleka phakathi nesikhathi sokuxoxisana, khona ke sizoyeka ukuxoxisana bese siqhubeke ngesinye isikhathi. Okwesibili, umeluleki oqeqeshwe uzotholakala ukuhlinzeka ngezinsizakalo zokwelulekwa kuwe uma uhlangabezana nanoma yikuphi ukucindezeleka. Izinsizakalo zokweluleka zizonikwa mahhala futhi zizonikwa kwinduduzo yendlu yakho ngumeluleki obhalisiwe nesisebenzi sezenhlalakahle. Uma udinga izinsizakalo zokwelulekwa kwengqondo zesikhathi eside, uzothunyelwa esibhedlela lapho kuzohlinzekwa khona izinsizakalo zokweluleka ngemuva kwesikhathi eside. Uma uvuma ukubamba iqhaza esifundweni, sicela usayine ngomusa ifomu lesivumelwano kwisikhala esabelwe ngezansi.

Lolu cwaningo luzobhalwa njengengqungqunthela yocwaningo oluzotholakala ku intanethi ngewebhulali leyunivesithi. Uma ufisa ukuthola isifinyeto salombiko, ngizojabula ukusithumela kuwe ngenkathi yesicelo sakho (ngokuzithandela). Wamukelekile kakhulu ukuxhumana neyunivesithi yenkomfa yokuziphatha yocwaningo lomuntu (engeyona yezokwelapha) uma unenkinga noma izikhalazo mayelana nezinqubo zokuziphatha zalesi sifundo. Imininingwane yabo ilandelayo: +27(0) 11 717 1408, imeyili: Shaun.Schoeman@wits.ac.za.

Sicela uqaphele ukuthi uzodingeka ukuthi usayine ifomu lokuvuma ngemuva kokungena kuleli dokhumenti uma ungathanda ukubamba iqhaza kuphrojekthi yokucwaninga.

Ngikubonga ngalokhu

Ozithobayo

Khuthala Mabetha



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

APPENDIX Y: Participant Information Sheet for kin caregivers who still have a child alive (Zulu version)

ISHIDI LOLWAZI LOMHLANGANYELI

(Kubanakekeli abasenayo ingane ephilayo)

Mnumzana / Nkosikazi othandekayo

Igama lami ngu Khuthala Mabetha futhi ngingumfundi we PhD ezifundweni ze Demography and Population Studies (ezifundweni zabantu) enyuvesi yase Witwatersrand. Njengengxenye ye PhD yami, kufanele ngenze ucwaningo lwesikhangiso futhi isihloko sesifundo sami sithi "Under-five mortality among children raised in non-orphaned kinship care in South Africa: A Mixed-Methods study". Inhloso yalolucwaningo ukuphenya ukuthi izici zamademographics, izimo zokufuna impilo kanye nezici zomndeni zokunakekelwa kwezingane zithonya ukufa kwabantu abangaphansi kweminyaka emihlanu phakathi kwezingane ezikhuliswe ekunakekelweni kohlobo lwezintandane eNingizimu Afrika. Nginesithakazelo esijulile ekuxoxeni nawe njengamanje njengoba ungumnakekeli wengane engaphansi kweminyaka emihlanu futhi ngingathanda ukuthola umbono wakho njengoba uzofaka kakhulu kulolu cwaningo locwaningo.

Njengengxenye yalolu cwaningo, ngingathanda ukumema ukuthi uhlanganyele kwingxoxo ejulile ehleliwe. Le ngxoxo izothatha cishe phakathi kwamaminithi angu 90 (ihora elingu 30 imizuzu) kuya kumaminithi angu 120 (amahora amabili) njengoba imibuzo yokuxoxisana iningi kakhulu. Le ngxoxo ngeke ichithe isikhathi esinqunyiwe uma ufisa ukwabelana ngolwazi olwengeziwe ngaphezu kwesikhathi esilinganiselwe. Ngemvume yakho, ngingathanda ukurekhoda ingxoxo ngokusebenzisa irekhoda yomsindo. Sicela wazi ukuthi izingxoxo zizoqhutshwa ngolimi lwesiZulu futhi ukudla neziphuzo zizobakhona ngesikhathi sokuxoxisana.

Sicela uthathe ngomusa ukuthi ukubamba iqhaza lwakho kulesi sifundo kuphelele ngokuzithandela futhi azikho izinzuzo ngqo ngokuhlanganyela kulolu cwaningo noma izijeziso uma ufisa ukungabambi iqhaza kulolu cwaningo. Ungase uhoxise isifundo nganoma yisiphi isikhathi. Le ngxoxo izoba yimfihlo ngokuphelele futhi ingaziwa ngoba ngeke ngibuze igama lakho nanoma yiluphi ulwazi oluhlonzayo. Ulwazi olwabelana name luzovikelwa ngokuvikelekile futhi luzofinyelelwa kuphela kumphathi wami wocwaningo. Ngizobe ngisebenzisa igama eliyimfihlo (igama elingamanga) ukukumela njengomhlanganyeli kumqondo wami wokugcina. Uma uhlangabezana nanoma yikuphi ukucindezeleka phakathi nesikhathi sokuxoxisana, khona ke sizoyeka ukuxoxisana bese siqhubeke ngesinye isikhathi. Okwesibili, umeluleki oqeqeshwe uzotholakala ukuhlinzeka ngezinsizakalo zokwelulekwa kuwe uma uhlangabezana nanoma yikuphi ukucindezeleka. Izinsizakalo zokweluleka zizonikwa mahhala futhi zizonikwa kwinduduzo yendlu yakho ngumeluleki obhalisiwe nesisebenzi sezenhlalakahle. Uma udinga izinsizakalo zokwelulekwa kwengqondo zesikhathi eside, uzothunyelwa esibhedlela lapho kuzohlinzekwa khona izinsizakalo zokweluleka ngemuva kwesikhathi eside. Uma uvuma ukubamba iqhaza esifundweni, sicela usayine ngomusa ifomu lesivumelwano kwisikhala esabelwe ngezansi.

Lolu cwaningo luzobhalwa njengengqungqunthela yocwaningo oluzotholakala ku intanethi ngewebhulali leyunivesithi. Uma ufisa ukuthola isifinyeto salombiko, ngizojabula ukusithumela kuwe ngenkathi yesicelo sakho (ngokuzithandela). Wamukelekile kakhulu ukuxhumana neyunivesithi yenkomfa yokuziphatha yocwaningo lomuntu (engeyona yezokwelapha) uma unenkinga noma izikhalazo mayelana nezinqubo zokuziphatha zalesi sifundo. Imininingwane yabo ilandelayo: +27(0) 11 717 1408, imeyili: Shaun.Schoeman@wits.ac.za.

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Ngikubonga ngalokhu

Ozithobayo

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

APPENDIX Z: Consent Form (Zulu version)

IFOMU LESIVUMELWANO

(Kufanelekile kubanakekeli abasenabantwana abaphilayo nalabo abantwana babo abangasekho)

Mina……..ngosuku……2019 ngiyavuma ukubamba iqhaza futhi nginikeze ulwazi esifundweni esinesihloko esithi "Under-five mortality among children raised in non-orphaned kinship care in South Africa: A Mixed-methods study". Ngixoxe ngalolu cwaningo locwaningo noKhuthala Mabetha futhi ngiyaqonda ngokugcwele injongo nenhlobo yephrojekthi. Ngakho ke, nginikeza imvume yami ephelele yokuhlanganyela kule phrojekthi yophenyo. Ngiyaqonda ukuthi ukubamba iqhaza kwami kungukuzithandela futhi ngakho ke kunelungelo eliphelele lokuhoxisa esifundweni nganoma yisiphi isikhathi. Ngiyaqonda ukuthi ngeke ngithole noma iyiphi inhlawulo yokwenqaba ukubamba iqhaza noma ukuhoxisa esifundweni.

Uma nginemibuzo ngalolu cwaningo, ngiyakwazi ukuxhumana ngokukhululekile noKhuthala Mabetha (kmabetha@gmail.com, 0787492107), Professor Nicole De Wet (Nicole.dewet@wits.ac.za) noma uProfessor Clifford Odimegwu (Clifford.Odimegwu@wits.ac.za). Uma nginezinkinga noma izikhalazo zokuziphatha zalesi sifundo, ngingathintana neKomidi leKomiti Yezokuziphatha Zomsebenzi Wocwaningo LwaseWitwatersrand (okungewona ukwelashwa) ku +27(0) 11 717 1408, i imeyili: Shaun.Schoeman@wits.ac.za.

Ngokusayina ngezansi, ngibonisa imvume yami (sicela ubhale):

☐ Bamba iqhaza esifundweni

☐ Yenza le ngxoxo ibhalwe phansi

Okwesibili,

Ngiyavuma ukuthi ukuhlanganyela kwami kuzohlala kungaziwa

YEBO CHA (Sicela ubhale)

Ngiyavuma ukuthi umcwaningi angasebenzisa izingcaphuno ezingaziwa embikweni wakhe wocwaningo
YEBO CHA (Sicela ubha

Ngiyavuma ukuthi ulwazi engikunikezayo lungasetshenziswa ngokungaziwa ngabanye abacwaningi kulandela le phrojekthi
YEBO CHA (Sicela ubhale)

…… (isignesha)

…… (igama lomhlanganyeli)

…… (usuku)

Umcwaningi othola imvume: Khuthala Mabetha

Isignesha…… Usuku……

APPENDIX AA: Interview guide for kin caregivers who experienced a child death (Zulu version)

(Kubanakekeli abaye babhekana nokufa kwengane)

Ulwazi lwabantu abathintekayo

Ingxenye 1: Imininingwane yabantu

Ubuhlobo nengane eshonile: ……..

Ubudala: ……

Ubulili: …….....

Izinga lemfundo……. Umsebenzi…….....

Isimo sakho somshado……

Usuku lokuxoxa…….

Isikhathi sokuxoxa…….

Indawo yokuxoxisana……...

Ubudala bengane ekufeni…….

Ingxenye 2: Ukuziphatha kwempilo yabanakekeli kanye nezinselelo ezibhekene nabanakekeli

1. Ungayichaza kanjani impilo yakho yonke, ngokomzimba nangokomzwelo, ngaphambi kokushona kwengane?
2. Ungasho ukuthi impilo ishintshe nhlobo uma uqala ukunakekela ingane engasekho? Kanjani?
3. Ingabe impilo yakho ikuvimbele ekunakekeleni ingane engasekho? Uma kunjalo, ngayiphi indlela?
4. Uya kuphi noma uxhumana nobani uma ugula?
5. Uvakashela kangakanani emtholampilo futhi uzizwa kanjani ngokuya emtholampilo uma ugula?
6. Kulula ukufinyelela emtholampilo? Uma kungenjalo, ubungathi yiziphi izinto ezibalulekile ezivimbela ukufinyelela okulula emtholampilo?

7. Ingabe ingane engasekho ibinenkinga eqhubekayo yezempilo eyadingeka ukuthi ingane ivakashele umhlinzeki wezempilo njalo? Uma kunjalo, ingabe ingane ibinawo umshuwalense wezempilo?
8. Ngicela uchaze noma yiziphi izinselele ezakuvimbela ekutheni uthole ukwelashwa njalo kwengane engasekho?
9. Wenzenjani lapho ingane engasekho igula?
10. Ngicela uchaze noma yiziphi ezinye izidingo ezikhethekile zokunakekelwa nokusekelwa okukhethekile okholelwa ukuthi ingane engasekho ibizidinga?
11. Ingabe ungathi uzizwe ngandlela thile uhlomele ukunakekela kahle ingane engasekho? Uma kunjalo, kanjani? Futhi uma kungenjalo, ngani?
12. Yini etholakele inzima ngokunakekela ingane engasekho?
13. Yiziphi ezinye izinselele (ngaphandle kwezinselelo ezihlobene nezempilo) owake wazizwa ngenkathi unakekela ingane engasekho?
14. Uhlangabezane kanjani nezinselele zokunakekela ingane engasekho?
15. Ucabanga ukuthi ngabe kwenziwe kanjani ukunqoba lezi zinselele?
16. Bekuyiphi ingxenye ebaluleke kunazo zonke kuwe ekunakekeleni ingane engasekho?
17. Ukuqhubekela phambili, yiziphi izinsiza ongazidinga ekunakekeleni ezinye izingane ezingase zibe phansi kwesandla sakho, kanye nokunqoba noma yiziphi izinselele ongabhekana nazo ekunakekeleni kwakho?

Ingxenye 3: Imvelo yomndeni / Ukusebenza kwabanakekeli

1. Ngicela wabelane ukuthi bekungani ingane engasekho ibekwe ngaphansi kokunakekelwa kwakho? Ngabe ingane engasekho beyinesikhathi esingakanani ihlala nawe?
2. Ingabe ingane engasekho beyixhumana nabazali begazi ngaphambi kokushona kwayo? Uma kungenjalo, ngani?
3. Yayiziphi izindima zakho nemithwalo yemfanelo yakho njengomnakekeli kwingane engasekho?
4. Ukhona omunye umuntu osize ekunakekeleni ingane engasekho? Uma kunjalo, ubuhlobo bomuntu kwingane buyini nokuthi yiziphi izindlela umuntu azisiza ekunakekeleni ingane engasekho? Uma kungenjalo, ukuhlinzeka ngokunakekela ingane kubenomthelela kanjani kuwena nengane engasekho?
5. Ngicela ungitshele ngosuku olujwayelekile emndenini wakho/ ekhaya?
6. Ngicela ungitshele mayelana nekhwalithi yobuhlobo bakho nengane engasekho, kuhlanganise nengane engasekho namanye amalungu omndeni?
7. Amalungu omndeni wakho azizwe kanjani lapho ingane engasekho iqala ukuhlala nawe?
8. Ingabe kwakukhona izinguquko ebuhlotsheni phakathi komndeni wakho kusukela lapho unakekela ingane? Uma kunjalo, ngicela uchaze ukuthi ubuhlobo bomndeni wakho bushintshile kanjani kusukela ekunakekeleni ingane engasekho?
9. Ngicela uchaze noma yiziphi izinselelo enazizwa njengomndeni ngenkathi ingane engasekho isaphansi kwakho?
10. Ingabe wake wahlangabezana nanoma yiziphi izinkinga noma dysfunctions emndenini wakho kuyilapho ingane engasekho ingaphansi kokunakekelwa kwakho? Uma kunjalo, yiziphi izinkinga ohlangabezane nazo?
11. Ngicela uchaze isimo sokuphila komndeni wakho nesimo sezimali ngaphambi kokushona kwengane.

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Publication

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Publication

62 Khiya J. Marshall, Ximena Urrutia-Rojas, Francisco Soto Mas, Claudia Coggin. "Health Status and Access to Health Care of <1% Documented and Undocumented Immigrant Latino Women", Health Care for Women International, 2005
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