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The factors associated with the access to Early Childhood Development (ECD) facilities in South Africa: insight from the 2021 General Household Survey (GHS)

By

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Declaration

I, Elia Shikwambane, declare that 'The factors associated with the access to Early Childhood Development (ECD) facilities in South Africa: Insight from the 2021 General Household Survey (GHS)' is my own work that has not been submitted for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated or acknowledged by complete references.

Signature:  Date: November 2023

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Dedication

For this work, the Supreme Creator deserves all praise and acclaim. I am particularly appreciative of the assistance provided by my aunt, Ms. A.M. Shikwambana and uncle, Mr. I. Shikwambana.

List of acronyms

AIDS	Acquired Immune Deficiency Syndrome
COVID-19	Coronavirus Disease 2019
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
DoH	Department of Health
DSD	Department of Social Development
ECE	Early Childhood Education
ECD	Early Childhood Development
ECDI	Early Childhood Development Index
GHS	General Household Survey
HIV	Human Immunodeficiency Virus
HRDSSA	Human Resource Development Strategy for South Africa
MICS	Multiple Indicator Cluster Surveys
NDA	National Development Agency
NGO	Non-governmental Organisation
NP	National Party
SDGs	Sustainable Development Goals
Stats SA	Statistics South Africa

Abstract

Despite South Africa being a developed country, it has one of the highest and most persistent inequality rates in the world and this disparity is evident in the education sector. However, the country has sufficient resources to support children's education on all levels, but the number of children accessing education, the quality of education they receive, and the condition of their learning environment are causes for concern, especially the accessibility of Early Childhood Development (ECD) facilities in the nine provinces of South Africa. This study investigates the socio-economic and socio-demographic determinants that impact children aged six and younger's accessibility to ECD centres. Factors, such as head of household, age, demographic group, level of education, employment status, income level, residential location, father part of household and mother part of household, are all considered. The study used data from the 2021 General Household Survey, which was obtained from the University of Cape Town's DataFirst website, which was acquired from Statistics South Africa. The study employed univariate analysis, bivariate analysis, cross-tabulation using the Chi-square test of Independence and Multinomial Logistic Regression techniques to examine the associations or relationships between the type of ECD facilities, main reasons for not attending the ECD facilities and the place where the children spend most of their time with the socio-economic and socio-demographic factors. The data was analysed using both the Microsoft Excel and the Statistical Package for the Social Sciences (SPSS) version 28 software programmes. A hypothesis was specified to determine the probability of a young child enrolling in a particular type of ECD centre, as well as the primary reasons for not doing so. There is a positive relationship between father participation and the access to and utilization of early childhood development (ECD) services. Children residing with both biological parents exhibit a higher propensity to utilize childcare services such as a Gogo or a nanny. Young families frequently utilize Gogo and childminder services to visit playgrounds while mothers who are actively engaged in their children's lives are more inclined to utilize ECD services.

Keywords

Province, Mother alive, Father part of the household, School attendance, Playing ground, Head of household.

Chapter 1: Introduction

1.1 Introduction

Early Childhood Development (ECD) is defined as the period from conception until the entry level of school. It is a period of opportunity for children's cognitive, social, emotional and physical development, which occurs as the result of the interaction between the environment and the child (UNICEF, 2023). In this respect, ECD is an all-inclusive approach to programmes and guidelines for children from birth to seven years of age. Since 2019, in South Africa, ECD falls under the auspices of the Department of Basic Education who is responsible for children in grade R (UNICEF Report, 2019). The National Integrated Early Childhood Development Policy is aimed at transforming early childhood development service delivery in South Africa, in particular to address critical gaps and to ensure the provision of a comprehensive, universally available and equitable early childhood development services (Government of South Africa, 2023). Nevertheless, children residing in sub-Saharan Africa are consistently confronted with limited access to ECD facilities, leading to a pervasive state of distress and anguish. A community that is advantageous and economically stable can be achieved through the implementation of an efficient educational system. Therefore, the provision of access to ECD facilities will ensure that standards are upheld at a level comparable to those observed in privileged contexts (Oppong, 2015).

Vulnerable populations and lower-income demographics encounter significant disparities in terms of both access to and availability of ECD facilities. In light of historical evidence, it is apparent that individuals from low-income backgrounds, particularly young children of African descent, have disproportionately borne the brunt of insufficient educational infrastructure (Mwamwenda, 2014). Children encounter various obstacles when attempting to access and utilize ECD facilities. These challenges encompass limited financial means to afford ECD services, exorbitant costs associated with ECD, considerable distance to ECD facilities and the need for convenient access, the absence of ECD facilities within the local community, physical barriers hindering accessibility, inadequately trained staff, substandard boarding-house accommodations, and insufficient awareness regarding the range of available ECD services (Mpumela, 2021). This study, therefore, examines the socio-demographic and socio-economic factors contributing to the access of early childhood development facilities in South Africa.

1.2 Background to the study

The term "Early Childhood Development" (ECD) has gained prominence in South Africa's discourse in recent years. The focal point of this discourse revolves around contrasting principles concerning the construction of a societal framework grounded in the concept of individual freedom. Within this particular cultural environment, it is seen that children are regarded as complete individuals and esteemed members of the community starting from a young age. This is attributed to the importance ascribed to their upbringing within the framework of human and societal progress (Midodzi et al., 2010; Black et al., 2017). The right to education is widely recognized as one of the fundamental human rights, with particular significance for the younger population.

The education system in South Africa comprises of two primary components: independent or private institutions contrasted with overcrowded public institutions, which are accessible to all individuals within specific parameters (Mwamwenda, 2014). The key factors affecting young children are the physical surroundings and the geographical conditions of the place the child lives in, his social environment and relationships with family and peers come under the environmental factors that influence early childhood development in a major way.

In addition, South Africa is troubled with poverty, inequality and unemployment and bad service delivery and public infrastructure. The country has one of the highest Gini-coefficient in the world and this would impact negatively on child poverty (Atmore, 2012). The goals of ECD are to provide children with a safe haven and allow children to learn and advance their skills, and simultaneously offer parents or caregivers with the ability to leave their children in safe places so that they can go to work. The proximity of ECD centres, their costs, the staffing and their physical conditions influence the choices of parents to leave their children at an ECD centre.

Since South Africa has many informal settlements, it becomes a challenge to channel much-needed funds within these areas through the relevant government departments. Parents who are on social grants or those who work part-time, face financial challenges about child care. In this regard, national and local government could do more to cater for the needs of marginalised communities.

According to Atmore (2013), empirical evidence indicates that African education, including the overall education system, continues to lag behind the global average. This disparity persists despite notable advancements made since the conclusion of apartheid. According to Atmore

(2013), various demographic factors such as age, gender, education, income and location play a significant role in influencing the accessibility, availability and acceptability of ECD facilities. In a similar vein, Mwamwenda (2014) highlights the difficulties encountered by families in accessing ECD services as a result of limited financial resources. Furthermore, it is noteworthy to mention that the exemption of tuition fees for all students is mandated by the South African Schools Act of 1996; hence, the persistent difficulties encountered in accessing ECD services pose a significant concern (Aubrey, 2017).

Individuals situated at the lower end of the socio-economic spectrum in South Africa exhibit a higher propensity for encountering restricted opportunities in terms of accessing and engaging in early childhood development initiatives. According to Atmore (2012), within the educational system of South Africa, there exists a significant disparity wherein individuals of lower socio-economic status depend on public schools that suffer from issues such as overcrowding and inadequate funding. Conversely, individuals of higher socio-economic status opt to enrol their children in exclusive private schools. According to Visser et al. (2021), the authors posit that public services continue to face challenges of inadequate funding and overcrowding due to their responsibility of providing education to approximately 85% of individuals with limited financial resources, despite the allocation of resources being evenly divided between private and public facilities.

Female-headed households in South Africa are disproportionately represented among the socio-economically disadvantaged population, rendering them more susceptible to financial constraints when it comes to accessing ECD facilities for their children. According to the research conducted by Shung-King et al. (2019), it was observed that households led by women tend to exhibit a higher degree of financial vulnerability.

Furthermore, the limited availability of financial resources poses a significant challenge in accessing high-quality ECD facilities. The presence of insufficient infrastructure frequently amplifies challenges related to accessibility. According to the findings of Shung-King et al. (2019), in rural areas where the majority of children reside and where ECD facilities are not easily accessible to communities due to geographical distance, financial resources play a crucial role in determining access to such facilities. This financial constraint emerges as a significant challenge in ensuring equitable access to ECD services. Furthermore, rural communities face a scarcity of sufficient ECD facilities, resulting in limited accessibility to these resources as a result of the lack of established referral systems. The lack of financial

resources and/or limited opportunities to access ECD facilities disproportionately impacts children whose mothers serve as the primary earners in their households. The limited availability of ECD centres in rural areas of South Africa contributes to the disparity in access between children residing in rural regions and their urban counterparts. This discrepancy can be attributed to the country's predominantly rural landscape and the uneven distribution of ECD centres across the nation (see Figures 2.4 and 2.5). Children residing in rural areas face a diminished likelihood of accessing ECD assistance. The disparity in access to facilities, travel expenses, and the presence of services and appropriate amenities, coupled with the unequal distribution of these factors between rural and urban regions, can be attributed to this phenomenon (Shung-King et al., 2019). Ineffective training and accountability of teachers, unsuccessful directing of education resources between urban and rural areas, sporadic mandatory national assessments that are externally monitored, and insufficient provision of vital resources per learner (e.g. stationery and textbooks) are contributory factors (International Monitory Fund (IMF), 2019: 68).

The social and structural factors influencing education and the availability of ECD facilities are influenced by the various population groups in South Africa. Hence, there exists an inequity in the accessibility of early childhood development centres. Based on empirical research, it has been observed that African children exhibit a higher propensity for economic and social vulnerability, encounter limited access to educational prospects, and encounter notable obstacles in early childhood development when compared to their White counterparts (Mpumela, 2021). Despite ongoing efforts to address racial and ethnic disparities, African children continue to encounter numerous disadvantages. Insufficient attention has been given in previous research to the hardship of African children and the obstacles they encounter in their pursuit of accessing ECD facilities.

1.3 Research questions

The purpose of this study is to look at the factors that contribute to children aged 0 to 6 years in South Africa having access to or having difficulty attending early childhood development facilities by asking specific research questions.

This study investigated the following research questions:

- What is the type of ECD facility children are more likely to attend and what are the places children are more likely to spend most of the day?

- Does either mother or father's part of the household influence children's ECD facility attendance?
- Do socio-demographic and socioeconomic characteristics of the head of the household such as age, gender, geographic type and province of residence, employment status, income status and level of education of the household head influence the type of ECD facility children attend in South Africa?
- What are the factors associated with the type of ECD facility children attend, and the place where children spend most of the time when they do not attend ECD facilities?

1.4 Problem statement

The limited accessibility of early childhood development services poses a substantial impediment to societal advancement. The South African government has implemented measures and policies to ensure universal access to daycare facilities for children. Nevertheless, the utilization of these resources is hindered by persistent issues, such as racial discrimination, poverty, inadequate infrastructure and domestic challenges. The prevalence of poverty is particularly pronounced within the rural regions of South Africa. Children, whose households reside in rural regions, experience a disproportionate impact of poverty, thereby encountering greater challenges in accessing early childhood development programs compared to their urban counterparts. There is a strong correlation between prosperity and educational attainment. It can be inferred that the financial capacity of individuals has a significant impact on their propensity to utilize ECD services. The primary objective of South Africa's early childhood development policies is to ensure equitable access to high-quality ECD services for all children, irrespective of their family's socio-economic status, including those residing in rural regions (Atmore, 2019). The availability of early childhood development facilities is influenced by two factors: the proximity of individuals' residences and the costs associated with transportation, regardless of whether the facility itself is provided at no cost (Shung-King et al., 2019).

The issue of limited accessibility to ECD facilities in South Africa arises due to over 70% of the country's population which resides in rural regions (Irwin et al., 2007). The accessibility of early childhood development services is influenced by factors such as the head of household's education level, employment status, and demographic composition. The acquisition of knowledge and skills through education significantly influences an individual's capacity to understand the functioning of ECD centres. Consequently, an individual's capacity to utilize

services and avail themselves of facilities is contingent upon their employment and educational standing (Gardiner, 2008). Nevertheless, there exists a dearth of information regarding the early childhood development facilities accessed by children residing in rural provinces, as well as the determinants that shape parental choices between enrolling their children in public or private ECD programs. The duration of travel for children commuting to and from ECD centres remains uncertain, as indicated by Sayed et al. (2013). Furthermore, there exist knowledge gaps pertaining to the influence of a household's socio-demographic factors, including age, population group, head of household's educational attainment. Socio-economic attributes, such as employment status and income level, as well as residential location, the decision-making process regarding the selection of early childhood development facilities, the duration of the commute to these facilities, and the mode of transportation are also factors that need to be investigated.

The objective of this study is to ascertain whether a correlation exists between the rate of access to and utilization of early childhood development programs among low-income children. This study aims to assess the prevailing type of early childhood development centres, considering the diverse urban and rural topography of the country. An investigation was conducted to examine the factors contributing to the decision of not utilizing the nearest ECD centre. The objective of this research is to investigate the preferences of children's parents or head of households about public and private schools. Hence, an investigation was undertaken to examine the impact of socio-demographic and socio-economic factors on the participation rates in early childhood development programs in South Africa.

In order to facilitate the emergence of an effective solution, it is imperative to consider all relevant factors at play. The constituent elements of early childhood development programs, namely, the ages of children, population group, and their socio-economic backgrounds, can be examined as distinct variables, independent of other factors. The dependent variables of this study encompass the type of ECD facilities, the primary reason children do not attend ECD, and the location where children spend most of their day if they do not attend ECD.

1.5 Objectives and aims of the study

The main aim of this study is to ascertain the socio-demographic and socio-economic factors associated with the enrolment of children in ECD facilities in South Africa. Upon completion of the data analysis, this study will ascertain the significance of these factors in relation to the issue of early childhood development attendance.

The following are the study's specific objectives:

- To identify the type of ECD facility children are more likely to attend and to assess the place where children are more likely to spend most of the day if they do not attend ECD facilities.
- To identify the main reason why some children do not attend ECD facilities.
- To assess both father's and Mother's part in the household influence of children's ECD facility attendance.
- To measure whether socio-demographic and socio-economic factors such as age, gender, level of education, employment status, income, geographic type and province of residence of the household head influence the type of ECD facility children attend in South Africa.

1.6 Significance of the study

The significance of this research lies in its potential to contribute to the advancement of childhood education in South Africa. It aims to improve aspects, such as access to education, children's development outcomes, policy formulation, resource allocation, economic progress, social integration and overall knowledge enhancement. By conducting a gap analysis and offering evidence-based solutions as promoting policy changes and actions, we can work towards achieving the Sustainable Development Goals (SDGs) of 2030 related to Early Childhood Development (ECD). This study focuses on examining how these variables impact children's participation in childhood education programs. Understanding the factors that positively or negatively affect children's achievement is crucial. To address the pressing issues of unemployment and poverty rates in provinces, it becomes essential to critically evaluate the foundational elements of our educational system. Thus, the objective of this research is to investigate the factors that influence children's enrolment in ECD centres in South Africa.

1.7 Hypotheses

- Creche or educare centre is the type of ECD facility children are most likely to attend, and for those who do not attend, they stay at home with parents or foster parents or guardians.
- The fact that ECD facilities are too expensive is the main reason for not attending ECD facilities.
- Mother or father form part of the household influence children's ECD facility attendance.
- Socio-demographic and socio-economic factors such as age, gender, level of education, employment status, income, geographic type and province of residence of the household head influence the type of ECD facility children attend in South Africa.
- Employment status, income and level of education influence the place where children spend most of their time during the day when they do not attend an ECD facility.

1.8 Limitations of the study

The objective of this research is to examine the inequalities in the availability of early childhood development facilities among households in all nine provinces of South Africa. The study encompasses individuals whose ages fall within the range of 0 to 6 years. The study focused on households in South Africa where the principal breadwinners were aged 15 years or older, and the households' included children aged from 0 and 6. The study undertook a review of attendance trends and the diverse factors that impact attendance. However, the research faced challenges due to the adoption of Covid-19 containment measures, the enforcement of restricted protocols, and the limitations imposed on home visits. The COVID-19 pandemic has had a negative impact on the quality and consistency of data by disrupting the data collection process. This disruption has led to the lack or partial availability of data about sensitive variables such as marital status, educational level, and employment status when doing cross-tabulation with the dependent variables. A considerable proportion of participants demonstrated a lack of clarity in their answers or chose not to participate in the research. The researchers' investigation was limited due to the scarcity of accessible data.

1.9 Definition of major terminology

Infrastructure − A proper ECD infrastructure is needed as it aids young children in terms of accomplishment and reasoning abilities. According to Rakabe (2015), "pupils with sufficient exposure to early childhood development programs have better attainment levels and cognitive abilities".

Sustainable development − The ability to grow without depleting the resources required for growth. When growth is sustainable, it increases exponentially due to its lack of reliance on resources.

Psychological development − The process of developing an individual's mental and emotional capacity. This type of development is considered just as, if not more, important than the physical development of an individual.

Household − According to Statistics South Africa (2007), a household refers to a collective of individuals who cohabitate and collectively procure sustenance and other necessities for daily living. Alternatively, it can also denote an individual who resides alone.

Environmental constraints − Environmental constraints are obstacles provided by our surroundings, in most cases, they occur as a result of the geographical makeup of an area. Factors such as weather conditions also form part of these constraints.

Community-based organisations − As opposed to an NGO that can operate at national and international level, community-based organisations operate within local communities with the aim of bettering the overall functioning, social health and social well-being of the community.

Orphanhood − Orphanhood can be described as the act of becoming an orphan; this occurs when children are deprived of parents by means of death or voluntary absence.

Household head − Refers to the individual within a household who assumes the primary role of decision-making, possesses ownership or tenancy rights over the dwelling, or serves as the primary income earner, as determined by the household. The head has the potential to exhibit either masculine or female characteristics. According to Statistics South Africa (2007), in cases when two individuals possess equal decision-making authority, or in households, including entirely unrelated individuals, the designation of household head may be assigned to the elder or eldest person.

Social class − A social class can be used to group individuals based on their socio-economic status. Factors such as income, political status, educational status and cultural views are used to determine which social class an individual fall within.

Non-governmental organisations − A non-governmental organisation (NGO) is a group that functions independently of any government with making a profit not being a goal of the organisation but instead these groups are motivated by political causes and humanitarian/environmental causes.

Cognitive development − The process by which an individual perceives and gains an understanding of the world through interaction. It is the construction of thought processes such as decision-making and problem-solving from childhood through adolescence through adulthood.

Nutrition − Obtaining nutrients for the improvement of health and the way your body uses these nutrients to assist in the process of growth. This can be done by maintaining an adequate diet and taking in all the required nutrients provided by food groups. Nutrition is known to be related to strong child and maternal health.

Racial segregation − Segregation refers to the systematic separation of certain groups based on their differences. In the case of racial segregation, civil rights, work opportunities and everyday activities are performed whilst being physically separated. This separation can be enforced by authoritative bodies such as the government.

Socio-emotional development − Social-emotional development includes the child's experience, expression, management of emotions and the ability to establish positive and rewarding relationships with others (Cohen et al., 2005). It encompasses both intra- and interpersonal processes.

1.10 Thesis outline

Chapter One outlines the rationale behind the inquiry, the guiding questions for the investigation are highlighted, and the proposed hypothesis to be investigated is presented. The significance of the study, objectives of the study, limitations of the study and definition of key terms utilised with the research context were expounded. Chapter Two of the dissertation presents a structured literature review comprising many components, namely the theoretical approach, empirical investigations and the underlying policy framework. Chapter Three provides a comprehensive description of the research methods employed in the study. This chapter provides an overview of the research design and the methods used for data collection. The techniques utilized for data analysis are presented alongside a comprehensive explanation of the variables. In Chapter Four, the data analysis and outcomes are presented. The text provides an overview of the univariate analysis, followed by a discussion of the bivariate analysis and its corresponding test statistic. Ultimately, a comprehensive investigation of multivariate analysis is undertaken. Chapter Five provides a critical analysis and discussion of the findings acquired in Chapter Four. Chapter Six serves as a conclusion, summarizing the findings and offering recommendations for future policy and research.

Chapter 2: Literature Review

2.1 Introduction

This chapter provides an analysis of the existing literature and theoretical frameworks pertaining to the access and utilization of Early Childhood Development (ECD) facilities in South Africa. The objective is to gain a comprehensive understanding of the factors that influence attendance patterns. This study will also examine the theoretical framework that will be utilized as the analytical framework. The present literature review has been meticulously structured, with particular emphasis placed on the topic of childhood development. This focus is attributed to the examination of early childhood development (ECD) attendance across many differentiating factors. In order to comprehend childhood development, it is imperative to deconstruct the inherent phases of growth and maturation. In this analysis, the following frameworks will be examined sequentially in order to ascertain the necessary conditions for facilitating an optimal environment for a child to successfully navigate this developmental process. Lastly, this chapter will analyse the policies related to Early Childhood Development (ECD) in South Africa.

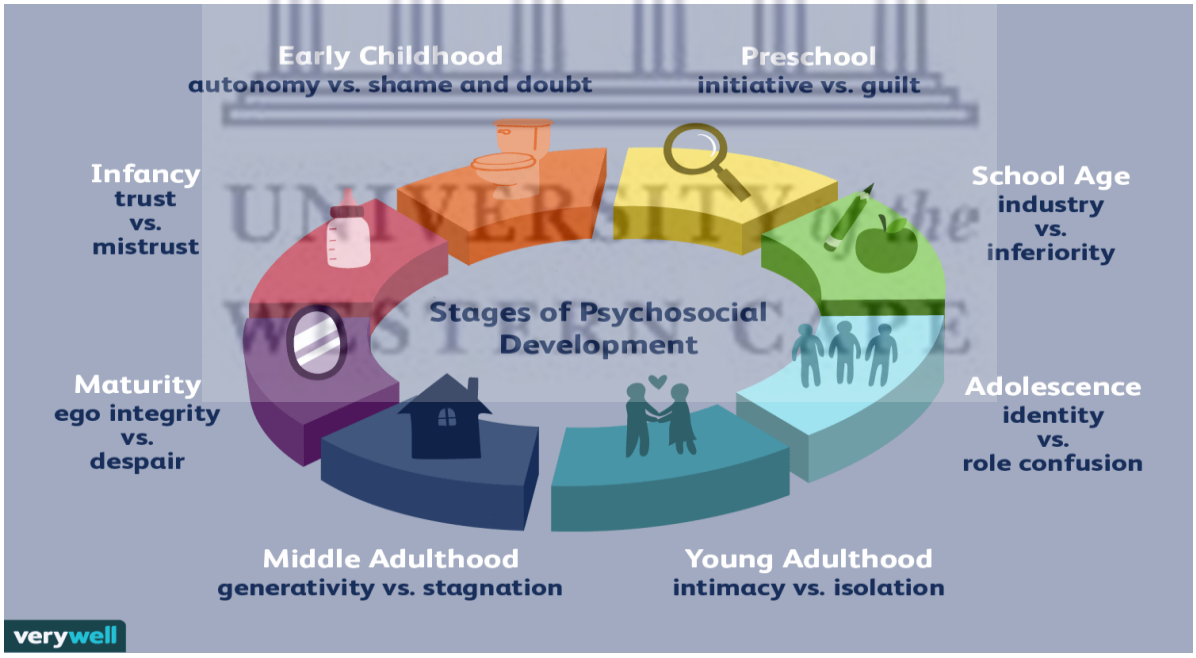
2.2 Theoretical framework

The main objective of this research is to ascertain the determinants that impact the accessibility of early childhood development facilities in South Africa. In consideration of this matter, three theoretical frameworks were analysed, which elucidate the various elements that both facilitate and hinder individuals' access to ECD facilities. The frameworks that were analysed in this study are Erik Erikson's Psychosocial Development Theory in which he expounds the 'Stages of Development' which contribute to growth of personality throughout a lifetime (Cote and Levine, 1987). Sigmund Freud developed the 'Psychosexual Stages of Development' to explain how personality develops in early childhood (Verywell Health, 2023). Another childhood development theory is Albert Bandura's Social Learning Theory, where children learn and retain the behaviour they are exposed to, which potentially determine their individual views, ranging from emulating masculine and feminine behaviours, developing antisocial or social personalities, and adopting specific attitudes and behaviours in the long term (Bandura, 1977). All three theories are explained below in how they might influence the ECD process.

2.2.1 Erikson's Psychosocial Development theory

When assessing the early growth and development of a child, it is imperative to consider not only the children themselves but also the individuals present in their immediate surroundings. The theory of psychosocial development proposed by Erikson has the potential to provide benefits to individuals across various contexts. Erikson's books are widely regarded as extensive and complex, characterized by intricate analyses that are skilfully integrated with overarching generalizations. Syed and McLean (2017) assert that Erikson's theory placed significant emphasis on the significance of social and cultural factors in an individual's developmental trajectory from infancy to late adulthood, with a particular focus on the psychosocial aspects of development. The eight psychological tensions are enduring causes of conflict that individuals universally encounter and must surmount. Individuals are confronted with distinct social and cultural influences and effects that are specific to their individual circumstances. Erikson, in particular, had a keen interest in the cultural obstacles encountered by marginalized populations (Keilty and Kosaraju, 2018).

Figure 2.1: Illustrative overview of Eric Erikson's Stages of Development Theory



Source: Joshua Song (2022) from Verywell Health

https://www.verywellmind.com/erik-eriksons-stages-of-psychosocial-development-2795740

This study uses Erikson's theory to examine the impact of underrepresented groups, including women and racial and ethnic minorities, on children's developmental outcomes and enrolment rates in Early Childhood Development (ECD) centres in South Africa. The theory suggests that

all eight tensions persist throughout an individual's lifespan and require management for optimal psychological growth. The primary target audience is children aged zero to six years old. The initial stage of psychosocial development, characterized by trust vs mistrust, is crucial in understanding children's access to ECD centres in South Africa. Infants develop confidence through pleasant interactions with nurturing others, emphasizing the importance of high-quality ECD programs. The second stage, Autonomy vs. Shame and Doubt, focuses on individuals aged 18 months to 3 years who strive to establish their sense of stability and control over their environment (Keilty and Kosaraju, 2018). Ensuring universal access to high-quality ECD programs is essential for facilitating holistic development and preparedness for future endeavours.

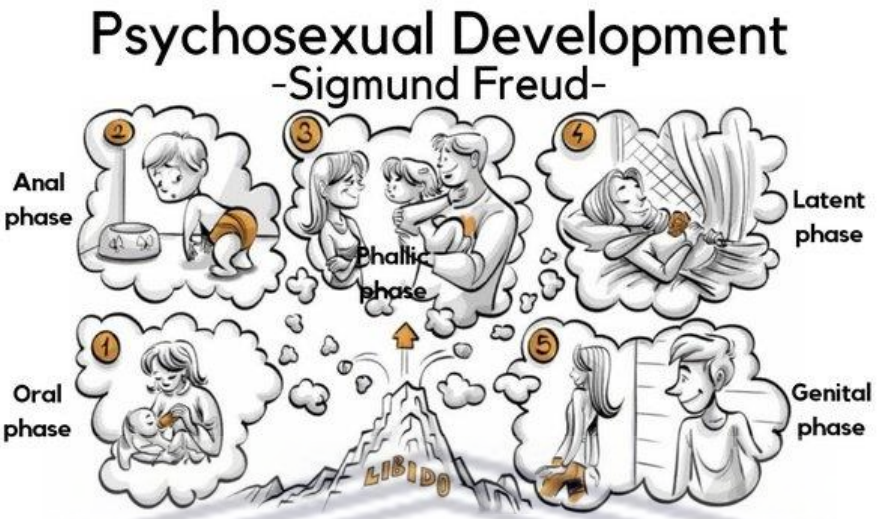
Preschool-aged children, typically aged three to six years old, display curiosity towards their environment and demonstrate initial signs of independence. The significance of ECD facilities in South Africa has increased in recent times, providing children with opportunities to engage in social interactions, participate in organized play activities and develop a sense of independence. Positive ECD settings that foster play, independence and risk-taking are essential for a child's self-confidence, emotional and social growth.

Sigmund Freud's psychosexual development theory and Albert Bandura's social learning theory can be applied to this demographic, providing valuable insights into the impact of ECD on children's development and school enrolment rates.

2.2.2 Sigmund Freud's psychosexual theory

Erikson's theoretical framework diverges from Freud's in terms of its temporal scope, as Erikson's theory is a more comprehensive approach, encompassing an individual's entire lifespan, while Freud's theory is confined to childhood development. Freud believed that psychosexual energies are crucial for human experience and require attention throughout all stages of development. Simon (1998) explains that experiences during different developmental stages impact an individual's personality traits and behavioural patterns. Falk and Kim (1999) found a strong correlation between adult experiences and childhood development. The five phases of childhood development are oral, anal, phallic, latent and genital, with fixation during these stages significantly influencing an individual's adult personality. The presence of libido is observed throughout all stages, with variations in specific areas of attention.

Figure 2.2: Pictograph of Sigmund Freud's theory of Psychosexual Development



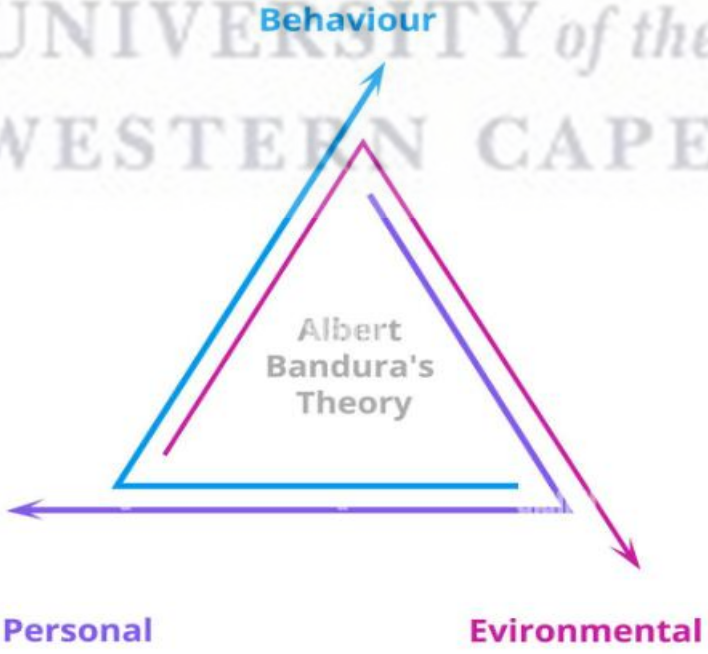
Source: Shrink (2023) https://sproutsschools.com/psychosexual-development-theory-freud/

The psychosexual development theory proposed by Sigmund Freud offers valuable insights into the various issues encountered by children within the Early Childhood Development (ECD) phase in South Africa. Every stage of human growth is distinguished by distinct sources of enjoyment and challenges. The Oral Stage, which spans from birth to 18 months, holds significant importance in terms of ECD accessibility. During this stage, infants find comfort and satisfaction through oral stimuli, such as breastfeeding. The Anal Stage, which occurs from around 18 months to three years of age, encompasses the development of self-regulation abilities and the acquisition of toilet training skills in children (Falk and Kim, 1999). The presence of easily accessible amenities can have a substantial influence on a child's ability to be independent and confident. During the developmental period known as the Phallic Stage, which typically occurs between the ages of 3 and 6, there is a particular emphasis on the Oedipus and Electra complexes, as well as the formation of parental bonds. The significance of family relationships, caregiver support and accessibility to mental health resources cannot be overstated (Falk and Kim, 1999). The developmental stages known as Latency and Genital, occurring between the ages of 6-12 and 12 and above, underscore the significance of providing comprehensive ECD support to foster cognitive and emotional growth. Freud's theory highlights the importance of ECD facilities in South Africa, highlighting the influence of early experiences and supportive circumstances on a child's psychosexual development.

2.2.3 Albert Bandura's Social Learning theory

The social learning theory, developed by Albert Bandura, emphasizes the importance of observational learning and social interactions in children's development. Albert Bandura's theory of social learning aligns with Eric Erikson's theory by positing that environmental circumstances play a significant part in influencing an individual's educational trajectory. The processing of information mostly occurs through meticulous observation and cognitive modelling of one's immediate surroundings. According to Grusec (1994), the concept that directs experience facilitates early growth is widely recognized and continues to be extensively utilized in various industries and occupations. In addition to exerting an impact on our behaviours, influences also have the capacity to shape our emotional states and belief systems. The concept of habit acquisition suggests that individuals develop routines and habits by observing and imitating their surroundings (Grusec, 1994). This concept can be applied to research on ECD in South Africa, particularly in the imitative and early childhood phases (years 0-2), and identifying and early socializing phases (ages 2-6). The study of access to ECD facilities in South Africa serves as a significant case study for this concept, as toddlers may adopt certain habits from adults in their immediate environment.

Figure 2.3: Diagram of Albert Bandura's Social Learning Theory



Source: Alamy (2022) https://www.alamy.com/stock-photo/banduras-social-learning-theory.html?sortBy=relevant

This study focuses on early detection and intervention strategies for children aged 2-6, who exhibit a remarkable capacity to acquire and assimilate knowledge from their surroundings. It emphasizes the importance of providing children with opportunities to participate in ECD programs which foster social learning and the development of fundamental skills. The study suggests that children begin to admire and emulate adults, acquiring knowledge and skills through observational learning. To promote pro-social behaviours and healthy socialization patterns, it is crucial to provide children with opportunities to interact with good role models and skilled ECD specialists.

2.2.4 Gap in the theory

The theories of Bandura's Social Learning Theory, Erikson's Psychosocial Theory and Freud's Psychosexual Theory address the concerns pertaining to the availability, accessibility and utilization of Early Childhood Development (ECD) services. Bandura's Social Theory holds significance in understanding the accessibility and utilization of ECD facilities, as it highlights the mechanisms via which children acquire knowledge from their environment, caregivers and peers. Erikson's Psychosocial Theory is a framework that examines the emotional and social readiness of children for ECD centres. Freudian thought offers insights into the comprehension of one's initial emotional experiences. The three ideas, namely availability, accessibility and consumption of ECD facilities, have overlapping characteristics. Bandura's social theory emphasizes the significance of ECD in relation to the emotional development, early experiences and learning processes of children. This theory also addresses the obstacles that hinder a greater number of children from accessing ECD.

Bandura's Social Learning Theory is the most suitable framework for understanding factors affecting access to ECD) facilities in South Africa, as it encompasses all independent variables. Erikson's Psychosocial Theory and Freud's Psychosexual Theory, while providing a comprehensive view, fall short in providing a comprehensive view on factors affecting access and utilization of ECD facilities.

2.3 Empirical literature

The literature on the factors influencing access to ECD facilities in South Africa is examined in this section. Gender, population group, age, household size, education level, employment status, household income, mother or father part of the household, type of ECD, main reason for not attending ECD facility, ECD post-apartheid and place of residence are among the main determinants discussed in this section.

2.3.1 Access to early childhood development across Africa

According to a report published by the World Bank in 2017, around 60% of the global population does not have access to essential early childhood development (ECD) programs. According to a study conducted by Black et al. (2017) ECD institutions in Africa suffer from insufficient funding and limited utilization. A significant number of African nations have a scarcity of essential resources necessary for the effective provision of ECD programs. Inefficient service integration in low-resource nations is often attributed to issues of poor governance and human resource constraints (Mwamwenda, 2014). Insufficiently integrated services and elevated expenses are two additional challenges afflicting ECD initiatives in Africa. A comprehensive study conducted across thirty-six nations in sub-Saharan Africa, revealed that various factors, including education, economic constraints, socio-cultural behaviours, regional influences, proximity to early childhood development (ECD) facilities and the availability of ECD services, collectively contribute to the determination of individuals' access to early childhood development.

The presence and standard of ECD programs are influenced by several factors throughout the continent. A notable discrepancy exists in the accessibility of ECD services between urban and rural regions. Rural places may encounter challenges stemming from limited resources and infrastructure, whereas metropolitan regions typically exhibit a greater prevalence of ECD institutions, superior infrastructure, and a higher concentration of educated educators. The influence of household income levels on participation in ECD programs has been identified as a significant factor (Mwamwenda, 2014). A positive link has been seen between family income and early education possibilities, whereby children from higher-income households exhibit a greater likelihood of attending formal ECD centres compared to their counterparts from lower-income households. Throughout the continent of Africa, governments exhibit a range of resources and levels of commitment towards the advancement of ECD. Certain nations have made substantial financial commitments towards ECD initiatives, such as allocating funds for

preschool programs and providing training for ECD educators. However, other countries face challenges in this area as a result of financial constraints.

According to Charman et al. (2017), the impact of clearly defined policies and laws related to ECD can influence both access and quality. The laws and regulations pertaining to ECD within a given country can exert a substantial influence on the calibre of early education provided within that jurisdiction. The availability of ECD services may also be subject to the effect of cultural norms and societal expectations. Although formal ECD programs are experiencing increased popularity in certain regions, they remain mostly unfamiliar to the general public in other areas. The involvement of local communities and non-governmental organizations (NGOs) can significantly contribute to the enhancement of accessibility to ECD. Early Childhood Development initiatives implemented within local communities, often supported by NGOs, represent a valuable approach of aiding marginalized individuals. Ensuring the provision of high-quality early education necessitates the presence of adequate infrastructure, encompassing secure and well-equipped ECD centres. According to a study conducted by Charman et al. (2017), numerous African nations face challenges pertaining to the availability of sufficient infrastructure and educational resources. The level of parental and caretaker interest and involvement in ECD programs is a potential determinant of eligibility. In many communities, there exists a potential dearth of information regarding the need of early education, as well as obstacles that impede involvement in such educational endeavours.

According to a study conducted by Black et al. (2017), it was found that 62% of individuals residing in sub-Saharan Africa possess the ability to avail themselves of early childhood development services. The southern part of the continent exhibited the largest proportion of access to ECD services, while the central region displayed the lowest rate of access. A significant challenge encountered in accessing ECD services in South Africa is the insufficiency of adequately trained workers. According to Atmore (2013), the African continent exhibits a scarcity of educators, with a teacher-to-student ratio of less than one per thousand. The presence of disparities in both private and public funding, along with the uneven allocation of teaching professionals among provinces, exacerbates the challenges in attaining equitable access to educational facilities. The lack of accessibility is influenced by several factors, including overcrowding, limited spatial capacity, substandard ECD facilities and deteriorating infrastructure (Black et al., 2017).

2.3.2 Access to ECD during apartheid in South Africa

The historical provision of ECD programs in South Africa has been characterized by instances of discrimination, segregation and injustice (Mwamwenda, 2014). During the era of apartheid, the National Party (NP) employed legislative measures and national policies to implement and uphold racial and ethnic segregation. The policies of the apartheid state were implemented by the categorization of individuals into four distinct racial groups: Bantu (Black/African), Coloured, White and Asian (Digital Research et al., 2020). The nation was geographically partitioned into two distinct regions: the mainland, which was designated for the minority White population and consisted of four provinces, and ten homelands, which were established to accommodate the majority Black population. According to Charman et al. (2017), the State managed the four provinces (Cape Province, Natal, Orange Free State and Transvaal) at the provincial level, while four homelands were governed at the local level. Additionally, there were six homelands that functioned as self-governing regions. The rigorous segregation of ECD facilities further exemplified racial and ethnic inequality in various dimensions of health (Digital Research et al., 2020). According to Rudolph (2022), there was a disparity in the quality of ECD facilities between Whites and Blacks. Whites were provided with superior ECD facilities, while Blacks were often denied access and instead led towards congested regions with inadequate and unsanitary facilities. Furthermore, laws pertaining to ECD mostly disregarded the specific difficulties impacting non-Whites.

Black et al. (2017) argue that the fragmentation of the system has worsened the unequal distribution of financing among educational departments and has resulted in inadequate service delivery. Consequently, access to ECD is currently characterized by underfunded, geographically dispersed and understaffed administrations. The distribution of education during the apartheid era exhibited a notable degree of disproportionality. The bulk of teachers in the profession tended to be concentrated in locations characterized by affluent residents. Based on the findings of Rudolph (2022) the teacher-learner ratio varied across different racial groups, with a ratio of 1:450 for White individuals, 1:890 for Indians, 1:15 000 for Coloured individuals and 1:98 000 for Black/Africans. According to Digital Research et al. (2020), it was highlighted that while rural areas accommodated 60% of the population, a mere 5% of teachers were accessible to these inhabitants. During this particular era, the school system was characterized by the pervasive presence of racial disparities. The provision of ECD programs was significantly constrained as a consequence of racial segregation, leading to a dearth of qualified educators and inadequate ECD infrastructure.

2.3.3 Access to ECD in post-apartheid South Africa

The primary focus of the post-apartheid government's policy on ECD was to introduce a revised educational framework with the objective of diminishing disparities in ECD services and the accessibility, use and provision of these services. Additionally, the government intended to ensure that ECD facilities were accessible, inexpensive and maintained high standards of quality for all individuals (Laher & Cockcroft, 2014). The ECD system in the post-apartheid era is characterized by a division into two distinct systems, namely the public and private sectors (Ramadiro, 2016). A significant proportion of children aged 0-5 years, specifically 36.8%, participated in ECD programs. Notably, the provinces of Gauteng and the Western Cape had the highest rates of access to these educational facilities, with percentages of 46.8 and 46.9, respectively. Approximately 50% of children within the age range of 0 to 4 years were found to be residing in their households under the care of their parents or legal guardians. In the year 2019, the total number of students enrolled in educational institutions amounted to around 14.6 million. According to available data from 2018, a significant proportion of preschool-aged children, specifically 92% or around 2.1 million individuals, were observed to be actively participating in educational programs inside various educational institutions. The bulk of these children were found to be enrolled in either grade R or grade 1. The reported number of children enrolled in school in the present year was more than twice the amount reported in 2002, wherein just less than 1.1 million children of the same age were claimed to be enrolled. An estimated 200 000 children from this specific age cohort are currently not enrolled in any educational institution.

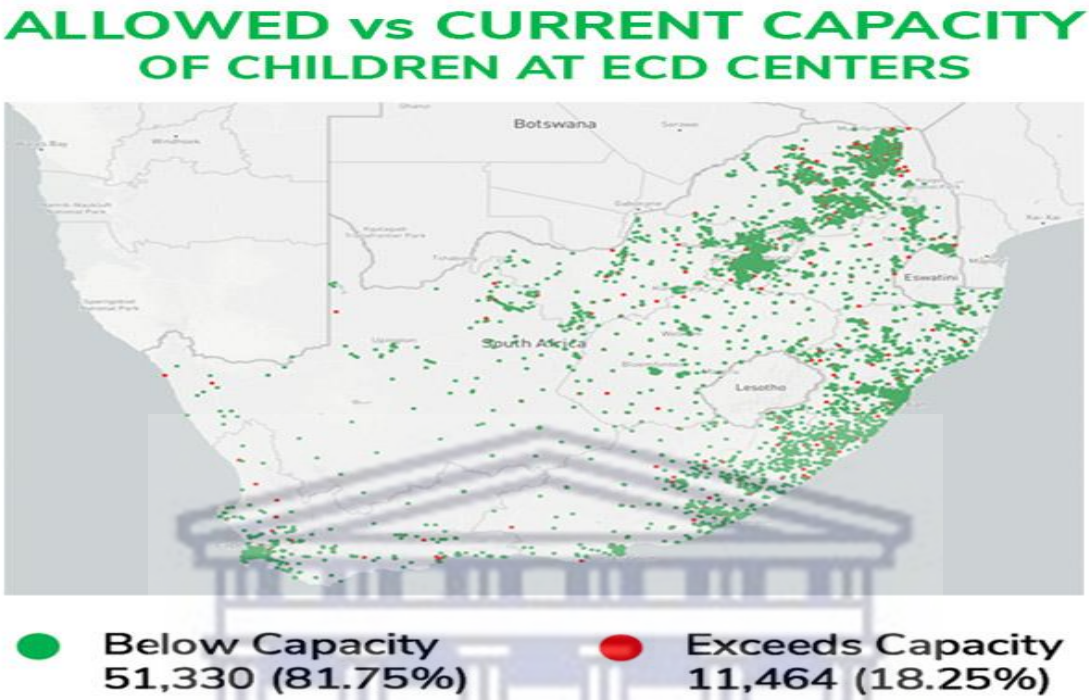
The fulfilment of teaching jobs in ECD facilities is contingent upon the curriculum implemented and the ability and training level of the educators involved. When selecting educators, it is crucial to strike a balance between the requirement for local knowledge and the attainment of sufficient skills. The utilization of local expertise is a common practice in rural regions, whereby the empowerment of local citizens is achieved by their involvement in filling vacancies within ECD facilities. This approach is founded on the premise that these individuals possess valuable knowledge about the community's environment and cultural dynamics. The methodology employed in this study is commonly referred to as an "organic curriculum" (Sayed et al., 2013). External educators are frequently encountered in both rural and urban regions. The decision-making process is significantly impacted by an individual's level of training and expertise, as well as their capacity to effectively finish a prescribed curriculum.

Charman et al. (2017) posit public ECD facilities that are under-resourced, underfunded and neglected, cater to about 86% of the population who lack the financial means to access ECD services. The private ECD sector caters to around 14% of the population. Although racial disparities may not be present, there continue to be discrepancies in access and utilization of resources between individuals of higher socio-economic status and those of lower socio-economic status (Rudolph, 2022). The allocation and distribution of resources between the two ECD sectors continue to be of considerable importance as the private sector receives over 50% of total resources and teaching professionals.

2.3.4 The context of the study

The primary focus of the research project is across all nine provinces. The analysis was conducted in adherence to the factors linked to the accessibility and utilization of ECD facilities across the nine provinces (see Figure 2.4). According to Statistics South Africa (Stats SA), the country recognizes twelve official languages. Coetzee-Van Roy (2018) has similarly argued that South Africa is a linguistically diverse nation, characterized by the presence of twelve official languages. A significant portion of the populace possesses the ability to communicate in more than one language, indicating a high prevalence of multilingualism. According to the statistical data provided by Stats SA, the number of male population count exceeds the female population count, with a ratio of 105 males for every 100 females at birth (Ritchie & Max, 2019).

Figure 2.4: Map of South Africa showing the capacity of children at ECD centres in the nine provinces



Source: https://www.govchat.org/usecases/digitising-early-childhood-development/

It is further asserted that IsiZulu, as the most extensively utilized language in South Africa, is spoken by approximately by 23% of the country's population. According to Coetzee-Van Roy (2018), the additional official languages spoken in the country include isiXhosa at a rate of 16%, Afrikaans at 13.5%, English at 10%, Northern Sotho at 9%, Southern Sotho at 8%, Xitsonga at 4.5%, siSwati and Tshivenda both at 2.5%, and isiNdebele at 2%. Based on the findings of the Stats SA 2020 survey, it was determined that a notable proportion of children, specifically 19.7%, resided in households where neither of their biological parents were present. Conversely, 34.2% of children lived with both of their biological parents, while a majority of 41.7% were found to be residing with their mothers. The data reveals that a proportion of approximately 12.3% of children experienced orphanhood as a result of the demise of one or both of their parents.

2.3.5 South Africa and ECD sectors in the provinces

Early Childhood Development (ECD) centres are present in all nine provinces of South Africa (see Figure 2.5). The Western Cape province, situated in the southwestern part of the country, harbours a population of almost seven million individuals (Stats SA, 2021). This region encompasses a diverse range of public and private ECD facilities, strategically designed to cater to the varying geographical landscapes and the urban centre of Cape Town Metropolitan region.

The Eastern Cape region provides a diverse range of ECD facilities, including preschools, day care centres and community-based projects. These offerings are indicative of the region's well-known historical and cultural diversity. The Eastern Cape is inhabited by around 6.9 million individuals (Stats SA, 2021). The province has two urban hubs, the Nelson Mandela Metropolitan region (Gqeberha) and the Buffalo City Metropolitan region (East London). The Northern Cape, which is the largest province in South Africa, is characterized by arid terrains and distinctive geological formations. Although rural America encompasses a significant land area and has a relatively low population density, the availability of ECD options in these areas may be somewhat restricted. The Northern Cape, which exhibit similar population density as rural America, is inhabited by approximately 1.3 million individuals and may have limited availability of ECDs (Stats SA, 2021).

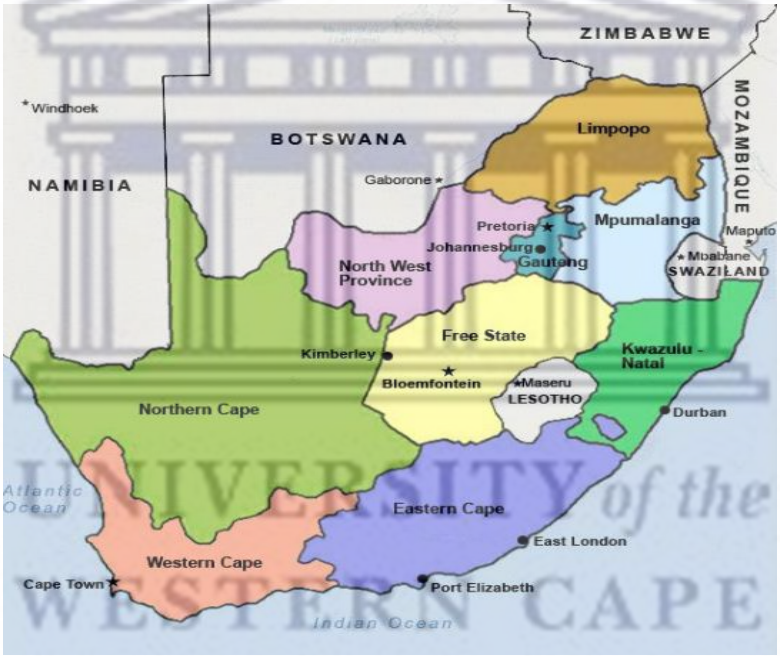
The Free State region in South Africa is occasionally recognized as the 'breadbasket' of the country because to its copious fertile agricultural area and picturesque historic towns. With an approximate population of 2.9 million individuals (Stats SA ,2021), this province offers ECD programs in both rural and urban regions. Free state province's urban centre is Mangaung Metropolitan region (Bloemfontein). KwaZulu-Natal, with an approximate population of 11.4 million (Stats SA, 2021), encompasses a diverse range of ECD institutions that cater to various cultural communities. This is evident via the province's abundant Zulu heritage and Indian/Asian heritage, picturesque beaches and vibrant urban centres such as the eThekwini Metropolitan region (Durban).

Mpumalanga, characterized by a population of 4.5 million individuals (Stats SA, 2021), encompasses a blend of urban and rural regions; hence, exhibiting a diverse range of ECD facilities. The province boasts notable attractions, such as the Blyde River Canyon and Kruger National Park. Limpopo, a province situated in the northern region of South Africa, has gained significant recognition for its commendable efforts in preserving and upholding cultural

traditions and customs. The province is home to around 5.8 million residents (Stats SA, 2021), establishing it as the primary hub for economic and cultural activities inside the nation.

Due to the substantial urban population around 15.5 million people (Stats SA, 2021), within the province of Gauteng, encompassing the urban regions of the City of Johannesburg Metropolitan and the City of Tshwane Metropolitan (Pretoria), there exists a pronounced demand for ECD programs. In the North West, the majority of the province's approximately 3.8 million inhabitants reside (Stats SA, 2021) in urban centres and mining communities, which have played a significant role in establishing the province being renown in the fields of mining and agriculture.

Figure 2.5: Map of South Africa showing the nine provinces and the urban centres



Source: https://za.pinterest.com/pin/408631366191918583/

2.3.6 Poverty and access to ECD facilities in South Africa

There is a higher probability that a kid born in South Africa may have a disadvantaged socio-economic status during their upbringing. The task of establishing a dependable educational system in rural places while simultaneously addressing poverty presents significant challenges. The availability of resources for ECD in rural parts of provinces is constrained by structural and environmental limits (Linda Biersteker, 2010). Socio-economically disadvantaged children are more likely to exhibit lower levels of competency in first reading instruction in comparison to their wealthier counterparts. There is a prevailing belief that the extent to which a kid is exposed to an early childhood development program throughout the critical period of 0 to 5

years, is significantly influenced by their proximity to an appropriate early childhood development facility (Mbarathi & Diga, 2016). Moreover, if there was a focus on undeveloped regions in the implementation of public ECD facilities, it could suggest a correlation between the presence of these services and increased levels of school attendance among the indigenous children. The cost of education, a widely recognized factor influencing school enrolment, is determined by considering the proximity to educational institutions and the prevailing explicit cost of basic schooling in the local area.

A significant number of children under school age in South Africa continue to encounter substantial obstacles in accessing a high-calibre early education due to the nation's elevated poverty rate. Nevertheless, there exist notable obstacles for low-income families in their pursuit to enrol their children in ECD programs (Linda Biersteker, 2010) The costs associated with preschools and early learning programs are merely two illustrations of the charges related to ECD that may prove unattainable for families with restricted financial means. Consequently, numerous households are compelled to opt for more affordable or less structured childcare options that may be insufficient in addressing their children's educational requirements or providing them with comparable levels of support (Mbarathi & Diga, 2016).

A potential disparity in the quality of early childhood education may arise due to insufficient financial resources and a dearth of adequately trained educators in ECD institutions situated within low-income neighbourhoods. Children residing in economically poor communities may have challenges in their cognitive and socio-emotional development due to limited opportunities to engage in enriching educational settings and get instruction from qualified professionals (Visser et al., 2021). The health and nutrition of children may be adversely impacted by poverty, thereby impeding their academic readiness. The efficacy of ECD programs may be compromised for children who experience malnutrition and limited access to healthcare due to the detrimental impact on their physical and cognitive growth.

Gaining access to ECD services in remote locations characterized by elevated poverty rates might provide significant challenges. Access to high-quality childcare and preschool programs may pose greater challenges for families residing in distant places, mostly attributable to constraints in infrastructure and service provision. The government of South Africa has acknowledged the significance of ECD and is actively striving to enhance the availability of early education with a special focus on marginalized communities (Atmore, 2013). Nevertheless, the provision of assistance to all children in need is an unattainable objective

because of the constraints imposed by limited resources and the magnitude of the undertaking. Non-governmental organizations (NGOs) and other non-profit entities assume a significant role in mitigating the disparity in ECD access among low-income communities. Community-based early learning programs, nutritional support and various other services are frequently employed as strategies to alleviate the effects of poverty on young children.

2.3.7 Living conditions and access to ECD facilities in South Africa

Similar to other countries in Africa, South Africa has a notable disparity in both economic resources and social conditions. At the provincial level, elevated population constitutes a contributing factor to the prevailing poverty across the country, alongside the phenomenon of labour demand surpassing the existing labour capacity. South Africa serves as a prominent economic force within the sub-Saharan African region, affording a select group of individuals the opportunity to experience unparalleled levels of affluence (Eric Atmore et al., 2012). The living conditions in South Africa are influenced by a combination of social and economic inequities, historical legacies and contemporary challenges. Despite the considerable progress made by the nation since the conclusion of apartheid in 1994, a multitude of social and economic challenges persist, exerting a detrimental impact on the well-being of its populace.

South Africa exhibits one of the most pronounced income disparities globally. In the given context, it is seen that a few proportions of individuals possess a significant share of the nation's economic resources while the majority of residents are compelled to manage with limited means. The disparity in income also amplifies pre-existing disparities in access to education, healthcare and other essential aspects of human well-being (Hall & Wright, 2010). The matter of housing affordability remains a significant concern. In the context of South Africa, a significant portion of the population is compelled to contend with substandard housing conditions due to factors such as population expansion and socio-economic deprivation. Notwithstanding governmental efforts aimed at addressing the issue, a significant dearth of affordable housing persists. The South African education system is confronted with a range of challenges, including a lack of qualified educators and insufficient financial resources (Yaw Amoateng et al., 2007). The post-apartheid era has witnessed advancements in educational accessibility, albeit with persistent disparities evident in both urban-rural divides and racial differentials (Hall & Wright, 2010). The country's healthcare system is confronted with several obstacles, including limited availability of high-quality treatment in remote regions, a substantial burden of

HIV/AIDS and a shortage of healthcare workers. The COVID-19 epidemic has placed further strain on the healthcare system (De Groot & Lemanski, 2021).

Unemployment continues to be a significant challenge in South Africa, particularly within the demographic of the nation's youth. As a consequence, the conditions of poverty and social discontent are further intensified. South Africa exhibits a notable prevalence of criminal activities, with a special emphasis on the incidence of violent offenses (Eric Atmore et al., 2012). In highly populated urban areas, this phenomenon possesses the capacity to jeopardize the well-being of individuals residing in the vicinity. Despite some advancements in expanding access to essential utilities such as running water and electricity, there are regions where these amenities are inadequate. The accessibility of these services is significantly influenced by geographical location and socio-economic level (Yaw Amoateng et al., 2007). The issue of land redistribution and ownership in South Africa remains a subject of intense discussion, despite ongoing endeavours to address historical injustices. Although South Africa has various challenges, it is important to acknowledge the nation's significant historical background, diverse demographic composition, breath-taking natural scenery and flourishing economic conditions.

2.3.8 COVID-19 and access to ECD in South Africa

This literature provides an overview of the adjustments and countermeasures made by ECD centres throughout the nine provinces of South Africa in light of the COVID-19 pandemic. The primary emphasis lies in the endeavours of facility owners to guarantee the growth and welfare of young children. The outbreak of the COVID-19 pandemic presented unexpected obstacles for the ECD sectors in South Africa (Reimers, 2021). The aforementioned circumstance has had a significant impact on the availability of healthcare services, educational opportunities and support systems for a majority of young children. During the onset of the pandemic, the government enacted stringent lockdown measures, one of which involved in the suspension of operations at ECD centres. These measures had major influence on children, families and ECD providers (Servaas van der Berg, 2020). Swanzen and Jonker (2021) conducted a study which revealed that the closure of ECD facilities has brought attention to the digital gap as it pertains to access to online educational resources. Certain ECD facilities tried to implement and offer remote learning resources in order to facilitate the development of young children.

The government has placed significant emphasis on ensuring the safety and well-being of young children, caregivers and educators in the context of ECD facilities during the ongoing pandemic. To this end, the government has implemented guidelines and provided resources aimed at promoting safety measures, hygiene protocols and mental health support within these facilities (Department of Social Development, 2020). According to the Human Sciences Research Council (2020), community-based ECD centres have collaborated with local organizations and sponsors to disseminate relief packages comprising essential food and sanitary items to economically disadvantaged families. The successful integration of health and safety protocols and the modification of operations to adhere to COVID-19 regulations have demonstrated the fortitude of numerous establishments in the face of financial constraints and escalating safety costs.

2.3.9 Type of ECD facilities in South Africa

Early Childhood Development (ECD) plays a vital role in the growth and development of children in South Africa, since it addresses significant social and educational concerns. The provision of high-quality ECD programs is crucial in adequately equipping children for a prosperous and thriving future (van der Walt & Oosthuizen, 2021). The country possesses a range of ECD facilities and programs that are designed to address the needs of its multifaceted youth demographic (Ebrahim et al., 2011). Community-based ECD centres which are operated by community members in informal settings, serve as crucial entities in rural and underserved regions by offering early education and care services to children who are at a higher risk of vulnerability (Ebrahim et al., 2011). These centres frequently secure financial support from international organizations and donors. Public ECD facilities, also referred to as crèches or preschools, are specifically created to give affordable and easily accessible services. These centres adhere to national curriculum norms and provide subsidized or free programming.

Private ECD centres which are operated by people or organizations, offer cost-effective educational services for families seeking early childhood education. These educational institutions frequently exhibit reduced student-to-teacher ratios and offer specialized curricula (van der Walt & Oosthuizen, 2021). Moreover, many primary schools use ECD programs which facilitate a seamless transition into formal education. In addition to their primary caregiving responsibilities, certain individuals also offer ECD services within the confines of their own

residences, thereby creating a supportive and enriching setting for young children residing in both urban and rural regions.

2.3.10 Main reason for not attending ECD facilities in South Africa

ECD programs have the potential to significantly enhance the cognitive, social and emotional development of children (Shung-King et al., 2019). Nevertheless, a significant number of children who reside in impoverished communities, lack the opportunity to avail themselves for ECD programs. Financial difficulties and poverty provide significant challenges for families in meeting the financial obligations associated with ECD, including fees, transportation costs and other related expenses (Bidwell & Watine, 2014). Low-income families may prioritize early schooling as a lower priority in order to fulfil their basic needs. Families residing in rural and isolated regions encounter difficulties in accessing ECD facilities as a result of insufficient infrastructure and a scarcity of such establishments. Parents may exhibit hesitancy in enrolling their offspring if the childcare facility is situated at a considerable distance (Kotzé, 2015). The potential cause for low enrolment rates in early childhood development programs could be attributed to a deficiency in public knowledge.

Other potential barriers, such as language barriers, cultural perspectives, distrust, inadequate governmental backing, policy inconsistencies, employment-related time constraints, or the necessity for intensive parental oversight may frustrate families to enrol their children in ECD facilities (Bidwell & Watine, 2014). These characteristics have the potential to limit the capacity and quality of services, hinder parental agency in decision-making related to ECD and create obstacles to families' involvement. Parents residing in metropolitan areas may need help while attempting to enrol their children in ECD centres due to limits related to their employment (Shung-King et al., 2019). Hence, eliminating these obstacles is crucial for achieving successful ECD enrolment.

2.3.11 Places where children spend most of their time in South Africa

This review addresses the typical locations frequented by children, emphasizing the need to comprehend their daily routines and surroundings (Department of Basic Education, 2018). The research emphasizes the crucial role the home environment plays in the growing process of a child, underscoring the significance of providing access to fundamental necessities, parental assistance and a secure and supportive atmosphere to foster comprehensive growth (Children's Institute, 2015). South Africa's educational landscape encompasses several institutions catering to the educational needs of its youth, including schools, preschools, and universities (du Plessis & Mestry, 2019). The optimal development and well-being of children are facilitated by the provision of secure and supportive environments, wherein they are afforded many chances for learning and growth, complemented by the presence of helpful people. In order to foster optimal physical and social development, it is imperative that children are provided with ample opportunity to engage in outdoor play within designated areas such as parks and playgrounds. The disparity in access to wholesome online activities and secure playgrounds has deleterious consequences on the mental and social development of youngsters (Children's Institute, 2015).

2.4 Household and socio-demographic factors

According to Madyibi (2021), a home is comprised of individuals who cohabitate in a shared residence and engage in communal meals. It is possible for either a single family or another group of individuals to be implicated in the matter. According to Munyai (2012), households retain great importance in the field of economics and inheritance due to their role as the primary unit of analysis in various social, microeconomic and governmental models. Families, blended families, shared housing, group homes, boarding houses, houses of multiple occupancy (United Kingdom) and single room occupancy all represent various household structures. Individuals who reside with other members of a home but are currently absent for a temporary period of time are classified as household members. Two illustrative instances include individuals who are enrolled as full-time students and those who engage in seasonal migratory labour.

The study examines many household variables, including measures of income and wealth, household size, adult economic activity, gender and the illiteracy status of the household head. Individuals are perpetually influenced by their surroundings and the factors present in their environment. All students are in a similar situation. Multiple elements contribute to the formation and impact of an individual student's life, including but not limited to their socio-

economic background, familial customs, parental educational attainment, community engagement and racial identity. In the past two decades, notable shifts in demographics have transpired, hence yielding significant ramifications for the field of education and its associated consequences. Several alterations occurred, including shifts in intra-household dynamics such as the occurrence of orphanhood, variations in family kinds and changes in living arrangements.

According to Charman et al. (2017), parental education level has an impact on student academic performance inside the educational setting. Research indicates that students have enhanced reading performance when their parents possess a post-secondary education. The engagement of students in community activities serves as a valuable complement to their overall development. The extent of a student's involvement in community activities and external events is typically reflective of their level of engagement and participation. Families and households hold significant influence over the developmental, emotional and cognitive growth of children, with parents assuming a crucial role in facilitating such development. In contrast, the act of residing with one's biological parents carries an inherent economic worth that is contingent upon the quality of care they are capable of offering. Consequently, it is not uncommon for children to be entrusted to the guardianship of extended family members such as grandparents. Munyai (2012) posits that single-parent families are characterized by a scarcity of resources, including temporal and financial assets which are typically more abundant in dual-parent households. According to the General Household Survey 2018 study, it was discovered that 19.8% of children did not have either of their biological parents, while 33.8% had both biological parents present. Additionally, the survey revealed that 43.1% of children had their mothers as their primary caregivers. According to the General Household Survey 2018, the proportion of orphaned children among the total population of children was found to be 11.7%. Thus, each household is unique in terms of head of household, size, single or dual parent, finance and literacy level.

2.4.1 Household size

The presence of a larger number of children assigned to household tasks takes away the workload borne by individual children, potentially impacting their likelihood of enrolling in school. The size of a household may also influence the extent of children's engagement in ECD programs since larger families with a greater number of prospective caregivers may exhibit reduced reliance on external childcare services (Madyibi, 2021). The enrolment of children in school may be influenced by the economic activities of adults, particularly women who may assign home domestic responsibilities to children, so impeding their attendance at school. The impact of work may also motivate a significant number of economically active moms to enrol their children in an ECD program.

2.4.2 Age and sex of the head of household

The study incorporates the gender of the family head due to the observed tendency of women to exhibit greater generosity in allocating resources towards children. According to Handa's (1996) findings, there was a inclination among women-headed families in Jamaica to focus expenditures on the needs of their children and extended family members. Families in which women assume the primary role of breadwinner may see a reduction in available resources for their children. The provision of ECD facilities for children is significantly influenced by the age and gender of the household head. Access to ECD is influenced by a multitude of interconnected elements, encompassing cultural norms, societal expectations and economic realities.

The age of the primary earner within a home can potentially impact the availability of financial resources for ECD. Due to their greater professional experience and enhanced financial stability, older individuals who serve as heads of households may encounter less challenges in affording higher-quality ECD services for their offspring. Younger individuals assuming the role of family heads, potentially concurrently pursuing college or engaging in entry-level employment, may have heightened financial limitations that impede their ability to avail themselves of early childhood education of superior quality (Britto et al., 2011).

Moreover, an individual's gender could also have a role. Traditional gender roles and obligations in South Africa may potentially impede the capacity of the family's primary decision-maker to facilitate access to ECD opportunities. The presence of male household

leaders may confer a potential benefit in the realm of ECD as a result of heightened opportunities for steady employment and income acquisition (Britto et al., 2011). Nevertheless, it is imperative to acknowledge the evolving nature of gender dynamics and the commendable efforts of numerous female heads of households in surmounting obstacles to provide their children with opportunities to partake in ECD programs of exceptional quality. In order to ensure equitable access to ECD, it is imperative to implement a range of solutions that address the needs of all individuals, irrespective of the age or gender of the primary earner within the home. It is imperative that all children residing in South Africa are afforded equitable access to ECD programs of superior quality, irrespective of the age or gender of the household's primary caregiver. The achievement of this objective can be facilitated through the implementation of policy measures, the promotion of economic empowerment and the execution of awareness initiatives.

2.4.3 Household income

The capacity of a family to adequately support its children is anticipated to be significantly impacted by its level of income and wealth. If one were to assume that an advantage of early childhood enrichment is its potential to enhance future academic success, the decision to enrol in ECD programs may be influenced by the financial implications of education. The assertion is substantiated by findings in rural Ghana that the cost of secondary education has an impact on the enrolment rates of elementary schools (Victor Lavy, 1996).

The influence of financial disparity on a child's early education is evident in South Africa, where there exists a correlation between family income and the accessibility of ECD institutions. In a nation characterized by enduring income inequality, the capacity to afford ECD institutions exhibits significant variation (Raikes et al., 2020). There is a higher probability that children hailing from economically advantaged households may enrol in ECD programs that offer opportunities to interact with skilled educators, safe surroundings and a diverse array of educational materials. These educational institutions provide a strong basis for learning, aiding young individuals in acquiring essential skills and knowledge.

In contrast, children hailing from economically disadvantaged households face significant obstacles in their ability to access appropriate ECD services. As a result of financial limitations, individuals are compelled to resort to suboptimal, unofficial care alternatives that may not provide sufficient intellectual guidance. Income gaps in ECD prospects can potentially lead to

enduring repercussions for children(Britto et al., 2011). The imperative of bridging the disparity in access to early childhood education is crucial in fostering a more equitable South Africa, wherein children from impoverished backgrounds are afforded a reasonable chance to commence a promising educational direction.

2.4.4 Level of education in the household

There exists a considerable amount of literature and theoretical frameworks in the field of child development that underscore the importance of both family and preschool environments in shaping early childhood outcomes. According to the data derived from the Multiple Indicator Cluster Surveys (MICS) conducted by UNICEF, MICS is an internationally recognized household survey that aims to collect comprehensive and representative data on children's early development. This survey has been conducted in over 118 countries with low- and middle-income economies since 1995, ensuring the comparability of data across different cohorts. This study examines the impact of home learning activities and enrolment in early childhood programs on early child development, focusing on the experiences of mothers and caregivers. According to Rao et al. (2021), there was a notable rise over time in maternal education, household wealth, home learning activities, Early Childhood Education (ECE) involvement, and Early Childhood Development Index (ECDI) scores, with significant correlations seen among these variables. The present study employed multilevel structural equation modelling to elucidate the underlying mechanism via which mother education and household wealth were associated with child outcomes. Mothers with higher socio-economic status and educational attainment have shown a greater propensity to enrol their children in ECD programs, which in turn exhibited a positive correlation with higher scores on the ECDI. The ECDI score was found to be highly affected by caregiver-reported early childhood education (ECE) participation, while the influence of maternal education was very minimal. Moreover, as stated by Rao et al. (2021), the impact of the home learning environment has shown significantly diminished effects in contrast.

According to Du Plessis and Conley (2007), a significant majority of children in South Africa experience poverty, thereby compromising their constitutionally protected rights. Children who are raised in impoverished conditions encounter significant levels of vulnerability, discrimination and social isolation. There exists a strong correlation between monetary poverty and adverse health outcomes, as well as restricted access to educational opportunities, adequate

nutrition, healthcare services and secure living surroundings. Based on data from the General Household Survey 2009, it was found that a significant proportion of children in South Africa, specifically 61%, were classified as impoverished as indicated by their monthly per capita income falling below the threshold of R522. There exists a strong correlation between unemployment and the measure of income poverty. Based on the findings of Statistics South Africa (2010), it was observed that a significant proportion of children, specifically 36%, reside in families characterized by the absence of any working adults.

In instances where parents are incapable of furnishing financial assistance to their offspring, the government assumes the responsibility of providing such support to ensure the fulfilment of their fundamental necessities. This is achieved through the implementation of social assistance programs such as the Child Support Grant, which is disbursed to caregivers who meet the eligibility criteria. The award has had a notable increase over the years, rising from R100 per month in 1998 to R280 in April 2012; however, it remains insufficient in magnitude. As of April 2011, 10.5 million children below the age of 16 years were beneficiaries of the Child Support Grant, establishing it as the foremost child poverty mitigation initiative in South Africa. According to the South African Child Gauge (2010), the aforementioned award has helped a significant number of children in the nation, specifically in terms of sustenance, education and access to essential commodities and services.

2.4.5 Education level

Education is a fundamental necessity for all individuals (Raikes et al., 2020). The right to basic education is guaranteed to all inhabitants of South Africa, as stipulated in the Bill of Rights. The government is obligated to progressively enhance the availability of education by implementing reasonable measures. The provision of education is a responsibility of the state, and the government endeavour to enhance its delivery in a manner that is both engaging and comprehensive, considering the available national resources. In the context of South Africa, the responsibility for education is jointly held by the Department of Basic Education (DBE) and the Department of Higher Education and Training (DHET). The DBE is responsible for the supervision and management of educational institutions spanning from kindergarten to grade 12, including adult literacy programs.

On the other hand, the DHET is tasked with overseeing universities and other institutions offering post-secondary education and training with a specific focus on facilitating effective

human resource development. Additionally, the DHET plays a coordinating role in implementing South Africa's Human Resource Development Strategy (HRDSSA). The DBE is responsible for establishing, upholding and facilitating a contemporary school education system in the country. This system aims to ensure that all individuals have equal opportunities for continuous learning, education and training throughout their lives. By doing so, the DBE aims to enhance the overall standard of living and foster the growth of a harmonious, prosperous and democratic South Africa. Based on the findings of the South African Child Gauge (2010), it is noteworthy that 67% of five-year-olds had been enrolled in grade R by 2011. This statistic indicates a positive advancement towards the government's revised objective of achieving universal access to grade R by 2014. The relevant governmental entities, including the Departments of Social Development, Education and Health, have recognized the imperative to enhance the availability of ECD initiatives, while concurrently enhancing the calibre of ECD programs and services with a specific focus on children from economically disadvantaged backgrounds. Moreover, as stated by the DBE, Department of Social Development (DSD) and the United Nations Children's Fund (UNICEF) in 2010, there was an augmentation in financial allocation by the DSD for ECD centres catering to children from birth to four years of age. Simultaneously, the Department of Education boosted its financing for grade R, encompassing children aged five to six years.

2.5 Children's characteristics and access to ECD facilities

2.5.1 Children's access to ECD facilities by area of residence

The provision of ECD holds particular significance in regions where historical policies have exhibited preferential treatment towards specific demographic groups, hence leading to substantial disparities in educational attainment that persist despite the implementation of current policies. Oppong (2015) posits that the observed differences can be attributed to a multifaceted interplay of demographic factors, spatial components and institutional restrictions. Based on the findings of the World Education Report published in 2015, it can be asserted that the concept of universal education encompasses the provision of educational opportunities to all individuals, irrespective of their geographical location. Furthermore, it is emphasized that every individual possesses an intrinsic entitlement to sufficient ECD services, as affirmed by Black et al. (2017). In spite of the ongoing process of urbanization within the nation, Black et al. (2017) have documented that a significant proportion of the populace, up

to 38%, continues to reside in rural regions. Based on the findings of Black et al. (2017), it can be observed that the provision of professional caregiver services exhibits a concentration in urban areas, leading to a notable disparity in the distribution of such services and facilities between rural and urban regions. Moreover, Atmore (2019) asserted that as a consequence of an inequitable allocation of ECD resources, including facilities and services, children residing in rural regions exhibit lower use rates of ECD facilities compared to their urban counterparts.

According to Atmore (2013), there is a disparity in the provision of ECD services between urban and rural locations in Africa. This discrepancy can be attributed to the insufficient availability of facilities and qualified teachers in rural regions. Moreover, the presence of disparities in accessing contemporary ECD services throughout Africa compels individuals residing in underprivileged communities to resort to non-traditional and home-based approaches using individuals who are not professionally hired or trained. Consequently, this engenders a lack of parity in the availability of contemporary ECD services. Moreover, the geographical characteristics of rural areas may not always be conducive to the development of infrastructure and efficient transportation systems. Despite the presence of transportation options, the accessibility of ECD services is constrained by factors such as journey duration and associated expenses. Consequently, rural regions continue to experience a lack of progress, resulting in limited availability of ECD programs for children.

2.5.2 Children's access to ECD by household head income

The level of financial resources within a household in South Africa plays a crucial role in determining a family's ability to provide support for the early development of their young children. In order to address poverty among marginalized communities, the government of South Africa has developed a social grant system. In rural regions characterized by low-income levels and dependence on remittances, social handouts play a crucial role in augmenting home security and ensuring food security. The study conducted by Atmore (2019) examined the demographic composition of social grant recipients in South Africa, finding that around 70% of the recipients were comprised of families. This is mostly due to the vulnerable and impoverished nature of many families who often depend on government financial aid (Atmore, 2013). Hence, children often encounter obstacles connected to finances that hinder their access to ECD services.

The restricted availability of ECD facilities can be attributed to a scarcity of financial resources. In the context of South Africa, it is observed that children belonging to lower-income households face a reduced likelihood of accessing ECD centres that offer high-quality services (Aina & Bipath, 2022). Children belonging from families with higher economic levels exhibit a greater propensity to enrol in ECD programs of superior quality, characterized by an atmosphere that ensures safety and fosters stimulation for the youngsters. Educational institutions of this nature frequently engage the services of highly competent instructors, provide an abundance of educational materials and facilitate the optimal development of young individuals.

Nevertheless, children belonging from low-income households sometimes have challenges when it comes to accessing superior child development services. Due to financial limitations, families frequently opt to enrol their children in childcare facilities that possess fewer resources or in informal care arrangements (O'keeffe et al., 2022). Promoting quality and ensuring equitable access to ECD facilities are imperative in South Africa to mitigate the adverse impact of inequality on the future chances of children, irrespective of their families' socio-economic status.

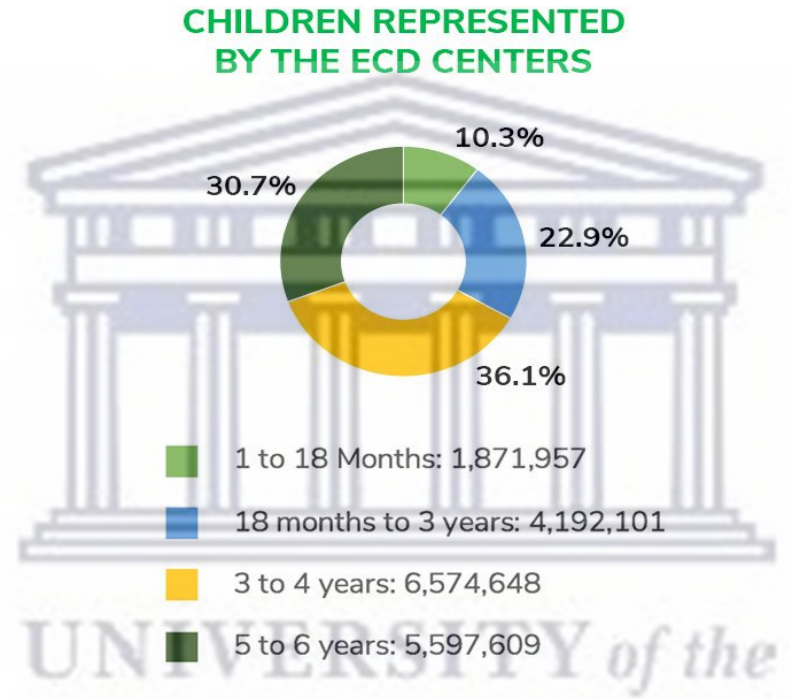
2.5.3 Children's accessibility to ECD facilities

Early childhood development (ECD) services in undeveloped nations such as South Africa, face significant underutilization resulting from many challenges. These challenges encompass inadequate provision of ECD facility services (Digital Research et al., n.d.) and restricted accessibility to ECD facilities. The utilization of ECD facilities in particular contexts has been limited due to several constraints, such as the financial difficulties associated with travel fees and the significant distances and time required for travel (Atmore, 2013). In spite of the implementation of educational laws and policies with the objective of increasing the presence of ECD centres in even the most geographically isolated areas of South Africa, the lasting impact of apartheid has led to significant disparities in the availability of these facilities and associated services (Charman et al., 2017).

According to Pillay (2006), there is an unequal allocation of resources for ECD in South Africa. The existing inequity in the availability of ECD programs serves to intensify the already pervasive poverty and inequality within the nation. Furthermore, Laher and Cockcroft (2014) argue that individuals residing in metropolitan areas have unique challenges in the realm of education when compared to those living in rural areas. The utilization of ECD services is

impeded by the significant geographical distance to ECD institutions, particularly in rural regions of South Africa. According to Mwamwenda (2014), the ECD facilities and services in these areas are located at a considerable distance from the communities they cater to. The provision of complimentary ECD programs does not guarantee the optimal utilization of ECD facilities as there are additional costs related to transportation and time limitations (Mwamwenda, 2014).

Figure 2.6: Age distribution of children in ECDs across South Africa



Source: https://www.govchat.org/usecases/digitising-early-childhood-development/

2.6 Conceptual framework

Early childhood development access is recognized as a fundamental human right in the South African constitution. Nonetheless, inequalities in ECD persist. The socio-demographic, socio-economic and cultural context of children's lives determines their access to ECD facilities (Richter & Samuels, 2018).

2.6.1 Head of household level of education and access to ECD facilities

There is an assumption that a higher degree of education is positively associated with increased access to ECD services within homes, for both parents. Education plays a crucial role in enhancing consciousness and exerting influence over the utilization of ECD services. Research conducted by Richter and Samuels (2018) has established a positive correlation between formal education and increased levels of knowledge, comprehension and communication. Also, Pillay's (2006) study demonstrates a correlation between parental education and heightened utilization of ECD services.

In their study, Rao et al. (2014) investigated to identify the various elements that have an impact on ECD attendance, with a particular emphasis on the significance of education. It was found that the availability of ECD facilities was constrained by limited access, primarily attributed to a deficiency in education, a factor often linked to a lack of knowledge. Moreover, as stated by Black et al. (2017), parents who have achieved lower levels of education are less inclined to enrol their children in ECD facilities compared to parents with greater levels of education and literacy rates. This phenomenon might be attributed to the limited comprehension of ECD services among parents with lower educational attainment, resulting in a lack of awareness regarding the significance of these programs for their children. Consequently, there exists a positive correlation between one's level of education and their probability of utilizing ECD facilities. The influence of parental literacy on access to ECD services and facilities has also been examined by Dozva and Dyanda (2012) in Zimbabwe.

2.6.2 Income level and access to ECD facilities

There is an assumption that parents belonging to higher economic brackets exhibit a greater propensity to enrol their children in ECD programs when compared to parents with lower earnings or no income. Based on existing scholarly sources, it is evident that income continues to play a significant role in determining one's ability to obtain ECD services. Atmore (2013) posits that a prevailing notion exists regarding the positive correlation between greater income levels and increasing attendance rates at ECD facilities. Children have financial obstacles in accessing ECD facilities due to their families' poor income and the scarcity of employment prospects. Consequently, these financial hurdles impede children from attending ECD facilities. Oppong (2015) asserts that urban locations offer more favourable economic prospects compared to rural areas. Consequently, children residing in urban areas are more inclined to have access to higher income levels, in contrast to their counterparts in rural areas

where the economy is seeing a decline. According to Chitsamatanga and Rembe (2020), the absence of financial resources, limited income and dependence on social welfare payments are substantial barriers that hinder individuals' ability to utilize ECD services. Children, particularly those from low-income households, have further limitations in their ability to access ECD services. There is a positive correlation between parental employment and the likelihood of earning an income, hence facilitating increased accessibility and utilization of ECD services.

2.6.3 Area of residence and access to ECD facilities

There is an assumption that children residing in urban areas are more inclined to enrol in ECD facilities compared to their counterparts in rural regions. The accessibility of ECD services for children is significantly impacted by their geographical location and the proximity of ECD facilities. Numerous studies have been undertaken to examine ECD access and usage between urban and rural regions. Studies have revealed that children residing in urban regions have more access to ECD programs and facilities compared to their counterparts in rural settings (Atmore, 2019; Rao et al., 2014; Irwin et al., 2007). Based on the findings of Black et al. (2014), individuals residing in economically disadvantaged, non-urban and rural provinces, including the Eastern Cape, Limpopo and Mpumalanga, exhibit a higher propensity for encountering educational deficiencies and disparities compared to their counterparts residing in metropolitan regions and provinces such as the Western Cape and Gauteng.

According to Oppong (2015), the availability and proximity of ECD facilities and services tend to diminish when population density declines, and geographical isolation intensifies. This suggests that rural and isolated regions characterized by lower population densities often experience a scarcity of ECD services. The rural regions of sub-Saharan Africa, including the Eastern Cape, Limpopo and Mpumalanga provinces in South Africa, suffer from a lack of adequate ECD facilities and services, resulting in underserved or unserved populations. Moreover, Rao et al. (2014) highlights the challenges encountered by individuals residing in rural regions and former homelands within South Africa in terms of accessing ECD services. These challenges mostly revolve on the considerable distances that need to be covered and the absence of adequate transportation options. In addition, Dozva and Dyanda (2012) have identified certain geographical constraints that have an impact on the accessibility of ECD facilities in Zimbabwe. These issues include transportation difficulties and inadequate terrain. Hence, there exists an inequitable distribution of ECD services among children residing in both

urban and rural regions. ECD facilities exhibit a scarcity in rural regions, although they are comparatively more concentrated and easily reachable in metropolitan areas (Chitsamatanga & Rembe, 2020). Living in rural locations has been found to have a negative impact on individuals' ability to receive ECD services.

2.7 The policy on ECD access and use in South Africa

Early childhood development has been identified as a critical issue by the South African government. Policymakers have worked hard to ensure that early childhood development policies are appropriate and equitable, especially for poor and vulnerable children (Biersteker, 2012). According to the most recent available data on registered ECD centres in the country, as of the 2013 Department of Social Development (DSD) Annual Report, there were 18 000 in South Africa. The government is addressing existing policy gaps by implementing ECD programs through their respective departments - the Departments of Education, Health and Social Development - and their relevant stakeholders (Storbeck & Moodley, 2010). On March 13, 2015, the South African government presented a draft national ECD policy through the DSD, which is currently being reviewed by the public before final ratification (Republic of South Africa, 2015).

This draft ECD policy is in accordance with the DSD's mandate of September 18, 2013, and is promoted through the South African integrated Early Childhood Development programme - Moving Ahead (2013-2016). Having said that, the South African government would need to make some critical financial allocations to ensure that ECD policy implementation is both cost effective and equitable, particularly to ensure that material and infrastructural resources reach the poorest of the poor. The South African Education Department declares that the ECD facilities encompasses discrimination-free access to ECD services and facilities. Furthermore, all services and facilities must be of good quality, available, accessible, and acceptable to all. South Africa's National Development Plan echoes this in its aim to provide equitable and universal Education system and access to quality and equal ECD standards, despite financial status.

The Children's Bill 2003, outlines South Africa's childcare legislation and proposed legislative changes. The national Department of Social Development reports on the status of implementation of national policies, legislation, strategies and priorities for early childhood development services (Department of Social Development, Republic of South Africa, 2006).

2.8 Governance and national policy for ECD

On the side of the government, it is dedicated to guarantee the collective access to ECD programmes for young children in preparation for their compulsory schooling. However, the implementation of the ECD programmes leaves a lot to be desired as there are not enough ECD facilities, the distribution of ECDs across the provinces are not even and the services are irregular.

According to a UNICEF Report (2019), South Africa's education system has three broad levels. The first level is early childhood development (ECD) for children between 0 and 6 years of age. The Department of Basic Education (DBE), Department of Social Development (DSD) and the Department of Health (DoH) are responsible for implementing ECD but these departments have different roles. Children 4 years of age and under, attend ECD centres while children aged between 5 and 6 years are enrolled in pre-Grade R and Grade R, which are reception programmes to equip learners for primary school. The Department of Basic Education (DBE) is responsible for ECD curriculum development as well as the budget and procurement processes for training ECD practitioners. Provincial education departments are responsible for training, implementing and monitoring curriculum-related activities.

Following the President's 2019 State of the Nation Address, the management of ECD centres will be transferred from the Department of Social Development to the DBE, and two years of preschool education will become mandatory (UNICEF Report, 2019). Qualification of ECD practitioners, especially those engaged in community- and home-based programmes, should be another major component of the work towards quality improvement. Provision of ECD programmes is an inter-sectoral responsibility shared between the Departments of Social Development and Education. DSD has a primary obligation for children under school-going age. It is important, therefore, that the departments work in close partnership to ensure universal access to and good quality of ECD services to all children, irrespective of which department these services are provided by.

Therefore, the primary objective of this study is to gain a deeper understanding of the obstacles and enablers encountered by children in South Africa in their pursuit of participation in early childhood development initiatives. This study aims to provide policymakers and stakeholders with insights into the determinants influencing the utilization of ECD facilities.

2.9 Chapter summary

Chapter Two outlines a comprehensive review of the literature presented, which was categorized in three groups: theoretical frameworks and empirical frameworks. The initial component of this study examines pertinent existing theories concerning access to and utilization of Early Childhood Development (ECD) facilities. The subsequent portion of the literature examines and explores the empirical aspects. The pertinent policy framework for Early Childhood Development (ECD) is examined towards the conclusion of Chapter Two.

Chapter 3: Methodology

3.1 Introduction

This chapter presents a comprehensive account of the research design and methodology utilized by the researcher in the investigation of the socio-demographic and socio-economic determinants that impact the accessibility and utilization of Early Childhood Development (ECD) facilities in South Africa. The examination of the research approach utilized in this study is conducted at various phases. The passage emphasizes the significance of embracing a research-oriented perspective and offers a rationale for the selection of techniques. The primary aim of this study is to provide a thorough examination of the accessibility of early childhood development services in all nine provinces of South Africa. This study examines various aspects of the study, including the research perspective, research kind and subtype, study context, ethical issues, study participants, data collection methods and instruments and data analysis. The primary emphasis of this discourse concerns the study design and its relevance to the topic at hand, encompassing factors such as the size and design of the sample. The chapter presents a comprehensive examination of the factors and data included in the research. The statistical approaches and research methodology utilized by the researcher are also outlined. The current study used the dataset consisting of the data obtained from the 2021 General Household Survey. The dataset can be obtained through the Data First website which is overseen by the University of Cape Town. The data underwent statistical analysis using the IBM Statistical Package for the Social Sciences (SPSS) software to obtain results.

3.2 Research perspective

The present study utilized a quantitative research approach to investigate the factors associated with the access and utilization of Early Childhood Development (ECD) facilities across the nine provinces of South Africa. The present study investigated the specified hypotheses derived from the variables under investigation, utilizing scientific sampling methodologies as outlined by Lartey (2018). According to Lartey (2018), the utilization of this methodology serves the objective of addressing doubts pertaining to the relationship between measurable variables, as well as providing clarification, prediction and management of occurrences. Thus far, there has been a discernible dearth of attention given to the demographic features of South Africa while analysing the statistical facets pertaining to the availability of ECD facilities. This study has

evaluated many demographic factors, including age, gender, marital status, population group and education level. The objective of this study is to conduct a comprehensive examination of correlation research approach between household, socio-economic and socio-demographic variables, alongside the availability of early childhood development services. Moreover, it is essential to illustrate the impact of each of these factors on ECD access and utilization. This study utilized the General Household Survey (GHS) 2021 dataset to examine the association between demographic factors and variables related to early childhood development.

3.3 Data sources and methods

The study sample was exclusively comprised of private households from all nine provinces. This study utilized the data obtained from the 2021 General Household Survey (GHS) conducted by Stats SA. The GHS is an annual survey that aims to provide a nationally representative sample of the general population. The two datasets in the survey comprise a comprehensive range of socio-demographic and socio-economic attributes at both the individual and household levels. These attributes encompass factors such as level of education, population group and the specific type of ECD facility attended. The study considers the 2021 GHS as secondary data as it is provided by Stats SA. The collection and analysis of GHS data are conducted by government agencies proficient in conducting censuses, surveys, and other data collection and analysis methodologies, rendering it a dependable source of data. Additional sources, including scholarly journals, peer-reviewed articles, reports and pertinent surveys, were referenced.

The 2021 GHS was designed using the 2013 master sample as a foundation. This survey employed a stratified two-stage design, incorporating probability proportional to size sampling of primary sampling units in the initial stage, followed by systematic sampling of dwelling units in the subsequent stages (Stats SA, 2021). The sample used in this study is representative of several geographical areas at the provincial level, including both metropolitan and non-metropolitan areas. Additionally, the sample is stratified based on geography and population features, utilizing data from the 2011 Census conducted by Statistics South Africa (Stats SA, 2021).

The outbreak of COVID-19 has had an impact on the process of data collection, necessitating a shift towards the utilization of computer-assisted telephone interviews (CATI) as a means to mitigate the spread of the virus (Stats SA, 2021). The interviews (Computer-Assisted

Telephone Interviews or CATI) were conducted by enumerators as stated by Stats SA (2021). These interviews were carried out in a total of 3 234 main sampling units that were selected from the master sample. The master sample consisted of about 33 000 housing units from which data was collected.

3.4 Study design

The present study utilized cross-sectional data obtained from the GHS 2021. The sample survey was administered through personal interviews using a household questionnaire by Statistics South Africa (Stats SA). The data was collected within one point in time. The primary objective of the analysis is to ascertain disparities in the accessibility and utilization of ECD facilities within South Africa, as well as among various households. The research design employed a descriptive survey methodology. The process of conducting a descriptive survey involves the systematic collection of comprehensive data through the precise practice of notetaking, followed by careful evaluation and interpretation of the gathered information. The utilization of the GHS 2021 is justified due to its ability to offer reliable and comprehensive information, thereby ensuring the provision of precise and consistent data. The interpretation of the GHS primarily focused on the analysis of quantitative data derived from a survey questionnaire. The study design is classified as quantitative due to the utilization of a substantial sample size wherein respondents are organized into scales featuring numerical values. The data underwent analysis through the utilization of Chi-square Independence tests, employing cross-tabulation techniques, as well as employing Cramer's V and Phi (symmetric measures). The tests conducted demonstrated the relationship or no relationship between the two variables that have been cross-tabulated.

3.5 The participants in the study

The study population comprises individuals who hold the position of household head and have children aged 6 years old and below, residing in South Africa. The research employed the 2021 GHS dataset to ascertain the socio-demographic and socio-economic variables linked to the availability of ECD facilities. The research was centred on individuals residing in private households within the context of South Africa. Children from diverse ethnic backgrounds and cultural groups were deliberately included in order to achieve optimal representation and obtain

precise results. The data collected by the 2021 GHS included information on all members of households, regardless of the age of the children attending ECD facilities. The objective of the study was to identify the factors linked to the access and utilization of ECD facilities, as well as the underlying causes for children not attending such facilities in South Africa. Consequently, the study incorporated a diverse sample of children from various population groups across South Africa, encompassing both urban and rural regions. The objective was to examine the impact of multiple factors on the accessibility of ECD facilities within households with children aged 6 and below.

3.6 Data analysis

The present study utilizes data obtained from the 2021 General Household Survey (GHS) conducted by Statistics South Africa. The selection of the GHS was based on its demonstrated reliability and validity. Specific computer software has the capability to facilitate data analysis through the process of filtering both the extensive data set and the variables involved. One of the statistical software packages that was utilized is the SPSS 28. The present study encompassed a comprehensive depiction of all variables, an examination of the relationships among these variables, and a comparison of the anticipated outcomes. The data were subjected to various statistical procedures, such as univariate, bivariate and multivariate analyses.

3.6.1 Univariate analysis

Univariate analysis refers to a statistical technique employed to analyse data sets comprising a single variable. This method lacks the ability to address relationships as it only examines a single variable. The present analysis aims to identify the characteristics of the participants within the data set and subsequently represent them as percentages. These percentages are then visually presented through the use of frequency tables and graphs.

3.6.2 Bivariate analysis

The bivariate analysis method is utilized to examine the relationship between variables. The purpose of this analysis was to examine the statistical correlation between the independent variables and the dependent variable around the access to ECD facilities across the nine provinces of South Africa. The bivariate analysis was conducted by presenting the data in a two-way table or contingency table, using cross-tabulation to examine the relationship between the variables.

In addition, the Chi-square test for Independence was employed to ascertain the association between socio-economic and socio-demographic factors pertaining to the access and utilization of ECD facilities. In the context of a contingency table, a comparison was made between two variables. The p-value is a statistical measure that ranges between 0 and 1, representing the level of significance. A high p-value suggests that the hypothesis lacks significance, indicating a lack of association between the two variables. When the p-value is less than 0.05, it indicates statistical significance, suggesting the presence of a relationship between the two variables being tested.

The Chi-square test for Independence formula is given below:

$$\chi^2 = \sum_{i=1}^{k} \frac{(O_i - E_i)^2}{E_i}$$

In addition, the strength of the relationship was evaluated through the utilization of statistical significance testing for Phi and Cramer's V. The purpose of this study was to analyse the recorded data in order to assess the disparities between observed and expected outcomes. The aim was to identify the factors that influence the accessibility and utilization of ECD facilities in South Africa, as well as the various types of ECD facilities.

3.6.3 Multivariate analysis

Multinomial logistic regression was employed in the context of multivariate analysis. Multivariate analysis is a statistical technique that examines the interrelationships among three or more variables. Consequently, the dataset underwent multivariate analysis through the application of logistic regression. The utilization of multinomial logistic regression was justified due to the presence of a dependent variable that encompassed more than three distinct and not ordered categories. Multinomial logistic regression allows for the inclusion of more

than two categories for independent variables (Peng et al., 2002). The model utilizes multiple independent variables to estimate the probability of an individual's connection in a specific category on a dependent variable. Three odds ratios are computed for the dependent variable, and each category is compared to these ratios. The logistic models are then obtained by linearizing the model through the application of natural logarithms to these odds ratios (Peng et al., 2002).

The model utilizes a baseline category for the purpose of conducting comparisons or analyses, which may be selected at random by the software program. Peng et al. (2002) obtained three logistic models for a dependent variable with four categories, which consisted of 1, 2, 1, 3, 1, and 4. Peng et al. (2002) computed three odds ratios for each category and linearized the model by applying the natural logarithm to these odds ratios. The model holds significance in this study since it encompasses the nominal dependent variables, namely the type of Early Childhood Development (ECD) facility, the primary reasons for not attending the ECD facilities and the place where children spend most of their time. It is widely accepted that many demographic factors, including age, population group, marital status, level of education, province, mother part of the household and father part of the household, have an influence on the accessibility and utilization of ECD facilities.

To compute the Multinomial logistic regression, the following equation can be used (Peng et al., 2002):

$$\pi y = \frac{exp(\sum_{k=1}^{k} \beta_{yk} \chi_k)}{1+\sum_{y=1}^{y-1}(\sum_{k=1}^{k} \beta_{yk} \chi_k)} \quad y= 1, 2, ..., y-1$$

The application of binary logistic regression in the study conducted was considered unsuitable. The incorporation of multinomial categories in the dependent variable was facilitated by the utilization of multinomial logistic regression, which is an extension of binary logistic regression. This particular methodology proves to be advantageous in the examination of categorical variables as it does not assume the presence of normality, or linearity. The main need for the validity of a decision-making process is the independence of non-relevant alternatives. To evaluate the likelihood ratio (LR) of access and utilization of ECD facilities in relation to specific socio-demographic characteristics, the study employed multinomial logistic regression as the preferred statistical model, utilizing the maximum likelihood estimator.

3.7 Ethical considerations

The dataset under consideration pertains to the 2021 GHS data that has been collected by Stats SA. Hence, we do not have any ethical considerations on our part. Stats SA thoroughly addressed all ethical considerations and diligently ensured that all data collected adhered to the prescribed ethical requirements.

3.8 Description of variables

3.8.1 Dependent variables

The present study encompassed an examination of three dependent variables:

1. Type of ECD facility
2. Place where children spent most of their time during the day
3. Main reason for not attending the ECD facility

3.8.1.1 Main reason for not attending the ECD facility

The purpose of the question is to determine the primary reason for the child's absence from school or an ECD facility. Although there may be several reasons, it is critical to understand the primary concerns of the household because availability and access are not mutually exclusive in this case. There were seven responses to the question:

1 = Would prefer that the child stays at home/with someone else

2 = These facilities are not available in our area

3 = The facility he/she attended closed down due to COVID-19

4 = Concerned for his/her safety and do not want to expose him/her

5 = Do not want to risk the health of other household members

6 = Too expensive

7 = Do not have adequate transport

3.8.1.2 Type of ECD facility

The question establishes whether the individual is in Grade R, pre-school/nursery school/Grade, crèche/Educare centre, or day mother/Gogo. This was broken down into six categories:

1 = R Grade

2 = Preschool/Nursery School

3 = Crèche/Educare Centre

4 = Day mother/Gogo/childcare provider

5 = Home/community playgroup

6 = Indicates school (Grade 1 or 2)

3.8.1.3 Place where children spent most of their time during the day

The question seeks to ascertain where the child spent the majority of his or her day. Where does he/she spend the majority of the day if he/she is not attending an ECD facility? It was divided into four categories:

1 = Under the care of a parent, foster parent, or guardian

2 = Sharing a home with another adult

3 = Sharing a home with someone under the age of 18

4 = At someone else's house

3.8.2 Independent variables

The analysis of this study used nine independent variables to determine factors associated with access and utilization of ECD facilities across South Africa's nine provinces. Age, population group, gender, province, is the father part of household, is the mother part of household, level of education of the head of the household, employment status and marital status are the independent variables.

3.8.2.1 Age group

The age group of children attending ECD in South Africa was the focus of the first variable. The questions were classified into seven groups:

1 = 00-year-old

2 = 01-year-old

3 = 02-year-old

4= 03-year-old

5 = 04-year-old

6= 05-year-old

7 = 06-year-old

3.8.2.2 Population group

The population group of the child from the selected households was classified into four categories in the question:

1 = Black/African

2 = Coloured

3 = Asian/Indian

4 = White

3.8.2.3 Gender

The goal of this question was to determine the child's gender. The question is divided into two parts:

1= Male

2 = Female

3.8.2.4 Province

The goal of this question was to assess the child's province of residence. The provinces were classified into nine categories (see also Figure 2.5):

1 = Western Cape

2 = Eastern Cape

3 = Northern Cape

4 = Free State

5 = KwaZulu-Natal

6 = North West

7 = Gauteng

8 = Mpumalanga

9 = Limpopo

3.8.2.5 Is the mother part of household?

The responses were divided into two categories to determine whether the mother is part of the household:

1= Yes

2= No

3.8.2.6 Is the father part of household?

There are two possible answers if the father is part of the household:

1= Yes

2= No

3.8.2.7 Level of education of the head of the household?

This question was asked to determine the level of education held by the head of the household, which was divided into five categories:

1= Primary (including day-care, crèche, and pre-primary)

2= Secondary

3= Diploma

4= Degree

5= No Schooling

3.8.2.8 Employment status

The question was designed to find out if the head of the household is currently working. It was divided into three categories:

1= Employed

2 = Unemployed

3 = Not economically active

3.8.2.9 Marital status of head of household

The question was designed to elicit information about the household's marital status which was broken down into four categories:

1 = Married

2 = Divorced

3 = Widowed

4 = Single

3.9 Chapter summary

This chapter provides an overview of the data and methodologies employed in the analysis of the study. The analysis of factors associated with access and utilization of ECD facilities made use of secondary data from the General House Survey (GHS) of 2021. The study also includes a discussion on the methodologies employed for data collection and analysis. Chapter 4 provides a comprehensive analysis and discussion of the outcomes achieved through the utilization of these methodologies.

Chapter 4: Data Analysis and Results

4.1 Introduction

This chapter presents an analysis of the factors related to the utilization and accessibility of Early Childhood Development (ECD) facilities in the nine provinces of South Africa. The data utilized for this analysis is derived from the General Household Survey (GHS) of 2021. The statistical analysis incorporated various socio-demographic variables, including age, gender, marital status, employment status, education, province of residence, population groups, mother part of household and father part of household. The analysis commences by conducting a univariate analysis of the variables in order to evaluate the characteristics of the participants. The researchers conducted bivariate analysis by employing crosstabulation and the Chi-square test statistic to elucidate the association between the independent and dependent variables. Multivariate analysis was employed to ascertain the variables associated with the various types of ECD facilities, the place where children spend most of their time and the reasons for not attending ECD.

4.2 Characteristics of participants of the study

According to the data presented in Table 4.1, the General Household Survey conducted in South Africa in 2021, recorded a total of 28 798 individuals aged 10-75+ years who were identified as heads of households. The demographic composition of South Africa reveals that the African/Black population constitutes the largest proportion, accounting for 88.1% of the total population. This is followed by the Coloured population, comprising 6.9% of the population, and the White population, making up 3.7% of the total. In contrast, South Africa possesses a relatively modest Indian/Asian demographic, constituting a mere 1.4% of the overall populace.

The largest proportion of heads of households comprising 34.7%, fell within the age range of 10 to 25 years. The second largest group, accounting for 26.6%, consisted of individuals aged 26 to 41 years. Lastly, individuals aged 42 to 56 years constituted 19.8% of the total population of heads of households. As individuals advance in age, the proportion of individuals within that specific age cohort diminishes. In the age group ranging from 57 to 71 years, the minimum recorded reading was 5.4%. Conversely, in the age group of 72 years and above, the minimum recorded reading was 13.6%. Based on the research findings, it was observed that in the year

2021, the majority of South Africa's population, specifically 67.85%, resided in urban areas and cities. Conversely, rural areas accommodated 32.15% of the total population.

The distribution of gender among South Africans exhibits significant variation across the nine provinces of the country. Based on the research results, it was determined that 53% of the population consisted of females while the remaining 47% comprised males. This observation indicates a higher proportion of females compared to males in the population of South Africa.

In 2021, KwaZulu-Natal exhibited the highest population count, accounting for 21.9% of the total population. Following closely was Gauteng with a population share of 17.5%, trailed by the Eastern Cape at 15.1%, Limpopo at 13.9% and Mpumalanga at 9.3%. The Western Cape province exhibited a prevalence rate of 7.6%, the North West province demonstrated a prevalence rate of 5.6% and the Free State province displayed a prevalence rate of 5.0%. The Northern Cape province exhibits the lowest rate of 4.2%, suggesting that KwaZulu-Natal province possesses a comparatively larger population.

Moreover, a significant proportion of parents possess a level of education equivalent to that of secondary school, accounting for 52.0% of the population. Conversely, a notable proportion of individuals, specifically 27.9%, possess a primary school level of education, while a further 13.5% lack any formal educational background. According to the data, 3.6% of individuals possess a Diploma, while 3.0% hold a Degree. This implies that a greater proportion of parents possess solely a secondary level of education.

Additionally, the research findings indicate that both the father and mother constitute members of a household within each of the nine provinces in South Africa. There exist notable regional disparities. Within the South African population, a majority of 67.2% reported the absence of a father figure, whereas a minority of 32.8% reported the presence of a father. The findings indicate that a significant proportion of participants (62.3%) reported that the mother is part of the household, whereas a smaller proportion (37.7%) expressed the view that mothers are not part of household. This finding demonstrates that a significant portion of households are led by women.

Furthermore, the research also took into consideration the marital status of individuals within the population. The majority of individuals, accounting for 69.7%, reported being single. This was followed by 22.7% who indicated that they were legally married, 5.9% who stated they were widowed, and 1.8% who reported being divorced. The results indicate that a significant proportion of individuals in South Africa reside in households headed by a single individual.

Based on the findings of the study, it was determined that a mere 32.7% of children within the age range of 0 to 5 years were enrolled in creche/educare centres. Grade R achieved the second highest percentage of 25.6%, while preschool/nursery school/Grade 00/Grade 000 obtained a percentage of 10.6% in the ranking.

According to the findings of the study, it was determined that a total of 8% of the children under investigation were under the care of a day mother, Gogo or childminder, while 22.4% of the children were enrolled in school, specifically in Grade 1 or 2. A mere 0.7% of the children surveyed reported utilizing home-based playgrounds.

Moreover, in response to inquiries regarding the reasons for their children's non-participation in Early Childhood Development (ECD), the research revealed that a significant majority of parents, specifically 83.2%, expressed a preference for their children to remain in the care of a parent, foster parent or guardian within the home environment, as opposed to enrolling them in ECD facilities. Subsequently, a notable proportion of respondents, specifically 7.8%, expressed concerns regarding the costliness of the aforementioned matter. Additionally, a smaller subset, comprising 3.2% of the participants, conveyed apprehension pertaining to the safety of their offspring, thereby leading to their reluctance to subject them to potential viral exposure. A total of 2.9% of respondents indicated that their child is not enrolled in the facility that was temporarily shut down as a result of the COVID-19 pandemic. Subsequently, a minority of 2.1% of respondents indicated the absence of any facilities within the vicinity.

Moreover, it is important to consider the primary locations where children allocate the majority of their time. A total of 86% of respondents reported that they were in the presence of another adult while being at home. Subsequently, a notable proportion of 12.4% expressed a preference for entrusting the child's care to another individual. The proportion of parents who expressed a preference for their child to be in the company of individuals under the age of 18 was found to be the lowest at 0.1%.

Table 4.1: The characteristics of the study participants

Univariate Analysis		**Count**	**Percentage**
Sex	Female	18 686	53.0%
	Male	16 579	47.0%
		35 265	100.0%
Province	Eastern Cape	5 326	15.1%
	Free State	1 763	5.0%
	Gauteng	6 166	17.5%
	KwaZulu-Natal	7 719	21.9%
	Limpopo	4 917	13.9%
	Mpumalanga	3 266	9.3%
	North West	1 958	5.6%
	Northern Cape	1 487	4.2%
	Western Cape	2 663	7.6%
		35 265	100.0%
Population Group	African/Black	31 065	88.1%
	Coloured	2 419	6.9%
	Indian/Asian	480	1.4%
	White	1 301	3.7%
		35 265	100.0%
Type of ECD Child Attend	Creche/Educare centre	713	32.7%
	Day Mother/Gogo/Child Minder	175	8.0%
	Grade R	558	25.6%
	Home-based playground	15	0.7%
	Pre-school/nursery school/Grade 00/ Grade 000	232	10.6%
	School (Grade 1 or 2)	490	22.4%
		2 183	100.0%
Places where children spend most of their time	At home with another adult	258	12.4%
	At home with parents, foster parent, or guardian	1 791	86.0%
	At home with someone younger than 18 years	3	0.1%
	At someone else's dwelling	30	1.4%
		2 082	100.0%
Main Reason for not Attending ECD	Concerned for his/her safety and do not want to expose him/her to the virus	70	3.2%
	Do not have adequate transport	5	0.2%
	Do not want to risk the health of other household members	13	0.6%
	Prefer that the child stay at home/ with someone else	1 817	83.2%
	the facility he/she attended closed down due to COVID-19	64	2.9%
	These facilities do not exist in our area	46	2.1%
	Too expensive	170	7.8%
		2 185	100.0%

Age Group – Head of Households	10 - 25	9 986	34.7%
	26 - 41	7 656	26.6%
	42 - 56	5 688	19.8%
	57 - 71	3 912	13.6%
	72 - Above	1 556	5.4%
		28 798	100.0%
Children's Age	0	470	2.2%
	1	108	4.9%
	2	189	8.7%
	3	253	11.6%
	4	384	17.6%
	5	547	25.1%
	6	655	3.%
		2 183	100.0%
Marital Status	Divorced	628	1.8%
	Married	7 989	22.7%
	single	24 581	69.7%
	Widowed	2 067	5.9%
		35 265	100.0%
The mother part of the Household	Yes	14 869	62.3%
	No	8 984	37.7%
		23 853	100.0%
Father part of Household	Yes	6 097	32.8%
	No	12 464	67.2%
		18 561	100.0%
Level of Education	Primary	9 705	27.9%
	Secondary	18 087	52.0%
	Diploma	1 253	3.6%
	Degree	1 034	3.0%
	No Schooling	4 709	13.5%
		34 788	100.0%

Source: Author's own calculation using GHS2021 data set

4.3 Type of ECD facility attended and the characteristics of the head of the household

In this section, the pattern of the percentage was analysed using crosstabulation and a Chi-square test statistic to determine the relationship between the variables.

4.3.1. Type of ECD facility attended and population group

Table 4.2 presents the distribution of the various types of ECD facilities and the corresponding population groups of the household heads. Based on the research results, it was observed that a significant proportion of individuals utilizing ECD facilities were of African/Black population. Due to South Africa's historical context as a territory primarily inhabited by individuals of African/Black descent, a considerable proportion of African/Black children avail themselves of ECD facilities. Based on the available data, it can be observed that home-based playgrounds were exclusively utilized by African/Black children, with no participation from children of other racial backgrounds. The demographic composition of children attending ECD at the Grades 1 or 2 level was predominantly comprised of African/Black children, accounting for a significant majority of 97%. White children constitute 1% of the total population, whereas Coloured children account for 2%. There was a lack of empirical evidence indicating the presence of an Asian or Indian demographic. The results of the study also indicated that a greater percentage of African/Black children (92%) utilized the Creche/Educare centre, in contrast to Coloured children (5%) and White children (2%). The utilization rate was found to be low among individuals of Indian and Asian descent.

In order to measure the association between population group and the type of ECD facility children attend, a hypothesis was formulated that there is no relationship between population group and the type of ECD facility children attend.

In order to test this hypothesis, the Chi-square test was used, and the study found that there is a significant relationship between the two variables. This observation can be attributed to the fact that the p-value (0.000) is below the significance level of 0.05. Consequently, the null hypothesis can be rejected (see Appendix 1). Hence, there is a relationship between population group and the type of ECD facility children attend. The degree of association between the two variables can be assessed by employing statistical measures such as Cramer's V and Phi. The obtained values of Phi (0.148) and Cramer's V (0.085) suggest a negligible association between the two variables.

Table 4.2: Distribution of type of ECD facility by population group

Distribution of type of ECD facility attended by population group					
	Race				
	African/Black	Coloured	Indian/Asian	White	Total
Grade R	516	26	7	9	558
	92%	5%	1%	2%	100%
Pre-school/nursery school/Grade 00/ Grade 000	207	7	5	13	232
	89%	3%	2%	6%	100%
Creche/Educare centres	652	43	3	15	713
	91%	6%	0%	2%	100%
Day mother/Gogo/Childminder	165	8	2	0	175
	94%	5%	1%	0%	100%
Home-based playground	15	0	0	0	15
	100%	0%	0%	0%	100%
School (Grade 1 or 2)	475	8	2	5	490
	97%	2%	0%	1%	100%

Source: Author's own calculation using GHS2021 data set

4.3.2 Type of ECD facility attended and gender

Table 4.3 illustrates the distribution of gender and the type of ECD facility children attend. The study revealed that the utilization of creche/Educare centre facilities was most commonly observed among females, accounting for 52% of the total users. The male population constituted 48% of the total population. Conversely, it was found that females, comprising 53% of the participants, exhibited the highest propensity for utilizing the at-home playground. Moreover, as indicated by the findings of this study, a significant proportion of male participants (53%) and female participants (47%) were enrolled in grade R. The proportion of male students in pre-school and grade 1 or 2 was 51%, whereas the proportion of female students was 49%. This finding implies that there is a higher utilization rate of this facility by male heading household compared to females in the context of South Africa. The data revealed a disparity in the utilization of ECD services, with females exhibiting a lower likelihood of engagement compared to their male counterparts.

In order to measure the association between gender and the type of ECD facility children attend, a hypothesis was formulated that there is no relationship between gender and the type of ECD facility children attend. In order to test this hypothesis, the Chi-square test was used, and the study revealed that the observed data does not exhibit statistical significance, suggesting that there is no discernible association between the type of ECD facility attended by children and their gender. This is due to the fact that the observed p-value (0.592) exceeds the predetermined

significance level of 0.05 (see Appendix 2). Consequently, the null hypothesis can be accepted. Hence, there is no relationship between gender and the type of ECD facility children attend.

Table 4.3: Distribution of the type of ECD facility by gender

Distribution of type of ECD facility attended by gender			
	Gender		
	Male	Female	Total
Grade R	294	264	558
	53%	47%	100%
Pre-school/nursery school/Grade 00/ Grade 000	118	114	232
	51%	49%	100%
Creche/Educare centres	345	368	713
	48%	52%	100%
Day mother/Gogo/Childminder	96	79	175
	55%	45%	100%
Home-based playground	7	8	15
	47%	53%	100%
School (Grade 1 or 2)	249	241	490
	51%	49%	100%

Source: Author's own calculation using GHS2021 data set

4.3.3 Type of ECD facility attended and province

According to the findings presented in Table 4.4, it can be observed that the region with the highest attendance rate is Gauteng, accounting for 26% of the total. Following Gauteng, Limpopo exhibits the second-highest attendance rate at 18%. The Northern Cape and Northwest regions, as well as the Western Cape demonstrate a 5% attendance rate. KwaZulu-Natal exhibits the highest proportion of children who express a preference for availing the services of a day mother, Gogo (grandmother) or childminder, amounting to 27% of the population. The provinces of Limpopo and North West exhibited the lowest recorded readings, with Limpopo accounting for 25% and North West registering 0%. Limpopo exhibits the most notable proportion of Grade R students, accounting for 20% of the total, while KwaZulu-Natal follows closely behind with a percentage of 23%. The provinces of Northern Cape and Western Cape exhibit the lowest percentage, which stands at 4%. KwaZulu-Natal exhibits the highest prevalence of home-based playgrounds, accounting for 87% of the total, whereas Gauteng demonstrates the lowest proportion with only 13%.

In order to measure the association between province and the type of ECD facility children attend, a hypothesis was formulated that there is no relationship between province and the type of ECD facility children attend.

In order to test this hypothesis, the Chi-square test was used, and the study found that there exists is significant association between the type of ECD facility attended by children and the province in which they reside. The reason for this is that the obtained p-value (0.000) is smaller than the predetermined significance level of 0.05 (see Appendix 3). Consequently, we reject the null hypothesis. Hence, there is a relationship between province and the type of ECD facility children attend. The degree of association between the two variables can be assessed by employing statistical measures such as Cramer's V and Phi. The obtained values of Phi (0.315) and Cramer's V (0.141) suggest a relatively strong association between the two variables.

Table 4.4: The type of ECD facility by province

Distribution of type of ECD facility attended by Province										
	Province									
	WC	**EC**	**NC**	**FS**	**KZN**	**NW**	**GP**	**MP**	**LP**	**Total**
Grade R	33	83	21	35	126	24	66	56	114	558
	6%	15%	4%	6%	23%	4%	12%	10%	20%	100%
Pre-school/nursery school/Grade 00/ Grade 000	16	45	9	14	53	4	44	15	32	232
	7%	19%	4%	6%	23%	2%	19%	6%	14%	100%
Creche/Educare centres	54	80	33	49	77	36	182	76	126	713
	8%	11%	5%	7%	11%	5%	26%	11%	18%	100%
Day mother/Gogo/Childminder	15	10	9	15	47	0	29	6	44	175
	9%	6%	5%	9%	27%	0%	17%	3%	25%	100%
Home-based playground	0	0	0	0	13	0	2	0	0	15
	0%	0%	0%	0%	87%	0%	13%	0%	0%	100%
School (Grade 1 or 2)	9	78	9	13	132	27	89	56	77	490
	2%	16%	2%	3%	27%	6%	18%	11%	16%	100%

Source: Author's own calculation using GHS2021 data set

Key: WC: Western Cape; **EC**: Eastern Cape**; NC:** Northern Cape; **FS:** Free State; **KZN**: KwaZulu-Natal; **NW**: North West; Gauteng; **MP**: Mpumalanga**; LP**: Limpopo.

4.3.4 Type of ECD facility attended and age of child

The Table 4.5 below presents a cross-tabulation of age and Early Childhood Development (ECD) facility type. The table presents the distribution of responses from household heads in South Africa, expressed as both a percentage and a count. The majority of parents, accounting for 31%, enrolled their 4-year-old children in crèche/Educare centres, while 26% of parents opted for these centres for their 2-year-old children. Parents who have children aged one year were able to attain a reading proficiency rate of 2%. Parents of children who are one-year-old have the highest proportion of utilizing day mother/Gogo/childminders, with a rate of 30%. This is closely followed by parents of two-year-old. Among parents who have a child aged six, the minimum reading proficiency observed was 2%. The majority of students in Grade R is offspring of parents with children aged five years (50%), followed by parents with children aged four years (35%). The data reveals that parents who have children aged 1-year-old possess the highest proportion of home-based playgrounds, accounting for 33% of the total. Subsequently, parents or guardians of 2-year-old exhibit the second-highest percentage, amounting to 21%. Conversely, parents or guardians of 6-year-old do not possess any home-based playgrounds, indicating a 0% ownership rate.

In order to measure the association between age and the type of ECD facility children attend, a hypothesis was formulated that there is no relationship between age and the type of ECD facility children attend.

In order to test this hypothesis, Chi-square test was used, and the study suggests is significant relationship between the type of ECD and age. The reason for this is that the observed p-value (0.000) is smaller than the predetermined significance level of 0.05. Consequently, the null hypothesis can be rejected (see Appendix 4). Hence, there is a relationship between age and the type of ECD facility children attend. The degree of association between the two variables can be assessed by employing statistical measures such as Cramer's V and Phi. The obtained values of Phi (0.963) and Cramer's V (0.431) suggest a relatively strong association between the two variables.

Table 4.5: The type of ECD facility by age of child

Distribution of type of ECD facility attended by Age of child								
	Age							
	0	**1**	**2**	**3**	**4**	**5**	**6**	**Total**
Grade R	0	2	6	9	67	281	193	558
	0%	0%	1%	2%	12%	50%	35%	100%
Pre-school/nursery school/Grade 00/ Grade 000	0	6	13	34	67	71	41	232
	0%	3%	6%	15%	29%	31%	18%	100%
Creche/Educare centres	11	41	124	188	219	107	23	713
	2%	6%	17%	26%	30%	15%	3%	100%
Day mother/Gogo/Childminder	33	53	41	16	19	9	4	175
	18%	30%	23%	9%	11%	2%	2%	100%
Home-based playground	2	5	3	2	2	1	0	15
	13%	33%	20%	13%	13%	7%	0%	100%
School (Grade 1 or 2)	1	1	2	4	10	78	394	490
	0%	0%	0%	1%	2%	16%	81%	100%

Source: Author's own calculation using GHS2021 data set

4.3.5 Type of ECD facility attended and whether the father is part of the household

The following table presents a cross-tabulation of the presence of the father within the household and the corresponding type of Early Childhood Development (ECD) facility. The vast majority (94%) of participants reported attending a creche/educare centre and confirmed that the father is a resident member of the household, while a small percentage (5%) indicated otherwise. Individuals who lacked knowledge, possess a reading proficiency level of merely 1%. Individuals who reported having a day mother, a Gogo or childminder, exhibited the highest reading rate of 94%, whereas those who responded negatively to this question, displayed a reading rate of 3%. According to the survey data, a significant majority of Grade R students, specifically 92%, reported that their father is a resident member of their household. The survey results indicate that 93% of individuals who possess a home-based playground responded affirmatively, while the remaining 7% responded negatively.

In order to measure the association between the presence of father within the household and the type of ECD facility children attend, a hypothesis was formulated that there is no relationship between presence of the father within the household and the type of ECD facility children attend.

In order to test this hypothesis, Chi-square test was used, and the Chi-square statistic suggests that there is no statistically significant association between the type of ECD facility and the father's role within the household. This is due to the fact that the calculated p-value (0.077) is above the predetermined significance level of 0.05. Consequently, the null hypothesis can be deemed accepted (see Appendix 5). Hence, there is no relationship between presence of the father within the household and the type of ECD facility children attend.

Table 4.6: Distribution of the type of ECD facility and whether the father is part of the household

Distribution of type of ECD facility attended and whether the father is part of household			
	Father part of household		
	yes	No	Total
Grade R	155	358	513
	30%	70%	100%
Pre-school/nursery school/Grade 00/ Grade 000	76	138	214
	36%	64%	100%
Creche/Educare centres	237	433	670
	35%	65%	100%
Day mother/Gogo/Child minder	44	121	165
	27%	73%	100%
Home-based playground	2	12	14
	14%	86%	100%
School (Grade 1 or 2)	139	314	453
	31%	69%	100%

Source: Author's own calculation using GHS2021 data set

4.3.6 Type of ECD facility attended and whether the mother is part of the household

The following Table 4.7 presents a cross-tabulation of the presence of the mother within the household and the corresponding type of Early Childhood Development (ECD) facility. The overwhelming majority of participants (98%) indicated that they enrolled their children in a creche/Educare centre. Additionally, the data revealed that the mother was a resident member of the household for the majority of participants, with only a small proportion (2%) reporting otherwise. Individuals who have a day mother, Gogo, or childminder exhibit a response rate of 98%, whereas those who do not have such arrangements demonstrate a response rate of merely 2%. According to the survey data, a significant majority of Grade R students, specifically 97%, reported that their mother is a member of their household. The individuals who possess a playground located at their residence, exhibited a positive response rate of 100%, whereas those who attend school in either Grade 1 or Grade 2, demonstrated a positive response rate of 98%.

In order to measure the association between the presence of the mother within the household and the type of ECD facility children attend, a hypothesis was formulated that there is no relationship between the presence of the mother within the household and the type of ECD facility children attend.

In order to test this hypothesis, Chi-square test was used, and the Chi-square test demonstrates that the test results are statistically significant, suggesting the presence of a significant association between the type of ECD facility and the mother's role within the household. This is due to the fact that the calculated p-value (0.001) is smaller than the predetermined significance level of 0.05 (see Appendix 6). Consequently, the null hypothesis can be rejected. Hence, there is a relationship between the presence of the mother within the household and the type of ECD facility children attend. Cramer's V and Phi can be utilized to ascertain the magnitude of the association between the two variables. The obtained values of Phi (0.096) and Cramer's V (0.096) suggest a negligible association between the two variables.

Table 4.7: The type of ECD facility and whether the mother is part of the household

Distribution of type of ECD facility attended and whether the mother is part of the household			
	Mother part of household		
	yes	**No**	**Total**
Grade R	401	140	541
	74%	26%	100%
Pre-school/nursery school/Grade 00/ Grade 000	175	49	224
	78%	22%	100%
Creche/Educare centres	558	140	698
	80%	20%	100%
Day mother/Gogo/Childminder	149	23	172
	87%	0%	100%
Home-based playground	13	2	15
	87%	13%	100%
School (Grade 1 or 2)	350	128	478
	73%	27%	100%

Source: Author's own calculation using GHS2021 data set

4.4 Main reason for not attending ECD facility

Crosstabulation was employed to examine the primary factor influencing non-attendance at Early Childhood Development (ECD) facilities in relation to participant characteristics. Subsequently, the Chi-square test was utilized to assess the magnitude of the association between these variables.

4.4.1 Main reason for not attending ECD facility by gender

Table 4.8 presents a cross-tabulation analysis that examines the relationship between gender and the primary rationale for not utilizing Early Childhood Development (ECD) services. The study's results suggest that there was a significant difference in the likelihood of expressing 'concern for his/her safety and do not want to expose him/her to the virus' between females (57%) and males (43%). Moreover, it can be inferred that there is a higher prevalence of females compared to males in ECD facilities within the context of South Africa. The reason cited by respondents for not attending the ECD facility, namely the cost being too high, exhibited the highest proportion among male participants at 51.3%, while the lowest proportion among females was recorded at 46.3%. According to a survey, a majority of males (57%) and a minority of females (43%) expressed that the aforementioned facilities are not available within our locality.

In order to measure the association between gender and the main reason for not attending ECD facility, a hypothesis was formulated that there is no relationship between gender and the main reason for not attending ECD facility. In order to test this hypothesis, Chi-square test was used, and the study results indicate no statistical significance, suggesting a correlation between the child's gender and the primary factor influencing their non-attendance at the ECD facility. This is due to the fact that the p-value is 0.438, which is above the significance level of 0.05. Consequently, the null hypothesis can be deemed accepted (see Appendix 7). The Chi-square test yielded a p-value above the threshold of 0.05, suggesting that there is no statistically significant relationship between gender and the primary reason for not attending ECD facilities. Consequently, the null hypothesis is accepted. Hence, the there is no relationship between gender and the main reason for not attending ECD facility.

Table 4.8: The main reasons for not attending ECD facilities by gender

Distribution of main reason for not attending ECD facility by gender			
	Gender		
	Female	Male	Total
Concern for his/her safety and do not want to expose him/her to the virus	40	30	70
	57%	43%	100%
Do not have adequate transport	4	1	5
	80%	20%	100%
Do not want to risk the health of other household members	8	5	13
	62%	38%	100%
Prefer that the child stay at home/with someone else	888	929	1 817
	49%	51%	100%
The facility he/she attended closed down due to COVID-19	31	33	64
	48%	52%	100%
These facilities do not exist in our area	20	26	46
	43%	57%	100%
Too expensive	92	78	170
	54%	46%	100%

Source: Author's own calculation using GHS2021 data set

4.4.2 Main reason for not attending ECD facility by population group

The majority of population express a preference for the child to remain at home or be cared for by someone, with Africans/Blacks exhibiting the highest level of preference at 93%. It is evident that the high cost of ECD facilities is a significant contributing factor for 89% of individuals belonging to the Black/African population group. Based on the crosstabulation analysis, it is evident that the presence of ECD facilities in the nation is a significant contributing factor, explaining 89% of the African/Black population group. African/Black individuals constituted 89% of the population expressing apprehension regarding virus exposure.

In order to measure the association between population group and the main reason for not attending ECD facility, a hypothesis was formulated that there is no relationship between population group and the main reason for not attending ECD facility. In order to test this hypothesis, Chi-square test was used, and the study found that p=0.680, which is above the conventional threshold of 0.05. However, since 58.3% of the cells have expected count less than 5, the Likelihood Ratio is used where the p-value=0.738 and consequently, the null

hypothesis is accepted (see Appendix 8). This suggests that there is sufficient evidence to support the null hypothesis. Hence, the test statistic revealed no significant association between the population group and the primary determinant for non-participation in the ECD facility.

Table 4.9: Cross-tabulation of population group and the main reason for not attending the ECD facility

Distribution of main reason for not attending ECD facility by population group					
	Race				
	African/Black	Coloured	Indian/Asian	White	Total
Concern for his/her safety and do not want to expose him/her to the virus	62	5	1	2	70
	89%	7%	1%	3%	100%
Do not have adequate transport	5	0	0	0	5
	100%	0%	0%	0%	100%
Do not want to risk the health of other household members	12	1	0	0	13
	92%	8%	0%	0%	100%
Prefer that the child stay at home/with someone else	1 694	97	11	15	1 817
	93%	5%	1%	1%	100%
The facility he/she attended closed down due to COVID-19	60	4	0	0	64
	94%	6%	0%	0%	100%
These facilities do not exist in our area	41	4	0	1	46
	89%	9%	0%	2%	100%
Too expensive	152	15	2	1	170
	89%	9%	1%	1%	100%

Source: Author's own calculation using GHS2021 data set

4.4.3 Main reason for not attending ECD facility by province

The predominant proportion of ECD participants is located in KwaZulu-Natal where 24% of individuals favour the option of the child staying at home or being cared for by someone else. According to the data, it was observed that the cost of facilities was deemed to be high with Gauteng province recording the highest percentage of 32%. The parents expressed apprehension regarding the potential transmission of the virus to their children with a significant proportion (37%) of these parents residing in the province of KwaZulu-Natal. The aforementioned facilities are not present within our locality. The data presented in the table indicates that the Eastern Cape had the highest reading, with a percentage of 37%.

In order to measure the association between province and the main reason for not attending ECD facility, a hypothesis was formulated that there is no relationship between province and the main reason for not attending ECD facility.

In order to test this hypothesis, Chi-square test was used, and the study results indicate statistical significance, suggesting a correlation between the environmental context in which children are situated and the ECD facility they attend. This is due to the fact that the p-value is <0.001 which is smaller than 0.05. However, since 38.9% of the cells have expected count less than 5, the Likelihood Ratio is used where the p-value is also <0.001 and consequently, the null hypothesis can be rejected (see Appendix 9). Hence, the test statistic revealed there is a significant association between the province and the primary determinant for non-participation in the ECD facility. The degree of association between the two variables can be assessed by employing statistical measures such as Cramer's V and Phi. The calculated values of Phi (0.290) and Cramer's V (0.129) suggest a limited or weak association between the two variables.

Table 4.10: Cross-tabulation of the province and the main reason for not attending the ECD facility

Distribution of main reason for not attending ECD facility by province										
	Province									
	EC	FS	GP	KZN	LP	MP	NW	NC	WC	Total
Concern for his/her safety and do not want to expose him/her to the virus	6	1	17	26	8	3	3	4	2	70
	9%	1%	24%	37%	11%	4%	4%	6%	3%	100%
Do not have adequate transport	1	0	1	3	0	0	0	0	0	5
	20%	0%	20%	60%	0%	0%	0%	0%	0%	100%
Do not want to risk the health of other household members	1	0	4	7	0	0	0	1	0	13
	8%	0%	31%	54%	0%	0%	0%	8%	0%	100%
Prefer that the child stay at home/with someone else	303	77	222	433	321	199	101	96	65	1 817
	17%	4%	12%	24%	18%	11%	6%	5%	4%	100%
The facility he/she attended closed down due to COVID-19	4	3	11	22	6	11	1	6	0	64
	6%	5%	17%	34%	9%	17%	2%	9%	0%	100%
These facilities do not exist in our area	17	1	2	17	3	3	0	2	1	46
	37%	2%	4%	37%	7%	7%	0%	4%	2%	100%
Too expensive	2	8	55	34	16	21	11	3	20	170
	1%	5%	32%	20%	9%	12%	6%	2%	12%	100%

Source: Author's own calculation using GHS2021 data set

Key: WC: Western Cape; **EC**: Eastern Cape; **KZN**: KwaZulu-Natal; **GP**: Gauteng; **NW**: North West; **NC:** Northern Cape, **MP**: Mpumalanga; **LP**: Limpopo.

4.4.4 The main reason for not attending the ECD facility by age

The subsequent table presents a cross-tabulation of age and the primary rationale for non-participation in the Early Childhood Development (ECD) facility. The table presents the distribution of responses from parents in terms of both percentage and count. A significant proportion (40%) of parents or guardians with children aged two expressed apprehensions regarding their children's well-being and were disinclined to subject them to potential exposure to the COVID-19 virus. The reading rate among parents whose children are aged 5 was found to be the lowest, with only 3% of them engaging in regular reading activities. Among individuals who lack sufficient means of transportation, the demographic with the most notable reading rate of 60% consists of parents or guardians of two-year-old children. This group is closely trailed by parents or guardians of one-year-old and three-year-old children. The reading proficiency of parents with children aged 0 to 5 was found to be at its lowest level, with a

recorded rate of 0%. The majority of individuals who express opposition to endangering the health of other household members are one-year-olds (38%) and 0-year-olds (31%). A significant proportion of parents with children aged three (35%), one (20%), and six-years-old (%) reported the absence of such facilities within their locality. The individuals who expressed that the facilities were costly obtained the highest percentage reading of 28%, whereas parents with children aged six received the lowest reading of 2%.

In order to measure the association between age and the main reason for not attending ECD facility, a hypothesis was formulated that there is no relationship between age and the main reason for not attending ECD facility.

In order to test this hypothesis, Chi-square test was used, and the study suggests that there exists a significant association between the primary reason for attending an ECD facility and age. The reason for this is that the obtained p-value <0.001 is smaller than the predetermined significance level of 0.05. However, since 35.7% of the cells have expected count less than 5, the Likelihood Ratio is used where the p-value is also <0.001 and consequently, the null hypothesis can be rejected (see Appendix 10). Hence, the test statistic revealed is significant association between the age and the primary determinant for non-participation in the ECD facility. The degree of association between the two variables can be assessed by employing Cramer's V and Phi. The obtained values of Phi (0.222) and Cramer's V (0.099) suggest a negligible association between the two variables.

Table 4.11: The main reason for not attending ECD facility by age

Distribution of main reason for not attending ECD facility by Age								
	Age							
	0	**1**	**2**	**3**	**4**	**5**	**6**	**Total**
Concern for his/her safety and do not want to expose him/her to the virus	3	11	28	19	4	2	3	70
	4%	16%	40%	27%	6%	3%	4%	100%
Do not have adequate transport	0	1	3	1	0	0	0	5
	0%	20%	60%	20%	0%	0%	0%	100%
Do not want to risk the health of other household members	4	5	2	1	1	0	0	13
	31%	38%	15%	8%	8%	0%	0%	100%
Prefer that the child stay at home/with someone else	392	494	379	299	177	61	15	1 817
	22%	27%	21%	17%	10%	3%	0%	100%
The facility he/she attended closed down due to COVID-19	5	7	14	15	17	5	1	64
	8%	11%	22%	23%	27%	8%	1%	100%
These facilities do not exist in our area	5	9	8	16	5	3	0	46
	11%	20%	17%	35%	11%	6%	0%	100%
Too expensive	19	33	48	32	27	8	3	170
	11%	19%	28%	19%	16%	5%	2%	100%

Source: Author's own calculation using GHS2021 data set

4.4.5 The main reason for not attending the ECD facility by whether the father is part of the household

The following table presents a cross-tabulation analysis, illustrating the relationship between the father's household composition and the primary cause for the child's non-attendance at the Early Childhood Development (ECD) facility, while also considering the father's presence within the household. Merely 1% of individuals expressing apprehension regarding their offspring's susceptibility to the COVID-19 pathogen disclosed that the paternal figure does not reside within the same domestic unit. The individuals who indicated a lack of sufficient transportation reported the highest reading which was recorded at 100%. Individuals who expressed concern about jeopardizing the well-being of other household members consistently attributed this apprehension to the father figure. A significant majority (92%) of respondents who expressed the view that these facilities are costly reported the presence of a father figure within their household. Furthermore, it was found that 87% of respondents who reported the absence of the facility in their respective establishments confirmed the presence of the father, whereas the remaining 13% denied his presence.

In order to measure the association between the presence of the father within the household and the main reason for not attending ECD facility, a hypothesis was formulated that there is no relationship between presence of the father within the household and the main reason for not attending ECD facility.

In order to test this hypothesis, Chi-square test was used, and the study reveals no significant relationship between the primary reason for not attending the ECD facility and the presence of the father in the household. This is due to the fact that the calculated p-value (0.169) is greater than the predetermined significance level of 0.05 (see Appendix 11). Consequently, the null hypothesis is accepted. Hence, there is no association between the primary reason for not attending the ECD facility and the presence of the father in the household.

Table 4.12: The main reason for not attending the ECD facility and whether the father is part of the household

Distribution of the main reason for not attending the ECD facility and whether the father is part of the household			
	Father part of the household		
	Yes	No	Total
Concern for his/her safety and do not want to expose him/her to the virus	68	1	69
	99%	1%	100%
Do not have adequate transport	5	0	5
	100%	0%	100%
Do not want to risk the health of other household members	13	0	13
	100%	0%	100%
Prefer that the child stay at home/with someone else	95	55	150
	63%	37%	100%
The facility he/she attended closed down due to COVID-19	62	2	64
	97%	3%	100%
These facilities do not exist in our area	40	6	46
	87%	13%	100%
Too expensive	157	11	168
	92%	7%	100%

Source: Author's own calculation using GHS2021 data set

4.4.6 The main reason for not attending the ECD facility and whether the mother is part of the household

The table below presents a cross-tabulation of whether the mother is part of the household and the primary reason for not attending the Early Childhood Development (ECD) facility. Among the individuals expressing concern regarding their child's potential exposure to the Covid-19 virus, it is observed that the mother constitutes the primary caregiver in the household for a significant majority (97%), while a mere 3% indicate otherwise. The individuals lacking sufficient means of transportation obtained the highest reading of 80%, whereas those who responded negatively to the question received a reading of 20%. Individuals who expressed concern about jeopardizing the well-being of other household members consistently cited the presence of the mother as a contributing factor. The majority of individuals who expressed that these amenities are costly cited the inclusion of a mother figure within the household. Among the respondents who indicated the absence of the mentioned facility in their respective establishments, all of them reported the presence of the father, while none reported otherwise.

In order to measure the association between the presence of the mother within the household and the main reason for not attending ECD facility, a hypothesis was formulated that there is no relationship between the presence of the mother within the household and the main reason for not attending ECD facility.

In order to test this hypothesis, Chi-square test was used, and the study found that there is a statistically significant association between the primary reason for not attending the ECD facility and the mother's role within the household. This is due to the fact that the calculated p-value (0.856) is bigger than the predetermined significance level of 0.05 (see Appendix 12). Consequently, the null hypothesis is accepted. Hence, there is no association between the primary reason for not attending the ECD facility and the presence of the mother in the household.

Table 4.13: The main reason for not attending the ECD facility and whether the mother is part of the household

Distribution of the main reason for not attending the ECD facility by whether mother the part of the household			
	The mother part of the household		
	Yes	No	Total
Concern for his/her safety and do not want to expose him/her to the virus	68	2	70
	97%	3%	100%
Do not have adequate transport	4	1	5
	80%	20%	100%
Do not want to risk the health of other household members	13	0	13
	100%	0%	100%
Prefer that the child stay at home/with someone else	1 791	26	1 817
	99%	1%	100%
The facility he/she attended closed down due to COVID-19	63	1	64
	98%	2%	100%
These facilities do not exist in our area	46	0	46
	100%	0%	100%
Too expensive	169	1	170
	99%	0%	100%

Source: Author's own calculation using GHS2021 data set

4.5 Place where children spend most of their time

Crosstabulation was employed to examine the place where children spend most of their time in relation to participant characteristics. Subsequently, the Chi-square test was utilized to assess the magnitude of the association between these variables.

4.5.1 Place where children spend most of their time by population group

Table 4.14 presents the spatial distribution of the primary locations where children predominantly allocate their time, along with the demographic characteristics of the household heads. Based on the research outcomes, it was observed that individuals of African/Black descent constituted a significant proportion of the population (91%) who chose to remain in their residences alongside another adult. According to the provided data, African/Black children constituted the majority, accounting for 93% of individuals who served as at-home parents, foster parents, or guardians. Coloured children represented 6% of this population, while other population groups accounted for 1% of the total count. A significant majority, specifically 67%, of children of African/Black descent were observed to remain at home under the care of an individual below the age of 18. Approximately one-third (33%) of children belong to minority groups. There was a lack of empirical evidence pertaining to the presence of individuals belonging to Caucasian, Asian, or Indian ethnic backgrounds. Based on the

results, individuals who resided in alternative accommodations exhibited a greater percentage of African/Black offspring (80%), followed by Coloured individuals (20%), while no individuals of white ethnicity were

In order to measure the association between population group and the place where children spend most of their time, a hypothesis was formulated that there is no relationship between population group and the place where children spend most of their time.

In order to test this hypothesis, Chi-square test was used, and the study demonstrates no significant relationship between the predominant location of children's activities and their respective population groups. This is due to the fact that the p-value (0.023) is below the threshold of 0.05. However, since 56.3% of the cells have expected count less than 5 and consequently, the Likelihood Ratio was used which had a p-value of 0.165 which is greater than 0.05 (see Appendix 13). Hence, the null hypothesis is accepted and that there is no relationship between place where children spend most of their time and the different population groups.

Table 4.14: The place where children spend most of their time and the population group

Distribution of places where children spend most of their time by population group across South Africa					
	Race				
	African/Black	Coloured	Indian/Asian	White	Total
At home with another adult	236	15	2	5	258
	91%	6%	1%	2%	100%
At home with parents, foster parents, or guardian	1 666	99	12	14	1 791
	93%	6%	1%	1%	100%
At home with someone younger than 18 years	2	1	0	0	3
	67%	33%	0%	0%	100%
At someone else's dwelling	24	6	0	0	30
	80%	20%	0%	0%	100%

Source: Author's own calculation using GHS2021 data set

4.5.2 Place where children spend most of their time by gender across South Africa

Table 4.15 presents the gender distribution pertaining to the primary locations where children allocate the majority of their time. The study revealed that females, constituting 51% of the participants, exhibited the highest likelihood of being situated at home in the presence of another adult. The male population accounted for 49% of the total population. Male individuals

exhibited a slightly higher propensity (51% of instances) to reside with their offspring in the same household, under the care of their biological parents, foster parents or legal guardians. Moreover, the study reveals that all females (100%) and none of the males (0%) were cohabiting with an individual below the age of 18. The proportion of females who engaged in temporary residence at another individual's dwelling was 57%, whereas males constituted 43% of the total population. This suggests that there is a preference among South Africans for younger individuals to provide care for their children within the home setting.

In order to measure the association between gender and the place where children spend most of their time, a hypothesis was formulated that there is no relationship between gender and the place where children spend most of their time.

In order to test this hypothesis, Chi-square test was used, and the study reveals a lack of statistical significance, suggesting the absence of a significant association between the predominant location of children's activities and their gender. This is due to the fact that the calculated p-value (0.288) exceeds the predetermined significance level of 0.05. However, since 25% of the cells have expected count less than 5 and consequently, the Likelihood Ratio was used which had a p-value of 0.177 which is greater than 0.05 (see Appendix 14). Consequently, the null hypothesis can be deemed acceptable. Therefore, there is no relationship between the places where children spend most of their time and gender.

Table 4.15: Place where children spend most of their time and gender

Distribution of places where children spend most of their time by Gender across South Africa			
	Gender		
	Female	**Male**	**Total**
At home with another adult	131	127	258
	51%	49%	100%
At home with parents, foster parents, or guardians	886	905	1 791
	49%	51%	100%
At home with someone younger than 18 years	3	0	3
	100%	0%	100%
At someone else's dwelling	17	13	30
	57%	43%	100%

Source: Author's own calculation using GHS2021 data set

4.5.3 Place where children spend most of their time by province across South Africa

Based on the data presented in Table 4.16, it can be observed that the region with the highest proportion of children residing with another adult is KwaZulu-Natal, accounting for 40% of the total. Subsequently, Limpopo exhibits the second highest percentage at 16%, while the Eastern Cape and Gauteng both record 8%. The Northern Cape, Free State, and Northwest regions share a similar proportion of 5% in this regard. The Western Cape exhibits the lowest rate, which stands at 4%. The majority of children in KwaZulu-Natal exhibit a preference for residing in the domestic environment alongside their biological parents, foster parents, or legal guardians, constituting a significant proportion of 22%. The regions with the lowest readings were observed in the Western Cape and Free State, with both regions recording a 4% prevalence. The province of Eastern Cape exhibits the highest percentage (13%) of parents or guardians who express a preference for entrusting the care of their children to individuals residing in alternative households. This is closely followed by the province of Mpumalanga, where a proportion of 30% of parents or guardians hold a similar preference. The Free State exhibits the lowest percentage, which stands at 3%. The provinces of Gauteng, the Northern Cape, and the Western Cape exhibit the highest proportion of individuals under the age of 18 residing in their households, accounting for 33% of the population. Conversely, the remaining provinces demonstrate the lowest percentage, which amounts to 0%.

In order to measure the association between province and the place where children spend most of their time, a hypothesis was formulated that there is no relationship between province and the place where children spend most of their time.

In order to test this hypothesis, Chi-square test was used, and the study demonstrates statistical significance, suggesting a significant association between the primary location of children's activities and their respective provinces. This observation can be attributed to the fact that the p-value is below the threshold of 0.05. Consequently, the null hypothesis can be rejected. However, since 47.2% of the cells have expected count less than 5, the Likelihood Ratio was used which also had a p-value of <0.001 which is also less than 0.05 (see Appendix 15). Therefore, the test statistic revealed a significant association between the province and the place where children spend most of their time. The degree of association between the two variables can be assessed by employing Cramer's V and Phi. The obtained values of Phi (0.204) and Cramer's V (0.118) suggest a weak association between the two variables.

Table 4.16: Cross-tabulation of the place where children spend most of their time and province

Distribution of places where children spend most of their time by Province										
	Province									
	EC	FS	GP	KZN	LP	MP	NW	NC	WC	Total
At home with another adult	20	13	20	103	40	25	13	14	10	258
	8%	5%	8%	40%	16%	10%	5%	5%	4%	100%
At home with parents, foster parents, or guardians	309	64	268	398	277	212	103	95	65	1 791
	17%	4%	15%	22%	15%	12%	6%	5%	4%	100%
At home with someone younger than 18 years	0	0	1	0	0	0	0	1	1	3
	0%	0%	33%	0%	0%	0%	0%	33%	33%	100%
At someone else's dwelling	4	1	3	2	2	9	3	3	3	30
	13%	3%	10%	7%	7%	30%	10%	10%	10%	100%

Source: Author's own calculation using GHS2021 data set

Keys: WC: Western Cape; **EC**: Eastern Cape**; KZN**: KwaZulu-Natal; **GP**: Gauteng; **NW**: North West; **NC:** Northern Cape, **MP**: Mpumalanga**; LP**: Limpopo.

4.5.4 Place where children spend most of their time by age across South Africa

The following table presents a cross-tabulation of age and the predominant location where children typically allocate their time. The presented table provides an overview of the proportion and quantity of responses obtained from household heads in South Africa. A significant proportion of children aged one (26%) and two (22%) reside in their own households alongside another adult. Among the cohort of six-year-old individuals, the minimum reading proficiency level observed was 1%. Among children living at home with their parents, foster parents, or guardians, it has been observed that 3-year-olds exhibit the highest reading proficiency, with a prevalence rate of 22%. Subsequently, infants, specifically those aged 0 years, demonstrate the next highest level of reading ability. The recorded minimum reading score was 4% for a child at the age of one year. The demographic group that comprises the largest proportion of individuals who assume the role of primary caregiver for a child under the age of 18 is children aged six and below, accounting for 67% of the total. This is closely followed by children under the age of two, constituting 33% of the aforementioned population. The largest proportion of individuals who reside in alternative households consists of children aged five years, accounting for 30% of the population. This is followed by infants aged zero years, comprising 3% of the population and toddlers aged one year, also constituting 3% of the population.

In order to measure the association between age and the place where children spend most of their time, a hypothesis was formulated that there is no relationship between age and the place where children spend most of their time.

In order to test this hypothesis, Chi-square test was used, and the study demonstrates no significant association between the predominant location of children's activities and their age. This is due to the fact that the calculated p-value (0.647) is greater than the predetermined significance level of 0.05. However, since 39.3% of the cells have expected count less than 5, the Likelihood Ratio was used which had a p-value of 0.561 which is also greater than 0.05 (see Appendix 16). Consequently, the null hypothesis can be accepted. Therefore, there is no relationship between the place where children spend most of their time and their age.

Table 4.17: Cross-tabulation of the place where children spend most of their time and age

Distribution of places where children spend most of their time by Age								
	Age							
	0	**1**	**2**	**3**	**4**	**5**	**6**	**Total**
At home with another adult	36	66	58	55	28	12	3	258
	14%	26%	22%	21%	11%	5%	1%	100%
At home with parents, foster parents, or guardians	369	448	397	315	184	60	18	1 791
	21%	25%	22%	18%	10%	3%	1%	100%
At home with someone younger than 18 years	2	0	1	0	0	0	0	3
	67%	0%	33%	0%	0%	0%	0%	100%
At someone else's dwelling	4	1	3	2	2	9	3	30
	13%	3%	10%	7%	7%	30%	10%	100%

Source: Author's own calculation using GHS2021 data set

4.5.5 Place where children spend most of their time and whether the father is part of the household

The following Table 4.18 presents a cross-tabulation of the paternal role within the household and the primary location where the majority of the children spend their time. The vast majority of individuals (95%) reside in their own households alongside another adult, typically the father, while a small percentage (5%) report otherwise. The majority of individuals surveyed reported residing with their parents, foster parents or guardians (96%), while a smaller proportion indicated otherwise (4%). All individuals residing in a domestic setting alongside a child below the age of 18 have reported that their father is a member of the household. The

remaining one hundred percent of individuals are choosing to reside in alternative accommodations.

In order to measure the association between the presence of the father within the household and the place where children spend most of their time, a hypothesis was formulated that there is no relationship between the presence of the father within the household and the place where children spend most of their time.

In order to test this hypothesis, Chi-square test was used, and the study suggests no significant association between the primary location of children's activities and the paternal role within the household. This is due to the fact that the calculated p-value (0.620) is greater than the predetermined significance level of 0.05. However, since 25% of the cells have expected count less than 5, the Likelihood Ratio was used which had a p-value of 0.602 which is also greater than 0.05 (see Appendix 17). Consequently, the null hypothesis can be accepted. Therefore, there is no relationship between the place where children spend most of their time and whether the father is part of the household.

Table 4.18: The place where children spend most of their time and whether the father is part of the household

Distribution of places where children spend most of their time by whether the Father is Part of the Household			
	Father Part of household		
	Yes	No	Total
At home with another adult	241	14	255
	95%	5%	100%
At home with parents, foster parents, or guardians	1 708	57	1 765
	96%	4%	100%
At home with someone younger than 18 years	3	0	3
	100%	0%	100%
At someone else's dwelling	30	0	30
	100%	0%	100%

Source: Author's own calculation using GHS2021 data set

4.5.6 Place where children spend most of their time by whether the mother is part of the household

The following Table 4.19 presents a cross-tabulation of the paternal role within the household and the primary location where the majority of the children spend their time. The overwhelming majority of individuals (99%) reside in their own households alongside another adult, typically with the mother being a resident member. Only a small fraction (1%) do not follow this living arrangement. Individuals who resided in their parental, foster, or guardian households achieved the highest score of 99%, whereas those who responded negatively obtained the lowest score of 1%. All individuals residing in a household with a child below the age of 18 have reported the presence of their mother. Approximately 97% of individuals choose to reside in accommodations provided by others, while a mere 3% opt to decline such arrangements.

In order to measure the association between the presence of the mother within the household and the place where children spend most of their time, a hypothesis was formulated that there is no relationship between the presence of the mother within the household and the place where children spend most of their time.

In order to test this hypothesis, Chi-square test was used, and the study demonstrates a significant relationship between the primary location of children's activities and the maternal role within the household. This is due to the fact that the p-value (<0001) is below the significance level of 0.05. However, since 25% of the cells have expected count less than 5, the Likelihood Ratio was used which had a p-value of <0.001 which is also less than 0.05 (see Appendix 18). Consequently, the null hypothesis can be rejected. Therefore, there is a relationship between the place where children spend most of their time and whether the mother is part of the household. Cramer's V and Phi are statistical measures that can be employed to assess the magnitude of the association between the two variables. The values of Phi (0.204) and Cramer's V (0.204) suggest a moderate association between the two variables.

Table 4.19: Place where children spend most of their time and whether the mother is part of the household

Distribution of place where children spend most of their time by whether the mother is part of the household			
	The mother part of the household		
	Yes	No	Total
At home with another adult	255	3	258
	99%	1%	100%
At home with parents, foster parents, or guardian	1 767	24	1 791
	99%	1%	100%
At home with someone younger than 18 years	3	0	3
	100%	0%	100%
At someone else's dwelling	29	1	30
	97%	3%	100%

Source: Author's own calculation using GHS2021 data set

4.6 Multinomial logistic regression on factors associated with access to ECD facility attendance in South Africa

The study used multinomial logistic regression analysis to ascertain the factors that are associated with the access and utilization of ECD facilities among children in South Africa. Multinomial logistic regression is employed when the dependent variables have more than two nominal categories. Consequently, the multinomial logistic regression model incorporated three dependent variables, namely the type of the ECD facility, the main reason for not attending the ECD facility, and the place where children spend most of their time during the day. The independent variables utilized in the multinomial logistic regression module included age, gender, province of residence, population groups, employment status, income and type of residence.

The classification of the three nominal dependent variables was conducted. The initial dependent variable, referred to as "type of ECD facility," was classified into four distinct categories: The numerical values assigned to each category are as follows: 1 represents Grade R or Preschool, 2 corresponds to Childminder/Gogo, 3 denotes a Home-based playground, and 4 signifies School grade 1 or 2. The second dependent variable, referred to as "the main reasons for not attending the ECD facility," was categorized into five distinct factors: 1) prefer the child to stay at home, 2) facility does not exist in our area, 3) Covid-19 related reasons, 4) expensive, and 5) lack of adequate transportation. The last dependent variable was categorized into four groups: 1 = at home with parents, foster parents, or guardians; 2 = at home with another adult; 3 = at home with someone under the age of 18; and 4 = at someone else's

dwelling. The final category of the dependent variable, which is nominal and dependent, has been defined as the reference category. The final category of the independent variable, however, was defined as the baseline category, and the findings were subsequently interpreted in accordance with this designation. The statistical analysis revealed that the multinomial logistic regression model displayed statistical significance, as indicated by a p-value below 0.05. Additionally, the log-2 likelihood demonstrated a good fit for the observed data. The coefficients assigned to each category have variation, leading to distinct odds ratios. The interpretation of significant coefficients involved determining the odds ratios, which indicated whether there was an increase or decrease in comparison to the reference category. The findings of the analysis are presented in the tables provided below.

4.6.1 Multinomial logistic regression of the type of ECD facility

The outcomes of the multinomial logistic regression model regarding the attendance of children in South Africa at different types of ECD facilities are presented in Table 4.20. The results indicate that there is no statistically significant association between the variables of children's age group, gender, population group and mother's household status in the model. The study's results suggest that the province of residence has a notable impact on the type of ECD facilities. The study also considered the school level (Grade 1 or 2) as a fundamental factor for conducting comparative analysis. However, the data reveals that children living in the Western Cape province show a higher probability, with a coefficient of 3.107, of enrolling in Grade R or Preschool in comparison to children residing in the Limpopo province. The rise in usage and availability of Grade R or Preschool in the Western Cape may be attributed to parental preferences among families with children in the region. This can be attributed to the convenient access, urban lifestyle and cost-effectiveness of these educational facilities in the area. The study revealed a significant disparity in the prevalence of childminders/Gogos between the Eastern Cape and Limpopo provinces, with children in the former having a reduced probability of 0.594 in comparison to their counterparts in Limpopo province.

The findings from the multinomial logistic regression analysis further substantiate the significance of Grade R or Preschool in the Northern Cape and Free State provinces. According to the data, there is a statistically significant association between the province of residence and the likelihood of children attending Grade R or Preschool. Specifically, children residing in the Northern Cape province demonstrate a 2.303 times higher likelihood, while those residing in

the Free State province demonstrate a 2.463 times higher likelihood, compared to children residing in the Limpopo province. Further evidence is presented to substantiate the importance of Grade R or Preschool in the provinces of KwaZulu-Natal and North West. The study findings indicate that there is a notable contrast in the attendance rates of Grade R or Preschool among children residing in different provinces of South Africa. Specifically, children living in KwaZulu-Natal and North West provinces show a reduced probability, with a decrease of 0.545 and 0.644 respectively, of attending Grade R or Preschool in comparison to their counterparts residing in Limpopo province.

Moreover, there is evidence available that substantiates the significance of Grade R or Preschool and Childminder/Gogo in the provinces of Gauteng and Mpumalanga. The data suggests that there is a reduced probability, specifically by 0.66 and 0.616, for children residing in Gauteng and Mpumalanga provinces, respectively, to enrol in Grade R or Preschool when compared to children in Limpopo province. Furthermore, it has been observed that children who reside in the provinces of Gauteng and Mpumalanga indicate a reduced probability, specifically by 0.265 and 0.191, respectively, of having a childminder or grandparent caregiver in comparison to children residing in the province of Limpopo.

The logistic regression analysis provided additional evidence supporting the significance of the father's presence within the household. The data suggests that there is a negative correlation between the presence of a father in the household and the likelihood of children having a childminder/Gogo, with a decrease of 0.071 in the probability. It is evident that households in which the father is a member are more inclined to employ the services of a childminder or a grandparent caregiver, as supported by empirical evidence. This statement is accurate. When examining households in South Africa, it is observed that in the majority of cases where the father assumes the role of the head of the household, children often reside with a childminder or a grandparent (referred to as "Gogo" in the local context) while the father is engaged in employment activities.

Table 4.20: Multinomial logistic regression of the type of ECD facility

	Grade R or Preschool				Childminder/Gogo				Home-based playground			
Variable	**B**	**SE**	**Sig**	**Exp(B)**	**B**	**SE**	**Sig**	**Exp(B)**	**B**	**SE**	**Sig**	**Exp(B)**
Intercept	14.088	1.026	0		-1.354	3317.048	1		-18.769	3939.163	0.996	
Age Group	-1.954	0.115	0	0.142	-3.028	0.139	0	0.048	-3.078	0.247	0	0.046
Gender												
Male	0.1	0.138	0.468	1.106	0.157	0.244	0.52	1.17	-0.418	0.595	0.482	0.658
Female	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.
Population Group												
African/Black	-0.644	0.644	0.317	0.525	16.937	3317.048	0.996	22688886.96	15.014	0	.	3314787.838
Coloured	0.271	0.79	0.732	1.311	17.63	3317.048	0.996	45334321.85	0.949	4996.999	1	2.584
Indian/Asian	1.734	1.007	0.085	5.661	20.755	3317.048	0.995	1032564962	0.746	0	.	2.109
White	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.
Province												
WC	1.134	0.537	0.035	3.107	1.13	0.688	0.1	3.096	1.551	7989.075	1	4.715
EC	-0.521	0.244	0.033	0.594	-1.587	0.483	0.001	0.204	-0.27	5705.138	1	0.763
NC	0.834	0.457	0.068	2.303	1.117	0.682	0.101	3.056	1.033	9583.665	1	2.81
FS	0.901	0.39	0.021	2.463	0.082	0.595	0.89	1.086	0.512	7574.574	1	1.668
KZN	-0.606	0.213	0.004	0.545	-0.077	0.361	0.832	0.926	19	3939.163	0.996	178444837.3
NW	-0.441	0.346	0.202	0.644	-17.607	2568.925	0.995	2.26E-08	0.269	9209.962	1	1.309
GP	-0.416	0.228	0.068	0.66	-1.328	0.39	0.001	0.265	16.415	3939.163	0.997	13451712.79
MP	-0.485	0.265	0.067	0.616	-1.654	0.573	0.004	0.191	-0.157	6418.526	1	0.854
LP	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.
Father part of the household												
Yes	0.003	0.159	0.983	1.003	-0.505	0.28	0.071	0.604	-1.179	0.831	0.156	0.308
No	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.
The mother part of the household												
Yes	0	0.167	1	1	0.543	0.328	0.098	1.721	0.029	0.844	0.973	1.029
No	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.

Source: Author's own calculation using GHS2021 data set

4.6.2 Determinants of the main reason for not attending the ECD facility

Table 4.21 displays the outcomes of the multinomial logistic regression model pertaining to the main factor influencing the decision to not attend the Early Childhood Development (ECD) facility. The findings suggest that the variables of gender, population group, province, mother part of the household, and father part of the household do not demonstrate any statistically significant relationship within the model. The findings of the study indicate that the age group of the children significantly influences the main reason for not attending an ECD facility. The study additionally considered the absence of sufficient transportation as a fundamental category for comparative analysis. However, the data suggests that children aged 4 reveal a reduced probability, specifically by 0.184, of not attending these facilities due to reasons associated

with the Covid-19 pandemic in comparison to children aged 6. The decline in ECD attendance among four-year-olds may be attributed to parental preferences within families with children of that age, due to the child's limited ability to comply with Covid-19 protocols and protective measures.

Table 4.21: Multinomial logistic regression for the main reason for not attending the ECD facility

	Prefer the child to stay at home				Facility do not exist in our area				Covid- 19 related reasons				Expensive			
Variable	**B**	**SE**	**Sig**	**B**	**B**	**SE**	**Sig**	**B**	**B**	**SE**	**Sig**	**B**	**B**	**SE**	**Sig**	**B**
Intercept	59.008	1825.07	0.974		42.8	2794.272	0.988		58.086	1825.07	0.975		56.121	1825.069	0.975	
Male	1.182	1.163	0.309	3.262	0.978	1.205	0.417	2.659	0.879	1.174	0.454	2.409	0.881	1.174	0.453	2.414
Female	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.
Population Group																
African/Black	-12.665	1.061	0	3.16E-06	-15.071	1.566	0	2.85E-07	-13.177	1.262	0	1.89E-06	-11.691	0	.	8.37E-06
Coloured	-0.964	1564.833	1	0.381	-2.173	1564.834	0.999	0.114	-0.866	1564.833	1	0.42	-0.007	1564.833	1	0.993
Indian/Asian	1.701	4789.23	1	5.478	-14.266	5139.261	0.998	6.37E-07	0.994	4789.23	1	2.703	1.507	4789.23	1	4.511
White	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.
Province																
WC	-1.476	2386.687	1	0.229	-1.704	2386.687	0.999	0.182	-2.099	2386.687	0.999	0.123	0.507	2386.687	1	1.66
EC	-14.066	974.272	0.988	7.79E-07	-12.551	974.272	0.99	3.54E-06	-14.475	974.272	0.988	5.17E-07	-15.906	974.273	0.987	1.24E-07
NC	-1.035	1886.638	1	0.355	-1.071	1886.638	1	0.343	-0.484	1886.638	1	0.616	-1.393	1886.638	0.999	0.248
FS	-0.713	2158.269	1	0.49	-13.759	2317.829	0.995	1.06E-06	-0.642	2158.269	1	0.526	0.361	2158.269	1	1.434
KZN	-14.404	974.272	0.988	5.55E-07	-13.07	974.272	0.989	2.11E-06	-13.39	974.272	0.989	1.53E-06	-13.892	974.272	0.989	9.26E-07
NW	-0.082	2014.812	1	0.921	-13.223	2125.486	0.995	1.81E-06	-0.131	2014.812	1	0.877	0.904	2014.812	1	2.47
GP	-14.423	974.272	0.988	5.45E-07	-14.59	974.273	0.988	4.61E-07	-13.076	974.272	0.989	2.09E-06	-12.654	974.272	0.99	3.20E-06
MP	-0.237	1534.431	1	0.789	-0.17	1534.432	1	0.844	0.308	1534.431	1	1.36	0.524	1534.431	1	1.689
LP	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.
Father part of the household																
Yes	0.287	1.255	0.819	1.333	-0.105	1.323	0.937	0.9	-0.17	1.27	0.894	0.844	0.223	1.266	0.86	1.25
No	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.
The mother part of the household																
Yes	-13.674	873.044	0.988	1.15E-06	-13.409	873.044	0.988	1.50E-06	-13.519	873.044	0.988	1.35E-06	-13.552	873.044	0.988	1.30E-06
No	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.
Children Age Group																
0 Year	-0.085	1561.066	1	0.918	13.368	2629.448	0.996	639464.55	-2.624	1561.066	0.999	0.072	-2.135	1561.066	0.999	0.118
1 Year	-13.55	1272.583	0.992	1.30E-06	0.104	2469.117	1	1.11	-15.632	1272.583	0.99	1.63E-07	-15.101	1272.583	0.991	2.77E-07
2 Year	-14.732	1272.583	0.991	4.00E-07	-0.859	2469.117	1	0.424	-15.873	1272.583	0.99	1.28E-07	-15.451	1272.583	0.99	1.95E-07
3 Year	-14.123	1272.583	0.991	7.35E-07	0.419	2469.117	1	1.521	-15.261	1272.583	0.99	2.36E-07	-15.033	1272.583	0.991	2.96E-07
4 Year	-0.533	0.725	0.462	0.587	13.693	2115.91	0.995	884395.636	-1.692	0.854	0.048	0.184	-1.106	0	.	0.331
5 Year	-0.426	2433.739	1	0.653	13.838	3224.928	0.997	1022724.737	-1.959	2433.739	0.999	0.141	-1.378	2433.739	1	0.252
6 Year	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.

Source: Author's own calculation using GHS2021 data set

4.6.3 Determinants of the place where children spend most of their time

The results of the multinomial logistic regression model for the place where children spend most of their time are presented in Table 4.22. Based on the results, the variables of gender, population group, province and father part of the household indicate no statistical significance within the model. The results of the study suggest that the province in which children live has an impact on the place where they spend most of their time. The study also considered children staying at someone else's home as a baseline category for comparison. Nevertheless, the data indicates that children residing in the Mpumalanga province have a decreased likelihood, by 0.18, of being accompanied by another adult at home compared to children in the Limpopo province. The decreased utilization of being with another adult may be related to the parental preference among families with children residing in Mpumalanga, due to the limited availability and affordability of such facilities in the area.

The multinomial logistic regression analysis provided additional evidence to support the significance of children being in the care of a parent, foster parent, or guardian in the Mpumalanga province. The data indicates that children residing in Mpumalanga province have a decreased likelihood, by 0.186, of being in the presence of a parent, foster parent, or guardian compared to children residing in Limpopo province. The findings of the study indicate that the maternal role within the household is an additional determinant of the place where children spend most of their time. Nevertheless, the presence of the mother within the household is associated with a 0.131 decrease in the probability of the child being under the care of another adult, compared to households where the mother is not present.

Table 4.22: Multinomial logistic regression for the place where children spend most of their time

	At home with a parent, foster parent, or guardian				At home with another adult				At home with someone younger than 18 years			
Variable	**B**	**SE**	**Sig.**	**Exp(B)**	**B**	**SE**	**Sig.**	**Exp(B)**	**B**	**SE**	**Sig.**	**Exp(B)**
Intercept	37.237	1.718	0		37.421	1.447	0		0.329	12105.48	1	
Male	0.237	0.384	0.536	1.268	0.166	0.405	0.683	1.18	-15.063	1388.055	0.991	2.87E-07
Female	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.
Population Group												
African/Black	-15.781	1.004	0	1.40E-07	-17.358	0.863	0	2.89E-08	-14.94	8259.063	0.999	3.25E-07
Coloured	-17.131	0.656	0	3.63E-08	-18.509	0	.	9.16E-09	-16.27	8259.063	0.998	8.59E-08
Indian/Asian	-0.585	7055.454	1	0.557	-2.631	7055.454	1	0.072	-14.699	0	.	4.14E-07
White	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.
Province												
WC	-0.959	1.168	0.411	0.383	-1.262	1.259	0.316	0.283	17.311	4161.843	0.997	32981484.15
EC	-0.488	0.881	0.579	0.614	-1.53	0.927	0.099	0.217	-0.687	5789.345	1	0.503
NC	-0.739	1.089	0.497	0.477	-0.8	1.143	0.484	0.449	17.059	4161.843	0.997	25630384.97
FS	-0.833	1.24	0.501	0.435	-0.586	1.278	0.646	0.556	-0.957	9574.789	1	0.384
KZN	0.356	1.005	0.723	1.427	0.927	1.022	0.365	2.526	0.601	5299.609	1	1.824
NW	-1.492	0.924	0.106	0.225	-1.661	0.979	0.09	0.19	-1.648	8168.176	1	0.192
GP	-0.575	0.924	0.534	0.563	-1.237	0.967	0.201	0.29	16.39	4161.843	0.997	13118066.78
MP	-1.683	0.8	0.035	0.186	-1.715	0.838	0.041	0.18	-1.623	6230.17	1	0.197
LP	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.
Father part of the household												
Yes	0.647	0.473	0.172	1.909	0.733	0.498	0.141	2.081	0.658	1.482	0.657	1.931
No	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.
The mother part of the household												
Yes	-0.742	0.753	0.324	0.476	-2.031	0.764	0.008	0.131	-2.755	1.768	0.119	0.064
No	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.
Children Age Group												
0 Year	-16.069	1.051	0	1.05E-07	-15.946	0.716	0	1.19E-07	1.133	7850.953	1	3.106
1 Year	-16.283	1.023	0	8.48E-08	-15.757	0.662	0	1.44E-07	-15.017	8121.524	0.999	3.01E-07
2 Year	-15.693	1.089	0	1.53E-07	-15.239	0.763	0	2.41E-07	0.238	7850.953	1	1.269
3 Year	-16.473	1.052	0	7.01E-08	-15.903	0.709	0	1.24E-07	-15.511	8252.236	0.999	1.84E-07
4 Year	-16.395	0.819	0	7.58E-08	-15.967	0	.	1.16E-07	-15.498	8438.626	0.999	1.86E-07
5 Year	0.051	3485.359	1	1.052	0.362	3485.359	1	1.436	1.193	9659.982	1	3.296
6 Year	0[b]	.	.	.	0[b]	.	.	.	0[b]	.	.	.

Source: Author's own calculation using GHS2021 data set

4.7 Chapter summary

This chapter provides an analysis of the diverse factors that influence ECD facility attendance. The variables were evaluated both independently and in combination with other variables. The current chapter has provided an overview of the univariate, bivariate, and multivariate approaches to examining the subject matter. The objective of this chapter was to reveal the primary patterns of access and utilization of ECD facilities, with a focus on the socioeconomic and sociodemographic characteristics of children, while considering their place of residence. The findings of the study indicate that specific attributes of children have a more substantial impact on the utilization of ECD facilities compared to others. Moreover, these influences differ among various population groups and age cohorts of children. The findings indicate that the age of children plays a significant role in determining the type of ECD facility and the place where they spend most of their time. The predominant factor hindering the attendance among African/Black children in urban and rural provinces at ECD facilities was poverty.

Chapter 5: Discussion of Results

5.1 Introduction

The main objective of this study was to investigate the extent to which children in all nine provinces of South Africa have access to and make use of ECD facilities. This study included the types of ECD facilities, a look at the key factors that contribute to the main reason for not attending ECD facilities, and an investigation into the place where children spend most of their time. Hence, the focus of the study was to determine the factors associated with the access and utilization of ECD facilities in South Africa. The study aimed to investigate the demographic and socio-economic characteristics of children aged 6 years or younger and to investigate the variations in these issues based on the child's province, age group, population group, gender, and the mother and father part of the household. These factors were employed as criteria to compare and evaluate the trends in access and utilization of ECD facilities among children and simultaneously examine the variations and similarities in access to and utilization of ECD facilities across the nine provinces of South Africa. Thus, the chapter provides a comprehensive summary of the key findings obtained from the analysis highlighted in Chapter 4 and unearth the association with the literature review in Chapter 2.

5.2 Summary of the method used

The study adopted a quantitative approach and utilized data from the 2021 General Household Survey which was obtained from the University of Cape Town's Data First Website. The association between the identified independent and dependent variables was established, and hypotheses were formulated. The variables of interest were recorded in order to align them with the scope and objectives of the study. The study included several independent variables, namely, the age group of children, population group, province, gender, mother part of the household, father part of the household, level of education, employment status and income. The dependent variables evaluated in this study included the type of ECD facility, the main reason for not attending the ECD facility and places where children spend most of their time. The analysis of the independent and dependent variables was conducted for children residing in all nine provinces of South Africa.

The study began by conducting a univariate analysis which involved describing the distribution of each variable individually, across the nine provinces. Following that, a bivariate analysis

was performed employing cross-tabulation. The study utilized this methodology to assess the strengths to which children had access and utilized ECD facilities. Furthermore, the utilization of the Chi-square test of Independence was employed in order to investigate the association that exists between the independent variables and the dependent variables. The strength of the correlation between these variables was evaluated using statistical measures such as Cramer's V and Phi tests. Moreover, a multivariate analysis was performed using multinomial logistic regression to determine the variables that exerted the greatest influence on the access and utilization of ECD facilities among households with children who utilize these facilities. In this way, the correlation between the socio-economic and socio-demographic characteristics of children and their access to and utilization of ECD facilities in South Africa could be established.

5.3 Characteristics of children attending the ECD facilities in South Africa

In contrast to the adult population, which is concentrated in provinces with numerous large cities and metropoles, the majority of South Africa's children live in rural areas in Limpopo, Eastern Cape and KwaZulu-Natal (South African Child Gauge, 2021). According to the data, the majority of children who use ECD services live in their home province. This is because South Africa is so vastly divided between urban and rural areas, many of which are extremely underdeveloped (Azzi-Lessing & Schmidt, 2019). It is imperative for children who reside mainly in the rural districts to have easy access to ECD facilities based on their location. The results of the study showed that these kids face challenges because of where they live. Several studies by Mpumela, 2021 and Azzi-Lessing & Schmidt, 2019a have found that children's health, safety and nutrition depend on their frequent attendance at such facilities. According to the study's findings, ECD facilities in South Africa are heavily utilized by children aged 0 to 6.

The most common demographic of children in South Africa is comprised of individuals of African or Black descent, who, regrettably, exhibit the lowest rates of participation in ECD facilities. Based on the available data, it is evident that parents residing in South Africa, whose children are enrolled in these establishments, continue to confront considerable challenges in the form of elevated unemployment rates and limited monthly household income. The elevated dependency ratio can be partially attributed to the prevalent existence of adolescents throughout all nine provinces of South Africa (Statistics South Africa, 2021). The African or Black population in South Africa constitutes a significant portion of the socio-economically

disadvantaged due to their heightened vulnerability, limited access to education, insufficient financial means and restricted availability of formal employment opportunities. An additional plausible rationale pertains to the influence previously exerted by apartheid on the African/Black populace of South Africa (Excell, 2016). The findings of this study align with prior research investigations concerning the impact of racism on the African/Black demographic and the unequal distribution of resources and opportunities based on socio-economic status and gender.

The employment status of the head of the household had a substantial influence on the utilization and accessibility of ECD facilities. Parents who possessed a stable financial standing have the capability to allocate resources toward their children's education without jeopardizing the financial stability of their own household. According to the findings of Irwin et al. (2007), Britto et al. (2011) and Atmore, (2019), a significant proportion of African or Black parents in South Africa are characterized by economic inactivity or unemployment. Thus, the findings of this study, aligned with the prior research by these authors, had demonstrated a greater prevalence of unemployment within the African/Black population.

A limited fraction of the parents whose children attended ECD facilities, possessed university degrees. Nevertheless, a significant proportion of parents whose children attended ECD facilities have only attained a secondary level of education. The findings of this study provide support for the existing body of literature, which emphasizes the significance of the educational attainment of the household head in influencing the accessibility and utilization of ECD facilities for their children. Research studies have indicated that there was a positive correlation between the educational attainment of parents and their utilization of ECD facilities, according to Mwamwenda, (2014).

Understanding the reasons behind the inadequate use of ECD facilities among children residing in the nine provinces of South Africa is crucial for gaining insights into the various factors influencing this phenomenon. Taking this into consideration, a study was undertaken to look into the question at hand, "What are the main reasons for children not attending the ECD facilities?"

According to this research, parents' top five reasons for not enrolling their children in an ECD facility were as follows: the child's preference to stay at home; the facility does not exist in our area; reasons related to COVID-19; the cost of enrolling; and a lack of adequate transportation. Because of their geographical isolation, poverty and inadequate infrastructure,

these remote regions often fall short in the ECD rankings. The families live in rural areas, where early childhood development resources are scarce. The majority of South Africa's children live in rural provinces, which are also among the least well-resourced. According to Mwamwenda, (2014), when compared to urban facilities, ECD facilities in rural areas had a much lower ratio of teachers to students, fewer resources and a lower quality of infrastructure and training for their staff. Consequently, parents expressed a desire for their children to enrol in ECD facilities that not only prioritize safety, but also provided abundant resources and simultaneously deliver exceptional ECD care.

Many factors, such as the expertise and quality of services, influenced whether or not a community had access to and made use of ECD facilities – the ECD facility should be spotless, with no fire or other hazards to worry about, as well as a secure environment for the children and staff who work there. The results showed that how happy an individual is with a service, had an effect on how often they used an ECD facility. Results showed that some parents were unhappy with the services provided to their children. There may be a shortage of ECD facilities in the area, or the facility may not have had the necessary personnel or resources, or the facility may have had outdated or unsafe facilities. Parents had expressed a strong preference for ECD programs that place priority on a secure environment, offer ample resources and provide outstanding ECD services for their children.

5.4 Confirmation of hypotheses

5.4.1 Type of ECD facility attended and population group

A variety of social and economic disparities exert an adverse impact on a significant proportion of South Africa's young population. The childhood experiences of Black children in South Africa have been significantly impacted by the historical legacy of apartheid and the subsequent socio-economic disparities. Atmore et al. (2012) argued that these disparities have resulted in limited access to essential resources, including healthcare, education, social services and adequate nutrition. Hence, the growth of South African children had been hindered as a consequence of this phenomenon.

The observation that arose is that diverse population cohorts in South Africa exhibit a variety of utilization of distinct types of ECD facilities. The results of the study indicate that there is a disproportionate utilization of home-based playgrounds among African/Black children, as well

as a higher likelihood of school attendance in Grades 1 and 2 compared to their counterparts. The observed outcomes can be attributed to the historical impact of apartheid during which Black individuals were forcibly relocated to regions with insufficient educational resources. This phenomenon highlights the presence of ECD disparities across different demographic groups.

The hypothesis formulated for this study is *that there exists no relationship between the type of ECD facility that children attend and their population group*. The findings from the Chi-square analysis provided empirical evidence supporting the presence of a statistically significant association between the type of ECD facility the children attend and their population group.

5.4.2 Type of ECD facility attended and province

A comprehensive understanding of the access and utilization patterns of ECD facilities can be achieved by examining and comparing the various characteristics exhibited across the nine provinces and types of ECD facilities. The availability and utilization of ECD facilities in South Africa exhibit disparities based on geographical location as well as the socio-economic and socio-demographic attributes of the primary income earner within households. A comprehensive analysis of access and utilization patterns involves an adequate emphasis on the provincial level. There is evidence to suggest notable disparities in ECD facility attendance rates among children residing in urban and rural regions. The child-friendliness of certain residential areas with regard to the availability of ECD facilities, varies based on the characteristics of the head of the household's location.

The study revealed that there was a greater proportion of individuals residing in urban areas who utilized ECD facilities in comparison to individuals residing in other residential areas. This phenomenon can be attributed to a significant proportion of urban parents who are engaged in employment, leading them to opt for early childhood development facilities as opposed to staying at home to care for their children. Parents residing in rural regions tend to place a higher degree of importance on the utilization of daycare services, such as those provided by a Gogo or day mother. One possible hypothesis is that a greater proportion of parents residing in rural areas exhibits a preference for entrusting the care of their children to a Gogo/childminder due to the perceived convenience associated with this arrangement. The Grade R ECD facility has a high level of popularity among individuals residing in rural regions. This phenomenon can be attributed to the insufficient availability of employment opportunities

and childcare facilities, which fail to meet the demands of the entire population needing such services.

In light of the aforementioned circumstances, a hypothesis was formulated to explain *there is no relationship between the type of ECD facility children attend and the province*. This finding suggests a significant statistical relationship between the province in which children attend ECD facilities and the type of facility they attend.

5.4.3 Type of ECD facility attended by age

There is a prevalent and accepted consensus that children between the ages of 0-6 exhibit a higher likelihood of accessing ECD facilities. The inclusion of age as a factor is of utmost importance related to the associated diversity in children's requirements, nutritional demands, educational advancements and psychological maturation. Atmore et al. (2012) found that there is a positive correlation between age and the likelihood of availing of ECD services. The results indicate that the age of a child is a significant determinant of parents with children of age to use a specific ECD facility.

When looking at the impact of age on the utilization of ECD facilities among South African children, it becomes evident that younger children, irrespective of their age, exhibit a greater tendency to utilize Grade R facilities located in rural areas. The utilization of creche and educare services is predominantly observed among children residing in urban regions. Grade R schools are widely preferred by children in both urban and rural environments. One potential explanation for this phenomenon could be related that a significant number of parents prioritize the early education of their children. Additionally, the accessibility and cost-effectiveness of Grade R facilities, which are often conveniently situated within close proximity, may contribute to this trend. Consequently, parents residing in geographically isolated regions who face challenges related to financial constraints and limited availability, are able to enrol their children in Grade R educational initiatives. The study revealed that children at the age of two exhibit the lowest frequency of visits to Grade R playgrounds. Nevertheless, it is typically around the age of four when children are inclined to commence utilizing this particular service. The findings presented in this study aligned with the conclusions drawn by the Department of Social Development & UNICEF (2011), wherein a similar pattern was observed indicating a predominance of children in Grade R.

The utilization of ECD services such as creche/educare by children within the age range of 0-3 years is currently limited. The potential cause for this phenomenon can be pointed out as the significant financial burden associated with the provision of these services. Consequently, the statistical significance of the test statistic for Grade R was confirmed through the Chi-square analysis. The hypothesis was formulated in order to investigate *the no relationship between the type of ECD facility and their age*. This implies that there exists a no disparity in age distribution and engagement within ECD programs. Age is a crucial factor that influences how children use and access different ECD facilities. This variable is statistically significant, it does demonstrate a rather strong correlation between the two variables.

5.4.4 Type of ECD facility attended and whether the father is part of the household

Research conducted by Casale et al. (2014) has demonstrated that the absence of the mother in households is associated with notable effects on the emotional development and behaviour of the child, with the presence of the father playing a significant role. The home environment and the inputs provided by caregivers exert significant influence on a child's development. According to Casale et al. (2014), the ECD facility that is most commonly utilized when the father is present is a playground that is established within the household. The reason for this arrangement is that the father is currently occupied with his professional responsibilities, thus necessitating the mother-in-law's presence to assume the role of caretaker for the child. This pertains to the incapacity of fathers to comprehend and fulfil the developmental requirements of their children, as well as effectively communicate these needs to ECD service providers. South African fathers persist in maintaining a significant portion of the household's financial resources. This assertion holds true for individuals residing in both rural and urban areas, as the lack of paternal engagement in a child's upbringing has a negative impact on the child's well-being from the outset. In instances where the father is present, he may provide his child with tangible resources such as toys and nourishment. However, the absence of an emotional bond between father and child hinders the potential for alleviating the prevalent distrust that children often harbour towards their fathers.

The presence or absence of a father within the household exerts a notable influence on a child's utilization of ECD resources. The study revealed that the presence of fathers was linked to variations in both the accessibility and utilization of ECD facilities. The utilization of Gogo/childminder services is commonly observed among children residing in households

where the father is present. Children extensively utilize Grade R and home-based playgrounds, as well as those that include Gogo/Childminder facilities. Children whose mothers were present tended to utilize Grade R and creche ECD facilities with greater frequency. The findings presented in this study are supported by the research conducted by O'keeffe et al. (2022), wherein it was discovered that there exists a positive correlation between a mother's affection towards her child and an increased probability of utilizing ECD services for the child. Furthermore, it is highly unlikely that the child will avail themselves of these facilities due to the lack of awareness among fathers residing in the household regarding the appropriate circumstances that warrant the utilization of ECD facilities, or their limited knowledge about the nature and purpose of such facilities.

The study revealed that there is a positive correlation between the level of paternal involvement in the lives of Grade R children and their utilization of ECD facilities. The utilization of Grade R services by children can be linked to various circumstances, particularly when they are raised in households where only one biological parent is present. One possible hypothesis suggests that fathers possess a limited understanding of elementary education, leading them to recognize the necessity of ECD facilities for their children while remaining unaware of the significance of other available community resources. The data provided in this study supports the conclusion that *there is no statistically significant relationship between the type of ECD facility and the presence of the father in the household*, which aligns with the original research question. In this study, the hypothesis posited that *there exists is no correlation between the type of ECD facility and the presence of the father within the household*.

5.4.5 Type of ECD facility attended by whether the mother is part of the household

According to studies by (Azzi-Lessing & Schmidt, 2019b), a mother's presence in the home has a significant impact on her child's emotional development and behaviour. The home and the inputs from caregivers have a substantial impact on a child's growth and development. Casale et al. (2014) found that in households where one parent is present, creche, Grade R and home-based playgrounds were the most frequently used ECD facilities. The mother is the primary caretaker and has the most invested interest in her child's development, and therefore, this arrangement benefits everyone involved. It focuses on mothers' abilities to meet their children's developmental needs and to convey those needs to ECD service providers. Mothers in South Africa continue to control a small share of the family's income. This statement is valid for both

rural and urban dwellers because early and consistent maternal involvement improves a child's health and development. In cases where she is present, a mother can give her child emotional and material support. Moreover, the establishment of an emotional bond between mother and child has the potential to reduce the innate trust that children typically have in their mothers.

The presence of mothers is positively associated with an increased likelihood of children utilizing ECD services. The study revealed a correlation between the presence of mothers and variations in the accessibility and usage of ECD services. Children residing in households where the mother is present exhibit a greater likelihood to avail themselves of childcare facilities such as creche, Grade R, and home-based playground services. Children commonly utilize playgrounds that are categorized as Grade R or home-based, or those that offer Gogo/mother/childminder facilities. Children who have a mother present in their lives are more inclined to utilize ECD services such as Grade R and creches. The results presented in this study are supported by the findings of O'keeffe et al. (2022), which indicate a positive correlation between maternal affection and the propensity of mothers to utilize ECD services for their children. Moreover, it is very likely that the child will utilize these resources due to the mothers in the household having either a satisfactory level of awareness regarding the specific circumstances that necessitate the utilization of ECD resources, or a satisfactory level of knowledge regarding the nature and intended function of stated resources.

A study conducted by Shung-King et al. (2019) revealed that young children whose mothers actively engaged in their educational activities showed a higher utilization of ECD services compared to children whose mothers were less involved. The utilization of Grade R and creche services among children has been associated with various factors such as the prevalence of single-parent households. There exists a hypothesis suggesting that mothers possess an adequate level of knowledge regarding elementary education, enabling them to comprehend the significance of ECD facilities for their children. Additionally, it is suggested that mothers are also aware of the importance of various other community resources. However, the findings of this study suggested otherwise, with the initial research inquiry, indicate *no relationship between the nature of ECD facilities and the presence of the mother within the household*. The objective of this study was *to examine the non-correlation between the type of ECD facility and the presence of the mother in the household*.

5.4.6 Type of ECD facility attended by gender

Gender disparity is the primary obstacle to participation in ECD programs. The child's access to ECD centres is dependent upon their gender. Male individuals, on average, possess a higher level of availability and involvement in ECD programs compared to female individuals (Blimpo et al., 2019; The World Bank, 2013). This aspect can impact children of both genders and shape their choice to abstain from particular services. Persistent gender stereotypes can significantly restrict the aspirations and opportunities of females, especially. Certain families exhibit a higher propensity to enrol their sons rather than their daughters in ECD (Agarwal, 1997). The study conducted by Anthony et al. (2005) revealed a clear correlation between gender and the type of ECD services. The results indicate that parents' inclination to enrol their children in a particular ECD facility is greatly influenced by the gender of their child.

Parents in South Africa demonstrate a higher inclination to register their children for Grade R if they have engaged in an early childhood development program. The overrepresentation of males in early elementary and middle school can be attributed to gender bias and economic factors that favour the education of male children over girls within families and communities. The present concern revolves around the prejudiced gender stereotypes that result in men incurring greater expenses than women. The study revealed that most boys and a small proportion of girls reported having a day care provider. The results of this study align with Nordtveit's (2008) findings, which also demonstrated a correlation between health issues and gender in his research.

The Chi-square analysis confirmed the non-statistical significance of the test statistic for gender. The hypothesis was formulated to examine *the unrelatedness between gender and the type of ECD facility*. This suggests that there is no relationship between gender and the type of ECD facility children attend. Therefore, gender plays a crucial role in determining how different ECD facilities are used and accessed.

5.4.7 Place where children spend most of their time and population group

The principal sites where children spend most of their time, together with the demographic characteristics of the family heads, have a negative impact on a significant section of South Africa's young population. The childhood experiences of Black children in South Africa have been profoundly influenced by the historical inheritance of apartheid and restricted access to vital resources resulting from the prevalent poverty among Black South Africans. According to Atmore et al. (2012), this occurrence has impeded the development of the children.

The research findings suggest that children from different racial and ethnic backgrounds have different choices for their primary area of activity. The insight that emerges is that different population cohorts in South Africa display a range of utilization of certain locations where children spend the majority of their time. The study findings suggest that a higher number of children of African/Black descent were found to be staying at home under the supervision of someone under the age of 18. Additionally, African/Black children were more likely to be the majority in the roles of at-home parents, foster parents or guardians, compared to other groups. The observed findings can be linked to the historical fact that the majority of African/Black youngsters have African ancestry. This phenomenon emphasizes the existence of disparities in ECD among various demographic groupings.

The hypothesis formulated for this study is *that there is no relationship between population group and the place where children spend most of their time*. The findings from the Chi-square analysis provide empirical evidence supporting the non-statistically significant association the predominant location of children's activities and their respective population groups.

5.4.8 Place where children spend most of their time and province

An in-depth comprehension of the access and usage patterns of ECD facilities may be attained by analysing and contrasting the diverse characteristics observed in the nine provinces and the primary locations where children spend the majority of their time. The presence and usage of ECD facilities in South Africa vary depending on the geographical region and the socioeconomic and sociodemographic characteristics of the main breadwinner in households. An in-depth examination of access and usage trends requires sufficient focus on the provincial level. There is data indicating significant discrepancies in ECD facility attendance rates between children living in urban and rural areas. The child-friendliness of specific residential

areas, in terms of the presence of ECD services, differs depending on the attributes of the head of the household's location.

The study reveals that urban residents use ECD facilities more than rural residents, possibly due to employed parents opting for these facilities. Rural households, however, prefer daycare services like Gogo or day mothers. This preference may be due to convenience. In KwaZulu-Natal, children prefer living with their biological parents, foster parents or legal guardians in their own homes. This preference is prevalent among rural residents and constitutes a significant portion of the population. The issue is attributed to the insufficient availability of job opportunities and childcare facilities, which do not meet the needs of the entire population requiring these services.

Considering the circumstances, a hypothesis was formulated to explain *there is no relationship between* province *and the place where children spend most of their time*. This finding suggests a significant statistical relationship between the primary location of children's activities and their respective provinces.

5.4.9 Place where children spend most of their time and age

The study reveals that children aged one to two live in separate families with another adult in both rural and urban areas. This is due to maternity leave and parental unwillingness to leave newborns unattended. 3-year-olds demonstrate the highest level of reading competency in urban settings, while infants, particularly those aged 0 years, have the second highest level. In rural areas, parents often engage in agricultural labour and traditional gender roles, entrusting their child's care to another adult. The majority of individuals living in non-traditional households are children aged five years old. The results align with the findings of Maggi et al. (2010), showing that most children aged 0 are at home with an adult.

Moreover, the age group that constitutes the majority of adults who take on the responsibility of being the primary caregiver for a child under 18-years-old, is children aged six and younger. The primary factor contributing to this occurrence is the substantial financial burden faced by parents who desire to spend quality time with their children before they are enrolled in ECD institutions. The Chi-square analysis rejects the statistical significance of the test statistic for the relationship between the place where youngsters spend most of their time and their age. The hypothesis was formulated in order to investigate *the unrelatedness between age and the*

place where children spend most of their time. This suggests that there is no significant difference in the way age is distributed and participation is observed in ECD programs. Age has a crucial role in determining how people use and access various ECD resources.

5.4.10 Place where children spend most of their time and whether the father is part of the household

As to Casale et al. (2014), the primary ECD facility used when the father is present is an in-house playground. The father's current job commitments need the mother-in-law to be present and take on the role of caretaker for the child. This concerns the inability of dads to understand and meet the developmental needs of their children, as well as successfully convey these needs to ECD service providers.

A father's presence in a household significantly impacts a child's utilization of ECD services. A study found a correlation between fathers' presence and differences in the availability and usage of ECD facilities. Children living with fathers spend most of their time with another adult, interacting with biological parents, foster parents, legal guardians and those in alternative housing arrangements. Fathers' presence also increased the likelihood of children accompanied by another adult. This study supports Ae and Gauthier's (2008) research, which found a positive link between fathers' affection and a reduced likelihood of using ECD services.

The data provided in this study supports the conclusion that *there is no statistically significant relationship between the primary location of children's activities and the paternal role within the household*, which aligns with the original research question. In this study, the hypothesis posited that *there exists no correlation between the presence of the father within the household and the place where children spend most of their time.*

5.4.11 Place where children spend most of their time and whether the mother is part of the household

Research by Azzi-Lessing and Schmidt (2019) showed that a mother's presence significantly impacts her child's emotional development and behaviour. The mother is the primary caregiver and has the highest level of personal investment in her child's growth. This arrangement benefits all parties involved, as mothers can fulfil their children's developmental needs and effectively communicate those needs to early childhood development care providers. In South Africa, mothers have little authority over a small portion of the household's income. Early and continuous maternal engagement enhances a child's well-being and progress. The study found an association between the presence of mothers and fluctuations in the availability and utilization of ECD services. Children living in households with their mother are more likely to use childcare services, which involve being under the care of another adult, foster parent or guardian. This study supports Vinopal & Gershenson's (2017) findings, which show a favourable link between maternal attachment and the inclination of mothers to use ECD programs for their children.

The findings of this study, which align with the initial research inquiry, indicate *a relationship between the nature of ECD facilities and the presence of the mother within the household*. The objective of this study was *to examine the unrelatedness between the type of ECD facility and the presence of the mother in the household*.

5.4.12 Main reason for not attending ECD facility and gender

Poverty is the primary issue that restricts access to ECD services. Families with low income frequently cannot afford to send their children to ECD facilities (Contreras & Gonzá Lez, 2014). Irrespective of gender, this aspect can contribute to children's non-attendance at these services. Cultural norms can have a substantial impact on limited access to certain services. For example, in some homes, there is a preference for sending boys to ECD facilities rather than girls (Agarwal, 1997). Casale (2020) discovered a direct relationship between gender and the probability of not participating in ECD services. The findings suggest that the gender of a kid plays a crucial role in influencing parents' decision to utilize a particular ECD facility.

When looking into the effects of using ECD programs on children in South Africa, regardless of their gender, parents are more likely to express worry for their children's safety and avoid

exposing them to the virus. While the majority of males are dominating when it comes to health and safety issues, the primary reason given by respondents for not attending ECD facility, specifically the high cost, was more prevalent among males. This pertains to the discriminatory gender norms that result in higher prices for males in comparison to females. Moreover, the study found that most male children and a few females reported that the specified amenities are not accessible in their area. The results of this study are consistent with the conclusions made by Rubin & Parker (2023), who also identified a similar trend demonstrating a prevalence of health issues and geographic accessibility.

In households where both parents are employed or if there is a single working parent, the ability to use ECD facilities may be restricted. The Chi-square analysis confirmed the non-statistical significance of the test statistic for gender. The hypothesis was formulated to examine *the unrelatedness between gender and the main reason for not attending ECD facility*. This suggests that there is no significant difference in the way genders are represented and involved in ECD programs. Therefore, gender plays a crucial role in determining how different ECD facilities are used and accessed.

5.4.13 Main reason for not attending ECD facility and province

Geographic accessibility is a significant aspect that affects the availability and use of ECD facilities. Access to ECD facilities may be limited for both boys and girls in both urban and rural regions. An in-depth comprehension of the access and utilization patterns of ECD facilities may be attained by analysing and contrasting the diverse characteristics observed in the nine provinces, as well as the primary factors contributing to non-attendance at ECD facilities. There is data indicating significant discrepancies in the rates of attendance at ECD facilities between children living in urban and rural areas. The child-friendliness of specific residential zones, in terms of the presence of ECD services, differs depending on the features of the head of the household's location.

The study found that the majority of participants in ECD are based in KwaZulu-Natal and prefer either keeping their child at home or having someone take care of them. Rural parents prioritize the use of daycare services, such as those offered by a Gogo or day mothers to a greater extent. One potential theory is that a higher percentage of parents living in rural areas prefer leaving the care of their children to a Gogo/childminder because they regard this arrangement as more convenient. The survey also found that the expenses associated with

facilities were considered to be substantial, particularly in the Gauteng province. This is due to the urban characteristics of Gauteng province, where the majority of household heads are working and are accustomed to the pricey city lifestyle, as well as the fast-paced nature of city life.

Moreover, the parents voiced concern about the possible spread of the virus to their children, particularly among a substantial number of parents living in the province of KwaZulu-Natal. The high transmission rates in KwaZulu-Natal can be attributed to its large population size. Given that the initial instance of COVID-19 was detected within that specific province. Furthermore, the specified amenities are absent in their vicinity. The study suggests that the Eastern Cape exhibited the highest reading, which can be attributed to the province's predominantly rural characteristics, a regular occurrence. However, there will be limitations in terms of accessing these facilities.

In light of the aforementioned circumstances, a hypothesis was formulated to explain *there is no relationship between province and the main reason for not attending ECD facility*. This finding suggests a significant statistical correlation between the environmental context in which children are situated and the ECD facility they attend.

5.4.14 Main reason for not attending ECD facility and age

There is a widely acknowledged consensus that children aged 0-6 are more likely to have the primary reason for not attending ECD services. Due to restricted availability, ECD facilities may not provide services that cater to infants and toddlers. Parents sometimes choose to separate from their newborns and toddlers out of worries regarding bonding and attachment throughout the early stages of the child's development. Munthali et al. (2014) discovered a direct relationship between age and the probability of not participating in ECD facilities. The findings suggest that the age of a kid plays a crucial role in determining whether parents will utilize a particular ECD facility.

When examining the influence of age on the use of ECD facilities by South African children, it is clear that younger children, regardless of their age, have a large number of parents or guardians who are concerned about their children's well-being and are reluctant to expose them to the risk of contracting the COVID-19 virus. The demographic group that exhibits the highest reading rate among those who do not have adequate transportation comprises of parents

or guardians of two-year-old children. Children who were six years old stated that there were no such facilities available in their area.

The primary obstacle preventing parents or guardians of two-year-old children from accessing ECD programs is now a lack of adequate transportation options. The primary factor contributing to this phenomenon can be attributed to the substantial economic burden connected with the delivery of these services. The Chi-square analysis validated the statistical significance of the test statistic for age. The hypothesis was formulated to examine *the unrelatedness between age and the main reason for not attending ECD facility*. This suggests that there is a significant difference in the way age is distributed and participation is involved in ECD programs.

5.4.15 Main reason for not attending the ECD facility and whether the father is part of the household

South African fathers often have significant financial resources inside their houses, which directly impact a child's well-being. According to Casale et al. (2014), while fathers may provide tangible resources like toys and food, the absence of an emotional bond between fathers and children hinders the ability to reduce children's distrust towards their fathers. Households lacking the presence and availability of the mother often require external childcare assistance, making it necessary to enrol the kid in ECD programs. This issue is prevalent in both rural and urban areas, affecting inhabitants in both contexts. The findings of this study are supported by the investigation conducted by Bridgemohan et al. (2005), which have shown a clear correlation between a mother's affection for her child and an increased probability of utilizing ECD services for the child.

The study found a direct relationship between the extent of fathers' engagement in the lives of Grade R children and the primary cause for not attending ECD facilities. The respondents who expressed inadequate transportation reported the highest reading. The individuals who indicated anxiety about endangering the welfare of other members of the home consistently linked their apprehension to the paternal figure. The majority of respondents who believe that these amenities are expensive indicated the presence of a paternal figure in their household. Moreover, it was discovered that participants who indicated the lack of the facility at their respective businesses verified the existence of the father. One theory proposes that fathers have a restricted comprehension of primary education, causing them to acknowledge the need

of ECD facilities for their children while being unaware of the importance of other community services that are accessible.

The data presented in this study confirms that there is a statistically insignificant *correlation between the primary reason for not attending the Early Childhood Development (ECD) facility and the presence of the father in the household*, which is consistent with the initial research inquiry. The hypothesis of this study is *that there is no association between the presence of the father in the household and the primary reason for not attending an Early Childhood Development (ECD) facility*.

5.4.16 Main reason for not attending the ECD facility and whether the mother is part of the household

The presence of a mother in a family in certain families reduces the probability of sending the child to an ECD facility. The mother's desire to form a strong emotional connection with the kid is the reason (Lin et al., 2017). When the mother is present and the household has enough money, she chooses to stay at home and take care of the child. This reduces the necessity of enrolling the child in an ECD facility (Lin et al., 2017). In South Africa, mothers adhere to conventional gender norms that designate them as the primary caregiver for their children.

Mothers' presence is correlated with a reduced probability of children using ECD services. The results reported in this study are corroborated by the discoveries of Lopez Garcia et al. (2022), which demonstrate a favourable association between maternal affection and the inclination of mothers to employ ECD services for their children. The survey found that the mother is the main caregiver in the majority of households. The persons with limited access to transportation earned the highest score. Most people who mentioned that these amenities are expensive attributed it to the presence of a maternal role in the household. The indicated cost is determined by the mother's employment status and the absence of the father.

Furthermore, it is recommended that mothers also possess knowledge on the significance of many community resources. The results of this study, which are consistent with the original research question, suggest *no relationship between the presence of the mother within the household and the main reason for not attending ECD facility*. The aim of this study was to investigate the *unrelatedness correlation between the main reason for not attending ECD facility and the presence of the mother in the household.*

5.5 Multinomial logistic regression on factors associated with access to ECD facility attendance in South Africa

The study employed multinomial logistic regression analysis to ascertain the factors associated with the access and utilization of ECD facilities among children aged 0 to 6 in South Africa. Significant findings were acquired, which shed light on the correlation between the type of ECD facility and the characteristics of household heads with children aged 0 to 6.

5.5.1 Multinomial logistic regression of the type of ECD facility

The province in which the household head resides has a significant impact on the ECD facilities that are located and looked at in South Africa. The results proved that the model adequately explained the data. The model fit the data well and was statistically significant in the Western Cape. Previous studies by Atmore et al. (2012) have shown that children living in urban areas have a more difficult time gaining access to and utilizing ECD services. The study found that parents of children enrolled in ECD programs were more likely to be urban residents. Parents in urban areas have greater access to ECD services due to higher median household incomes. As a result, more children are able to take advantage of the many benefits offered by ECD facilities, including higher-quality technology, more services and more funding (Mpumela, 2021). Children living in rural areas were also more likely to use Grade R, according to the results. Possible explanations include Grade R being the most easily accessible choice and providing the best ECD program overall. Because urban ECD facilities are more likely to provide the best, safest and most equipped facilities, they pose a greater risk to children, especially those from low socio-economic backgrounds and household heads (Piper et al., 2010).

The study conducted revealed that residing in an urban environment was identified as a significant factor, as it was associated with a greater likelihood of children being enrolled in Grade R ECD programs. The utilization of Grade R and preschool facilities tends to be more prevalent in urban areas due to their enhanced accessibility and the generally higher perceived standard of care they offer (Latif & Ali, n.d.). The greater prevalence of ECD in urban areas can potentially be attributed to improved access to educational and occupational prospects (Rao et

al., 2014). Consequently, families exhibit a higher propensity to enrol their children in kindergarten and preschool programs that provide ECD initiatives.

The findings of this study indicate that in households where the mother is absent, the father is more inclined to have access to and utilize the childminder/Gogo facility, leading to a decreased probability of the children availing the services of a childminder/Gogo. The outcome is an increase in the number of households without fathers, leading to a greater reliance on childcare services such as a childminder and a Gogo. The findings presented in this study are consistent with the results reported by Black et al. (2017). It is widely asserted that the father consistently assumes the responsibility of caring for the child in the absence of the mother. The paternal figure assumes the responsibility of getting various items for the child, such as toys and clothing items. Many fathers choose to utilize paid creche services instead of relying on a Gogo (grandmother) for assistance with childcare, despite the availability of free ECD programs. One possible hypothesis for this observed pattern is that an increasing number of fathers may lack an awareness of the importance of ECD services in relation to their children's overall growth and development. Furthermore, households led by fathers who make use of Gogo/childminder facilities have the potential to reduce expenses related to ECD fees and transportation. There is a possibility that this could result in a reduction in the cost associated with utilizing ECD facilities.

5.5.2 Determinants of the main reason for not attending the ECD facility

The age bracket of the children has a substantial impact on the primary factor determining their non-attendance at Early Childhood Development facilities in South Africa. Prior research conducted by Contreras and González (2014) has demonstrated that children residing in metropolitan regions encounter greater challenges in accessing and utilizing early ECD programs. Additional factors were altered by the pandemic (Jeličić et al., 2021). The results proved that the model adequately explained the data. The model demonstrated a strong fit to the data and exhibited statistical significance in children aged 4. Furthermore, it suggested a decreased likelihood of not attending these facilities due to factors related to the Covid-19 epidemic (Costa et al., 2022). The decrease in ECD participation among four-year-olds can be linked to parental preferences in families with children of that age, as a result of the child's reduced capacity to adhere to Covid-19 guidelines and preventive measures.

5.5.3 Determinants of the place where children spend most of their time

The study looked at the primary factors that influence the place where children in the nine provinces of South Africa spend the majority of their time. The findings demonstrated that the model effectively elucidated the data. The model had a strong fit with the data and demonstrated statistical significance. The study's results align with existing studies, indicating that the geographical location in which children reside influences their primary site of activity (Gardiner, 2008; Martinez et al., 2012; Mbarathi & Diga, 2016). The study has revealed that children living in the Mpumalanga province have a reduced probability of being accompanied by another adult at home. The reduced contribution of adult companionship may be attributed to the parental preference observed among families with children living in Mpumalanga, which is influenced by the low accessibility and affordability of such amenities in the region.

The study found that being in a rural area was a major factor linked to a lower chance of children being under the care of a parent, foster parent or guardian in the Mpumalanga province. The prevalence of parents or guardians staying at home with their children is higher in rural areas due to limited availability and the perception of lower quality care they provide (Maggi et al., 2010). The lower incidence of ECD in rural areas may be due to less access to educational and occupational opportunities (Rao et al., 2014). As a result, families are less likely to enrol their children in kindergarten and preschool programs that offer ECD efforts.

The results of this study also suggest that the presence of the mother in the household influences where children spend most of their time. This leads to a lower likelihood of children being under the care of someone other than their mother, compared to households where the mother is not present. The findings revealed in this study align with the results reported by Planalp and Braungart-Rieker (2016). This phenomenon is widespread since the majority of mothers in rural areas are unemployed and their primary responsibility is to bear children, while husbands are the primary earners in the household.

5.6 Chapter summary

This study provides a comprehensive examination of the research methods employed and the data analysis conducted. This study examined the frequency and geographical distribution of children's attendance at early childhood development facilities across the nine provinces of South Africa. Therefore, it is essential to analyse the determinants that impact the utilization of ECD facilities by household heads. The data confirmed specific hypotheses and demonstrated their alignment with previous research, while also rejecting others.

The study's findings highlight significant barriers that continue to impede children's access to and utilization of ECD facilities. Nevertheless, parents are persevering in order to enhance their children's access to resources. Based on the research results, the predominant difficulties encountered by the primary earner of a household can be attributed to factors such as the geographical setting of the household, its demographic composition, the ages of the children and the parental status. The enduring consequences of apartheid are evident within the education system, particularly in the allocation of ECD facilities and services, which are often determined by an individual's residential area and ethnic background. ECD facilities remain essentially concentrated in urban areas, where they benefit from superior infrastructure and advanced technology. The prevalence of ECD services in urban settings is attributed to the prioritization of government investments in these areas.

Chapter 6: Conclusion and Recommendations

6.1 Conclusion

This study's objective was to investigate parents' decision-making processes regarding Early Childhood Development for their children in all nine provinces of South Africa. Additionally, the study aimed to examine the extent to which socio-demographic factors exert an influence on these decision-making processes. The study's primary aim was to examine potential variations in children's access to and utilization of ECD services based on demographic and socio-economic factors. The secondary aim of the study was to examine the variations of these issues based on the child's province, age, population group, gender and the presence or absence of both biological parents in the household. The variables related to ECD amenities encompassed the various types of facilities, an analysis of the primary factors contributing to children's non-attendance at ECD facilities, and an exploration of the predominant locations where children spend their time beyond educational institutions.

The present chapter of the thesis provides a comprehensive overview of the key findings derived from the conducted research. The survey utilized in this study was the General Household Survey 2021, which was selected due to its comprehensive inclusion of all the relevant variables. The study employed univariate analysis, a statistical method that examines individual data points in isolation, to ascertain the prevailing characteristics exhibited by household heads. Cross-tabulation was employed to examine the association between household demographics and socio-economic status, the various types of early childhood development facilities, the primary reasons for non-attendance at ECD facilities, and the predominant location where children spend the majority of their time. The Chi-square test for Independence was employed to investigate the potential association between the demographic characteristics of the household and their utilization of ECD services. Phi and Cramer's V were employed as statistical measures to assess the strength of the relationship between variables. After categorizing the dependent variables, further statistical analyses were performed, including Multinomial Logistic Regression, to assess the key factors influencing the access and utilization of ECD facilities and the extent of their influence. The data analysis for the General Household Survey of 2021 was conducted using SPSS version 28.

This study conducted a comprehensive review of current theories pertaining to access to Early Childhood Development facilities. The rationale for this review stems from the absence of a specific theory that addresses the access and utilization patterns of ECD facilities in South

Africa, specifically across its nine provinces. The present study employed relevant theoretical frameworks to construct a conceptual framework, facilitating an in-depth exploration of the determinants that impact parental decision-making regarding the enrolment of their children in early childhood development programs.

6.2 Factors influencing access to and utilization of ECD facilities

The primary objective of this study was to examine the relationship between household socio-economic status and the extent of their children's involvement in and utilization of ECD facilities. This study reveals that there continues to be a persistent issue regarding the availability of ECD facilities. Additionally, the ongoing pandemic has had significant repercussions on various aspects of children's well-being, encompassing their mental, social, developmental and academic dimensions. Consequently, this can potentially exert an adverse influence on the physical well-being of the children.

Within the South African context, there is a noteworthy prevalence of children falling within the designated age range of 0 to 6 years who actively participate in ECD services to a significant extent. The study's findings suggest that there is no significant correlation between the age group of children and the primary factors influencing their non-attendance at ECD facilities. Based on the data, it can be inferred that children who are 4 years old are less likely to refrain from attending these facilities due to reasons related to the COVID-19 pandemic, as compared to children who are 6 years old. The decrease in utilization of ECD facilities among children aged four can potentially be ascribed to parental inclinations within households with children of that age, owing to the child's constrained capacity to adhere to COVID-19 protocols and precautionary measures. The accessibility of ECD facilities is contingent upon the characteristics of household heads across the nine provinces. The subsequent ramifications that arise, according to Atmore (2013), are the considerable proportion of young children in South Africa who persistently encounter detrimental consequences arising from a range of social and economic disparities, including restricted access to healthcare, education, social services and nutrition. Despite the nation's dedication to early childhood development, these circumstances continue to endure. South Africa has yet to attain its goal of guaranteeing comprehensive accessibility to early childhood development services of superior quality for all children. According to the scholarly works of both Atmore (2013) and Aubrey (2017), it can be observed that the findings of this study indicate that children aged 4 in both urban and rural areas of

South Africa demonstrated the highest level of utilization of ECD facilities. The high prevalence of this particular age group can be attributed to the biological demands that arise from the psychological, social and developmental stages experienced by children supported by Bandura's Social Learning Theory, Erikson's Psychosocial Theory and Freud's Psychosexual Theory. However, Bandura's Social Theory holds significance in understanding the accessibility and utilization of ECD facilities, as it highlights the mechanisms via which children acquire knowledge from their environment, caregivers and peers. Furthermore, the research revealed no correlation between the category of ECD facility and the age group of the children.

The employment status of the primary earner in a household has a notable influence on the family's ability to access and utilize ECD centres. Parents who possess a stable financial standing have the capacity to allocate resources towards the educational pursuits of their children, without compromising their own financial stability. The findings of this study support previous research that have demonstrated a disproportionately higher level of unemployment within the African/ Black population.

The utilization of ECD facilities within a community is contingent upon various factors, such as the availability and proficiency of services rendered. Ensuring the safety and cleanliness of the ECD centre is imperative for both the well-being of the children and the staff employed therein. The results of the study indicated that a subset of families expressed dissatisfaction regarding the support their children received. It is conceivable that this early childhood development centre may not align with the requirements due to potential inadequacies in staffing, equipment or safety provisions. Research consistently indicates that parents tend to express a preference for ECD programs that prioritize safety, offer abundant resources and deliver exceptional services in the field of ECD.

The presence of a paternal figure within the domestic setting exerts a significant impact on a child's capacity to avail ECD services. The research revealed a positive association between the presence of a father within the household and the probability of children being cared for by a childminder or a grandparent (referred to as "Gogo" in some cultures). There is clear evidence to suggest that households with paternal presence are more likely to utilize the assistance of a childminder or a grandparent caregiver, as substantiated by empirical research. The study findings indicated a positive association between paternal engagement and disparities in the availability and utilization of ECD services. Children who live in households with both

biological parents are more likely to use childcare services, such as hiring professional caregivers known as Gogo or nannies. Playgrounds that are equipped with a Gogo and childminder facilities, in addition to conventional Grade R playgrounds, are observed to be significantly utilized by families with young children. Research has shown that children who benefit from the active involvement of their fathers in their lives are more likely to engage in ECD services, such as Grade R and creches.

The current educational framework continues to exhibit remnants of the allocation of funds that were prevalent during the apartheid era. The issue of infrastructure in ECD poses a significant challenge within the South African context. The distribution of resources between urban and rural areas is characterized by a notable disparity, resulting in an unequal and inequitable provision of ECD services. This discrepancy is frequently identified as the primary obstacle in the effective implementation of ECD programs in the country, according to the HSRC, (2010). The provision of essential services such as water, electricity and sanitary facilities is frequently lacking in ECD centres, despite the imperative for these centres to operate effectively. The infrastructure of South African ECD fails to meet the minimum standards for infrastructure as prescribed by the Department of Social Development and UNICEF (2006), in their Guidelines for Early Childhood Development Services. Consequently, community-based facilities located in rural areas often exhibit less substantial infrastructure compared to their urban counterparts.

Based on the findings of this study, it can be concluded that the provinces of Eastern Cape, KwaZulu-Natal and Limpopo exhibited comparatively inadequate resource allocation and infrastructure ratings. Across all provinces in South Africa, a significant portion of ECD facilities were discovered to be undersized, overcrowded, deficient in suitable outdoor play areas, inadequately ventilated and afflicted by vandalism. According to the 2001 National ECD Audit conducted by the Department of Education, it was observed that racial disparities are prominently evident in the physical infrastructure of early childhood development facilities. The study revealed that early childhood development centres catering primarily to Black/ African children exhibited a predominance of below-average infrastructure ratings, whereas centres primarily serving White children demonstrated the highest ratings.

6.3 Policy recommendations

The study's results indicate a notable correlation between the demographic group and the specific type of ECD facility attended. It is strongly advised that policymakers within the Department of Education, provincial government officials and the nation of South Africa as a whole prioritize the establishment and operation of ECD facilities that are characterized by efficacy, dependability, accessibility and availability. The National Development Agency (NDA) has the capacity to provide financial support for both minor and major infrastructure enhancements within the ECD sector, utilizing the findings derived from a comprehensive needs assessment carried out specifically for ECD centres. These proposed modifications should aim to ensure equal access to secure and hygienic preschool facilities for all vulnerable children within our society.

Additionally, the research revealed a noteworthy correlation between the primary factor influencing non-participation in Early Childhood Development (ECD) facilities and the age of the children. Ensuring the presence of a wide array of educational resources that are suitable for different age groups is of utmost importance at the ECD centre. This measure is crucial for enhancing the quality of children's learning encounters during their tenure at the facility. The ECD centre should possess learning equipment that exhibits durability, appropriateness for children and alignment with their respective age groups. Through the provision of educational guidance and the utilization of suitable resources, it is possible to augment the cognitive development of young children in various areas, including literacy, numeracy and practical aptitude. Likewise, ensuring educators receive comprehensive training on the proper utilization of classroom technology is of utmost importance.

Moreover, the matter of hunger, malnutrition and food insecurity among children in South Africa is a substantial concern that can be ascribed to the nation's prevailing condition of severe poverty. The impact of a child's nutritional status on their overall development, including physical, brain, cognitive and learning aspects, can have a substantial effect and may result in long-term consequences such as reduced earning potential. Due to these aforementioned constraints, there is a discernible decline in the proportion of children who are capable of attaining their utmost potential, consequently exerting an influence on the future accomplishments of both the individual child and the broader nation.

Additionally, the research revealed a statistically significant relationship between the type of ECD and the province in which it is implemented. Collaboration between the South African

government and the provincial department of education is of utmost importance to guarantee equitable access to high-quality ECD services in both urban and rural regions. The current discrepancy in the allocation of these resources presents a notable obstacle. In order to improve the educational opportunities for individuals living in rural areas, it is crucial for policymakers and local government education departments to enhance the distribution of ECD services and facilities. Also, it is crucial for the Department of Education to implement comprehensive guidelines at both urban and rural settings, delineating the most effective strategies for providing ECD of exceptional calibre – it is imperative that these guidelines incorporate provisions to ensure that children with special needs are afforded appropriate access to specialized ECD services. The improvement of availability and accessibility of ECD facilities and services can be accomplished through the implementation of a policy that requires the creation and positioning of these facilities within designated proximity to communities, including both urban and rural areas.

ECD centres situated in rural areas, particularly those affiliated with home-based settings, face the significant challenge of insufficient financial resources. The provision of clean and adequately equipped early childhood development centres holds the potential to enhance the well-being and overall satisfaction of children. ECD centres located in rural areas often encounter substantial obstacles as a result of restricted resources and limited personnel accessibility. It is crucial to allocate supplementary funding from the Department of Education to rural communities in order to improve the accessibility of ECD facilities. In addition to the imperative of constructing ECD facilities as a means of addressing this concern, it is also crucial to enhance the teacher-student ratio.

Moreover, the income and employment status of household heads have a significant influence on both the accessibility and utilization of ECD services. Families experiencing financial constraints and parental unemployment should be granted the chance to enrol their children in these establishments at reduced rates. It is vital for the government to establish and facilitate the provision of such opportunities.

6.4 Recommendation for future research

Further investigation is necessary to examine the access and utilization patterns of ECD services. In order to accomplish this, a comparative analysis can be conducted between the attributes of ECD settings and the developmental needs of children. The exorbitant expenses associated with ECD have deterred numerous families from enrolling their children in such programs. Government subsidies play a crucial role in ensuring that the expenses associated with ECD centres remain affordable for a significant proportion of households. Nevertheless, in the absence of financial assistance, a significant number of parents and guardians encounter difficulties in meeting the exorbitant expenses associated with providing education for their children. Some parents may encounter challenges in meeting the financial obligations associated with the tuition fees established by the proprietor of a privately-owned centre dedicated to early childhood development. Consequently, individuals are compelled to remain within their residences. Hence, it is advisable to conduct further research on the disparities arising from the imposition of tuition fees in ECD facilities.

There is a pressing need for comprehensive research to be conducted on the subject of gender disparities within educational settings. The prioritization of equitable educational opportunities for both male and female students should be a central area of investigation in forthcoming academic research. The imperative for the government, facilitated by the Department of Education, lies in the necessity to tackle these concerns by instituting compulsory ECD programs for all children. The 'Education for All' initiative has underscored the importance of granting every child the entitlement to receive an education and attend school. The Sustainable Development Goals for 2030 also placed significant emphasis on the provision of high-quality education for all children. Further research is required to enhance the state of education, especially early childhood development, in South Africa.

In order to facilitate the identification of trends and enable timely interventions, it is imperative to maintain the inclusion of inquiries pertaining to ECD facility requirements and utilization, as well as ECD attendance and the overall welfare of children availing these services, within the General Household Survey. Conducting a comparative analysis of ECD facility access and utilization at the highest level of local governance, encompassing local and district municipalities as well as small towns, could provide valuable insights into the diverse patterns of ECD service access and utilization among parents who are heads of households in the nine provinces of South Africa. The significance of incorporating ECD and migration variables into

the analysis cannot be overemphasized. The relationship between migration and ECD accessibility in South Africa remains an understudied domain. Addressing this knowledge deficit will equip policymakers with a more comprehensive understanding of this matter.

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Appendix Tables

Appendix 1

Table 1: Type of ECD facility attended and population group

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	47.499[a]	15	.000
Likelihood Ratio	47.813	15	.000
Linear-by-Linear Association	10.973	1	.001
N of Valid Cases	2183		

a. 9 cells (37,5%) have expected count less than 5. The minimum expected count is ,13.

Appendix 2

Table 2: Type of ECD facility attended and gender

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.712[a]	5	.592
Likelihood Ratio	3.715	5	.591
Linear-by-Linear Association	.130	1	.719
N of Valid Cases	2183		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 7,38.

Appendix 3

Table 3: Type of ECD facility attended and province

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	216.715[a]	40	.000
Likelihood Ratio	236.210	40	.000
Linear-by-Linear Association	3.242	1	.072
N of Valid Cases	2183		

a. 9 cells (16,7%) have expected count less than 5. The minimum expected count is ,56.

Appendix 4

Table 4: Type of ECD facility attended and age of child

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2023.904[a]	30	.000
Likelihood Ratio	1880.624	30	.000
Linear-by-Linear Association	23.690	1	.000
N of Valid Cases	2183		

a. 9 cells (21,4%) have expected count less than 5. The minimum expected count is ,32.

Appendix 5

Table 5: Type of ECD facility attended and whether the father is part of the household

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.944[a]	5	.077
Likelihood Ratio	10.285	5	.068
Linear-by-Linear Association	.322	1	.570
N of Valid Cases	2029		

a. 1 cells (8,3%) have expected count less than 5. The minimum expected count is 4,51.

Appendix 6

Table 6: Type of ECD facility attended and whether the mother is part of the household

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	19.816[a]	5	.001
Likelihood Ratio	20.772	5	<,001
Linear-by-Linear Association	.044	1	.834
N of Valid Cases	2128		

a. 1 cells (8.3%) have expected count less than 5. The minimum expected count is 3.40.

Appendix 7

Table 7: Main reason for not attending ECD facility by gender

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.823[a]	5	.438
Likelihood Ratio	4.837	5	.436
Linear-by-Linear Association	2.853	1	.091
N of Valid Cases	2180		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.43.

Appendix 8

Table 8: Main reason for not attending ECD facility by population group

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	11.990[a]	15	.680
Likelihood Ratio	11.208	15	.738
Linear-by-Linear Association	2.681	1	.102
N of Valid Cases	2180		

a. 14 cells (58.3%) have expected count less than 5. The minimum expected count is .08.

Appendix 9

Table 9: Main reason for not attending ECD facility by province

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	182.732[a]	40	<,001
Likelihood Ratio	189.417	40	<,001
Linear-by-Linear Association	2.086	1	.149
N of Valid Cases	2180		

a. 21 cells (38.9%) have expected count less than 5. The minimum expected count is .52.

Appendix 10

Table 10: The main reason for not attending the ECD facility by age

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	107.343[a]	30	<,001
Likelihood Ratio	103.303	30	<,001
Linear-by-Linear Association	32.232	1	<,001
N of Valid Cases	2180		

a. 15 cells (35.7%) have expected count less than 5. The minimum expected count is .13.

Appendix 11

Table 11: The main reason for not attending the ECD facility by whether the father is part of the household

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	7.781[a]	5	.169
Likelihood Ratio	7.948	5	.159
Linear-by-Linear Association	1.175	1	.278
N of Valid Cases	2074		

a. 1 cells (8.3%) have expected count less than 5. The minimum expected count is 3.67.

Appendix 12

Table 12: The main reason for not attending the ECD facility and whether the mother is part of the household

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.948[a]	5	.856
Likelihood Ratio	1.927	5	.859
Linear-by-Linear Association	.100	1	.752
N of Valid Cases	2150		

a. 1 cells (8.3%) have expected count less than 5. The minimum expected count is 2.24.

Appendix 13

Table 13: Place where children spend most of their time by population group

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	19.224[a]	9	.023
Likelihood Ratio	12.942	9	.165
Linear-by-Linear Association	4.766	1	.029
N of Valid Cases	2082		

a. 9 cells (56.3%) have expected count less than 5. The minimum expected count is .02.

Appendix 14

Table 14: Place where children spend most of their time by gender

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.766[a]	3	.288
Likelihood Ratio	4.927	3	.177
Linear-by-Linear Association	1.137	1	.286
N of Valid Cases	2082		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 1.49.

Appendix 15

Table 15: Place where children spend most of their time by province

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	86.740[a]	24	<,001
Likelihood Ratio	79.820	24	<,001
Linear-by-Linear Association	.026	1	.873
N of Valid Cases	2082		

a. 17 cells (47.2%) have expected count less than 5. The minimum expected count is .11.

Appendix 16

Table 16: Place where children spend most of their time by age

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	15.223[a]	18	.647
Likelihood Ratio	16.445	18	.561
Linear-by-Linear Association	1.702	1	.192
N of Valid Cases	2082		

a. 11 cells (39.3%) have expected count less than 5. The minimum expected count is .03.

Appendix 17

Table 17: Place where children spend most of their time and whether the father is part of the household

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.778[a]	3	.620
Likelihood Ratio	1.859	3	.602
Linear-by-Linear Association	1.623	1	.203
N of Valid Cases	1982		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is .85.

Appendix 18

Table 18: Place where children spend most of their time by whether the mother is part of the household

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	85.195[a]	3	<,001
Likelihood Ratio	72.044	3	<,001
Linear-by-Linear Association	28.100	1	<,001
N of Valid Cases	2054		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is .52.

Appendix 19

Table 19: Survey Questionnaire - Province

# prov: Province	
Information	[Type= discrete] [Format=numeric] [Range= 1-9] [Missing=*]
Statistics [NW/ W]	[Valid=35265 / 60482489.938] [Invalid=0 / 0]
Notes	South African provinces according to the provincial boundaries as demarcated in December 2005.

Value	Label	Cases	Weighted	Percentage (Weighted)
1	Western Cape	2663	7091117.2	11.7%
2	Eastern Cape	5326	6542463.8	10.8%
3	Northern Cape	1487	1280239.5	2.1%
4	Free State	1763	2973355.8	4.9%
5	KwaZulu-Natal	7719	11682261.5	19.3%
6	North West	1958	4146496.6	6.9%
7	Gauteng	6166	15888251.6	26.3%
8	Mpumalanga	3266	4776243.3	7.9%
9	Limpopo	4917	6102060.6	10.1%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

Source: GHS2021 metadata

Appendix 20

Table 20: Survey Questionnaire - Gender

# Sex: Gender	
Information	[Type= discrete] [Format=numeric] [Range= 1-2] [Missing=*]
Statistics [NW/ W]	[Valid=35265 / 60482489.938] [Invalid=0 / 0]
Universe	Every person who has stayed in the household in the selected dwelling unit at least four nights per week in the four weeks prior to the interview.
Literal question	Is ..... a male or a female?
Notes	This question is asked for each household member to determine his or her gender. This question, and all consequent questions, are applicable only if there is a 'Yes' answer in the previous question, which determines whether a person is a household member or not. The survey officers are instructed not to assume the gender of the members of the households by just looking at people's names or physical appearances, but to make identification according to the respondent's answer to the question.

Value	Label	Cases	Weighted	Percentage (Weighted)
1	Male	16579	29609954.8	49.0%
2	Female	18686	30872535.2	51.0%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

Source: GHS2021 metadata

Appendix 21

Table 21: Survey Questionnaire - Population group

# Population: Population group	
Information	[Type= discrete] [Format=numeric] [Range= 1-4] [Missing=*]
Statistics [NW/ W]	[Valid=35265 / 60482489.938] [Invalid=0 / 0]
Universe	Every person who has stayed in the household in the selected dwelling unit at least four nights on average per week in the four weeks prior to the interview.
Literal question	What population group does ..... belong to?
Notes	This question is asked to determine the population group of household members from the selected dwelling. The respondent must answer for each member without any assumptions. In this instance, survey officers are also instructed not to make any conclusions that may be influenced by their observation or using people's names during the interview. This question may also be very sensitive to some respondents, especially in this post-apartheid era, but it is really important to find out what the composition of the South African population is.

Value	Label	Cases	Weighted	Percentage (Weighted)
1	African/Black	31065	49396444.9	81.7%
2	Coloured	2419	5200046.0	8.6%
3	Indian/Asian	480	1465084.2	2.4%
4	White	1301	4420914.8	7.3%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

Source: GHS2021 metadata

Appendix 22

Table 22: Survey Questionnaire - Marital status

# hhc_marital: Marital status	
Information	[Type= discrete] [Format=numeric] [Range= 1-7] [Missing=*]
Statistics [NW/ W]	[Valid=35265 / 60482489.938] [Invalid=0 / 0]
Universe	Every person who has stayed in the household in the selected dwelling unit at least four nights on average per week in the four weeks prior to the interview.
Literal question	What is ……'s present marital status?
Notes	This question is about the marital status of the members of the household. Customary, civil and traditional marriages are considered in this question. Options 6 and 7 are similar in that they both refer to individuals who are single. However, the distinguishing factor is individuals who may have lived together with someone as husband/wife before. If the response is 'widowed', 'divorced', 'separated, but still legally married', 'single, but have been living together with someone as husband/wife before' or 'single and have never been married/never lived together as husband/wife before', the survey officer is instructed to go to HHC5.

Value	Label	Cases	Weighted	Percentage (Weighted)
1	Legally married	6001	11186359.5	18.5%
2	Living together like husband and wife/partners	1988	4318412.1	7.1%
3	Divorced	393	635984.8	1.1%
4	Separated, but still legally married	235	337754.5	0.6%
5	Widowed	2067	2761726.5	4.6%
6	Single, but have lived together with someone as husband/wife before	621	1104170.0	1.8%
7	Single and have never been married/never lived together as husband/wife before	23960	40138082.6	66.4%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

Source: GHS2021 metadata

Appendix 23

Table 23: Survey Questionnaire - Father part of the household

# hhc_fath_parthh: Father part of the household	
Information	[Type= discrete] [Format=numeric] [Range= 1-9] [Missing=*]
Statistics [NW/ W]	[Valid=35265 / 60482489.938] [Invalid=0 / 0]
Universe	Only for those who answered 'Yes' in HHC5.
Literal question	Is ……'s biological father part of this household?
Notes	This is a follow-up question to HHC5 and seeks to find out whether the father is a member of the visited household or not. If the answer is 'No', the interviewer must proceed to HHC8.

Value	Label	Cases	Weighted	Percentage (Weighted)
1	Yes	6097	12451139.0	20.6%
2	No	12464	21146290.5	35.0%
8	Not applicable	16702	26882548.0	44.4%
9	Unspecified	2	2512.5	0.0%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

Source: GHS2021 metadata

Appendix 24

Table 24: Survey Questionnaire - Mother part of the household

# hhc_moth_parthh: Mother part of the household	
Statistics [NW/ W]	[Valid=35265 / 60482489.938] [Invalid=0 / 0]
Universe	Only for those who answered 'Yes' in HHC8.
Literal question	Is ……'s biological mother part of this household?
Notes	This is a follow-up question to HHC8 and seeks to find out whether the mother is a member of the visited household or not. If the answer is 'No', the interviewer must proceed to EDU1.

Value	Label	Cases	Weighted	Percentage (Weighted)
1	Yes	14869	26019280.7	43.0%
2	No	8984	16294756.4	26.9%
8	Not applicable	11410	18165940.3	30.0%
9	Unspecified	2	2512.5	0.0%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

Source: GHS2021 metadata

Appendix 25

Table 25: Survey Questionnaire - Highest education level

# education: Highest education level	
Information	[Type= continuous] [Format=numeric] [Range= 0-99] [Missing=*]
Statistics [NW/ W]	[Valid=35265 / 60482489.938] [Invalid=0 / 0]
Universe	This is applicable to all members of the household in the selected dwelling unit.
Literal question	What is the highest level of education that …… has successfully completed?
Notes	Survey officers are instructed that it is only those qualifications already obtained that must be entered. That means the current level, whereby a person is still busy with the studies, is not applicable. It is very important to complete each record even if the person has not attended school. Moreover, survey officers are instructed that diplomas and certificates must be of at least six months duration.

Value	Label	Cases	Weighted	Percentage (Weighted)
0	Grade R/0	834	1457670.9	2.4%
1	Grade 1/Sub A/Class 1	870	1364619.3	2.3%
2	Grade 2/Sub B/Class 2	1031	1618213.0	2.7%
3	Grade 3/Standard 1/ABET/AET 1	1114	1618908.8	2.7%
4	Grade 4/Standard 2	1269	1771056.4	2.9%
5	Grade 5/Standard 3/ABET/AET 2	1299	1887381.7	3.1%
6	Grade 6/Standard 4	1473	2130058.3	3.5%
7	Grade 7/Standard 5/ABET/AET 3	1815	2639412.4	4.4%
8	Grade 8/Standard 6/Form 1	2040	2876464.8	4.8%
9	Grade 9/Standard 7/Form 2/ABET/AET 4/NCV Level 1/Occupational Certificate – NQF Level 1	2058	3306496.6	5.5%
10	Grade 10/Standard 8/Form 3/NCV Level 2/ Occupational Certificate – NQF Level 2	2988	5104864.9	8.4%
11	Grade 11/Standard 9/Form 4/NCV Level 3/ Occupational Certificate – NQF Level 3	3399	5821099.2	9.6%
12	Grade 12/Standard 10/Form 5/National Senior Certificate/Matric/ NCV Level 4/Occupational Certificate – NQF Level 4	7191	13860520.8	22.9%
13	NTC I/N1/NQF 1	16	28011.4	0.0%
14	NTC II/N2/NQF 2	27	49880.3	0.1%
15	NTC III/N3/NQF 3	75	137871.2	0.2%
16	N4/NTC 4/Occupational Certificate – NQF Level 5	97	153951.4	0.3%
17	N5/NTC 5/Occupational Certificate – NQF Level 5	64	122996.9	0.2%
18	N6/NTC 6/Occupational Certificate – NQF Level 5	132	262966.5	0.4%
19	Certificate with less than Grade 12/Standard 10	34	66808.7	0.1%
20	Diploma with less than Grade 12/Standard 10	34	53565.4	0.1%
21	Higher/National/Advance certificate with Grade 12/Std 10/Occupational Certificate – NQF Level 5	220	448189.4	0.7%
22	Diploma with Grade 12/Standard 10/ Occupational Certificate – NQF Level 6	999	1967510.0	3.3%
23	Higher Diploma/Occupational Certificate (B-Tech Diploma) – NQF Level 7	169	388585.4	0.6%
24	Bachelor's Degree/Occupational Certificate – NQF Level 7	604	1406125.6	2.3%
25	Honours Degree/Postgraduate Diploma/ Occupational Certificate – NQF Level 8	176	456516.0	0.8%
26	Post Higher Diploma (M-Tech and Master's Degree) – NQF Level 9	62	176570.1	0.3%
27	Doctoral Degrees (D-Tech and PhD) – NQF Level 10	23	74126.6	0.1%
28	Other	124	299194.1	0.5%
29	DO NOT KNOW	278	604748.3	1.0%
98	No schooling	4709	8281131.7	13.7%

99	Unspecified	41	46973.8	0.1%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

Source: GHS2021 metadata

Appendix 26

Table 26: Survey Questionnaire - Type of ECD facility

# ecd_chldatt: Type of ECD facility	
Information	[Type= continuous] [Format=numeric] [Range= 1-99] [Missing=*]
Statistics [NW/ W]	[Valid=35265 / 60482489.938] [Invalid=0 / 0]
Universe	This is applicable to all members of the household aged between 0 and 6 years in the selected dwelling unit.
Literal question	Which of the following does …… currently attend?
Notes	The question determines whether the individual currently attends Grade R, pre-school/nursery school/Grade 00/Grade 000, crèche/educare centre or day mother/gogo.

Value	Label	Cases	Weighted	Percentage (Weighted)
1	Grade R	558	970651.5	1.6%
2	Pre-school/nursery school/Grade 00/Grade 000	232	492138.4	0.8%
3	Crèche/educare centre	713	1451084.7	2.4%
4	Day mother/gogo/child minder	175	348669.5	0.6%
5	Home based play group	15	747.8	0.0%
6	School (Grade 1 or 2)	490	782422.6	1.3%
7	NONE	2091	4046198.9	6.7%
9	OTHER	4	12596.5	0.0%
88	Not applicable	30981	52374643.4	86.6%
99	Unspecified	5	1014.5	0.0%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

Source: GHS2021 metadata

Appendix 27

Table 27: Survey Questionnaire - Place where children spend most of their time during the day

# ecd_notatt: Place where children spent most of their time during the day	
Information	[Type= discrete] [Format=numeric] [Range= 1-9] [Missing=*]
Statistics [NW/ W]	[Valid=35265 / 60482489.938] [Invalid=0 / 0]
Universe	This is applicable to all members of the household aged between 0 and 6 years in the selected dwelling unit.
Literal question	If not attending any of the above, where is he/she during the day for most of the time?
Notes	The question tries to establish where the child spent most of his/her time during the day.

Value	Label	Cases	Weighted	Percentage (Weighted)
1	At home with parent, foster parent or guardian	1791	3513530.3	5.8%
2	At home with another adult	258	450665.7	0.7%
3	At home with someone younger than 18 years	3	3201.8	0.0%
4	At someone else's dwelling	30	63190.1	0.1%
5	Other	10	17933.2	0.0%
8	Not applicable	33169	56421372.4	93.3%
9	Unspecified	4	12596.5	0.0%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

Source: GHS2021 metadata

Appendix 28

Table 28: Survey Questionnaire - Main reason for not attending ECD facility

# ecd_notatt_rsn: Main reason for not attending the ECD facility	
Information	[Type= discrete] [Format=numeric] [Range= 1-88] [Missing=*]
Statistics [NW/ W]	[Valid=35265 / 60482489.938] [Invalid=0 / 0]
Universe	This is applicable to all members of the household aged between 0 and 6 years in the selected dwelling unit.
Literal question	What is the main reason for ... not to attend Grade R, pre-school/nursery school/Grade 00/Grade 000/crèche/educare centre?
Notes	The question tries to establish the primary reason why the child does not attend school or an ECD facility. Although several reasons may exist, it is important to understand the main concerns of the household as availability and access are not in this case mutually exclusive.

Value	Label	Cases	Weighted	Percentage (Weighted)
1	Prefer that the child stay at home/with someone else	1817	3427344.5	5.7%
2	These facilities do not exist in our area	46	84213.8	0.1%
3	The facility he/she attended closed down due to COVID-19	64	98025.5	0.2%
4	Concerned for his/her safety and do not want expose him/her to the virus	70	164887.5	0.3%
5	Do not want to risk the health of other household members	13	31037.4	0.1%
6	Too expensive	170	403952.5	0.7%
7	Do not have adequate transport	5	6840.5	0.0%
8	Other	101	194233.2	0.3%
88	Not applicable	32979	56071955.0	92.7%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

Source: GHS2021 metadata