

# **Early Intervention Programmes and Parenting Deaf Children: Parental Experiences of Stress**

**Rosemary Brown**

**207500587**

Submitted to the University of KwaZulu-Natal

In partial fulfilment of the academic requirements for the degree of Masters in Research Psychology

Date of Submission: June 2018

Supervisor: Dr Nicholas Munro

Discipline of Psychology  
School of Applied Human Sciences  
University of KwaZulu-Natal

# Plagiarism Declaration

I, Rosemary Brown, do hereby state unambiguously that:

- i. The research reported in this thesis, except where otherwise indicated, is my original research;
- ii. It has not been submitted for any degree or examination at any other university;
- iii. It does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons;
- iv. It does not contain other persons' writing, unless specifically acknowledged as being sourced from other researchers. Where other written sources have been quoted, then:
  - a. Their words have been re-written, but the general information attributed to them has been referenced;

Where their exact words have been used, then:

- b. Their writing has been placed in italics and inside quotation marks, and referenced;
- v. It does not contain text, graphics or tables copied and pasted from the internet, unless specifically acknowledged, and the source being detailed in the thesis and in the relevant reference section.
- vi. A Turnitin Originality Report has been generated on this version of the dissertation (see Appendix 8).

-----

Rosemary Brown

As candidate supervisor, I hereby approve this thesis for submission

-----

Dr Nicholas Munro

# **Dedication**

To my mom, Joan Brown,

Who sent me down this path,

And whom, given the opportunity, would've actually read this whole thing.

## Acknowledgements

I would like to acknowledge and show thanks to the following people, without whom this research would not have been possible:

- Firstly, I would like to thank HI HOPES and specifically their Director, Professor Claudine Störbeck, and the then provincial coordinator for KZN, Dianne Goring for giving me permission to conduct this research and pointing me in the right direction.
- I would also like to thank each one of the valued Moms and Grannies who gave of their time to participate in this research.
- To the HI HOPES Parental Advisors, who so willing took on the burden of helping me with my research.
- To Ayesha Osman, audiologist and friend, who helped connect me to the right people to do this research.
- To Fulton School for the Deaf for the continued support.
- To my supervisor, Dr Nicholas Munro, thank you for the patience and not losing hope.
- To Merridy Grant, for always giving me the push.
- To my family and my friends, thank you for years of endless love and support. And for never asking when asked not to ask.
- To my Dad, Trevor, thank you for always. For always listening, for always helping, for always being my biggest supporter. And all for bucksheet;)

## **Abstract**

When confronted with a child recently diagnosed as deaf, parents can find themselves in a foreign and stressful situation. Parenting stress can have detrimental effects (e.g., socio-emotional problems) on the family and child. Early intervention programmes seek to equip parents for their parenting journey with their deaf child. This study sought to determine if participation in an early intervention programme, specifically HI HOPES, was associated with levels of parenting stress, perceived social support, and the perceived socio-emotional functioning of the child. Two groups of maternal caregivers were compared, one who had been through the HI HOPES intervention (n=35) and one who had not (n=23), using three different measures: Parental Stress Index, Social Support Questionnaire and Strengths-Difficulties Questionnaire. The results from the analyses indicate that participation in the HI HOPES early intervention programme seems unrelated to levels of parenting stress, perceived social support, and the child's perceived socio-emotional functioning. These non-significant findings are discussed in relation to the theoretical foundations of the study and the contextual nature of the typical South African extended family structure. Although early intervention programmes are likely to be useful, it is possible that an extended family provides an important supportive and stress-relieving function for maternal caregivers of deaf children, which may negate the reported influence of an early intervention programme. In addition, the findings from the study are discussed in relation to certain methodological limitations (e.g., sample size, validity of questionnaire's used, and data collection strategies).

# Contents

<b>Plagiarism Declaration</b> .....	1
<b>Dedication</b> .....	2
<b>Acknowledgements</b> .....	3
<b>Abstract</b> .....	4
<b>Chapter One: Introduction</b> .....	8
1.1 Parenting a Deaf Child.....	8
1.1.1    Diagnosing a child as deaf.....	9
1.1.2    Parents’ reactions to their child’s diagnosis .....	10
1.2 Early Intervention .....	10
1.2.1 The HI HOPES Programme .....	11
1.3 Research Objectives.....	12
1.4 Research Overview .....	13
1.5 Conclusion.....	13
<b>Chapter Two: Literature Review</b> .....	14
2.1. Introduction .....	14
2.2 Understanding Disability.....	14
2.2.1 Medical Model of Disability .....	14
2.2.2 Social Model of Disability.....	15
2.2.4 Defining disability for this research .....	16
2.3 A Proposed Model for this Research .....	17
2.3.1 Parenting stress.....	18
2.3.2 Perceived social support .....	20
2.3.3 Parental perceptions of the child’s socio-emotional development.....	21
2.4 Conclusion.....	21
<b>Chapter Three: Methodology</b> .....	23
3.1 Introduction .....	23
3.2. Aims of this Study .....	23
3.2.1 Research objectives and associated hypotheses .....	23
3.3 Research design .....	24
3.3.1 Study setting .....	24
3.4 Sample.....	25
3.4.1 Sampling procedure .....	25
3.4.2. Ethical issues in sampling.....	27
3.5 Data collection .....	28

3.5.1. Test packs.....	28
3.5.2 Parental Stress Index (PSI) .....	28
3.5.3 Social Support Questionnaire (SSQ).....	30
3.5.4 Strengths and Difficulties Questionnaire (SDQ).....	31
3.6 Data analysis .....	32
3.6.1 Scoring the measures used (PSI, SSQ, SDQ).....	32
3.6.2 Descriptive statistics .....	33
3.6.3 Inferential Statistics .....	33
3.7. Conclusion.....	34
<b>Chapter Four: Results</b> .....	<b>35</b>
4.1 Introduction .....	35
4.2 The Participant Information Sheet.....	35
4.2.1 Maternal caregiver demographics.....	35
4.2.2. Participants’ children demographics .....	37
4.3 The Parental Stress Index (PSI) results.....	38
4.3.1 Results for research objective one.....	39
4.4 Social Support Questionnaire (SSQ) results.....	40
4.4.1 Results for research objective two .....	41
4.5 Strengths Difficulties Questionnaire (SDQ) results .....	41
4.5.1 Results for research objective three .....	42
4.6. Conclusion.....	43
<b>Chapter Five: Discussion</b> .....	<b>44</b>
5.1 Introduction .....	44
5.2. Non-significant Findings.....	44
5.3. Research Objective One: Decreasing Parenting Stress .....	45
5.4. Research Objective Two: Increasing Perceived Social Support .....	46
5.5. Research Objective Three: The Perceived Socio-Emotional Development of the Child.....	47
5.6. Limitations.....	47
5.7. Future Research .....	48
<b>References</b> .....	<b>50</b>
<b>Appendices</b> .....	<b>55</b>
Appendix 1: Permission email from HI HOPES.....	55
Appendix 2: Informed consent (English).....	56
Appendix 3: Letter of instruction to Parental Advisors included in test pack .....	58
Appendix 4: Participant information sheet.....	59
Appendix 5: HI-HOPES (Intervention) Group PSI Profile form .....	60

Appendix 6: Non-intervention Group Profile form..... 61  
Appendix 7: Ethical approval of research protocol..... 62  
Appendix 8: Turnitin Originality Report ..... 64



# Chapter One: Introduction

## 1.1 Parenting a Deaf Child

Approximately 90% of deaf children are born to hearing parents (Wood Jackson & Turnbull, 2004). However, often these parents have little to no experience with hearing impairment (Kurtzer-White & Luterman, 2003) yet they are required to manage their child's hearing impairment (Nolte, 2011). They are required to make numerous decisions on their child's behalf on topics relating to amplification, communication and education (Feher-Prout, 1996).

Early intervention programmes aim to bridge this gap, teaching parents about their child's hearing impairment. Early intervention programmes provide deaf children the best opportunity for positive developmental and educational outcomes (Störbeck & Pittman, 2008). One such early intervention programme available in South Africa is called HI HOPES. HI HOPES, which stands for Home Intervention Hearing and Language Opportunities Parent Education Services, aims to, in their own words:

foster the empowerment of the family in their home environment through the early intervention framework of care, support, information and partnership in a culturally sensitive, community based manner to allow the baby with hearing loss, to reach his/her full potential (What is HI HOPES, para.1)

While HI HOPES offers various types of support to families with a child who is deaf, what is unclear is what impact, if any, it has on parenting stress. Parenting stress can have various detrimental effects on family functioning. The effects include undermining the parent's perceived mastery in their role as parent (Farmer and Lee, 2011) and the parent being less nurturing and more strict with their children (Nolte, 2011). This will be explored further in Chapter Two (see Sub-section 2.3.1). Therefore, this research will explore the association between parenting stress and participating in an early intervention programme. As secondary aims this research will also explore the association between participation in HI HOPES and the parents' perceived social support and how the child is perceived by the parent in terms of socio-emotional functioning.

### 1.1.1 Diagnosing a child as deaf

There are numerous ways to conceptualise ‘being deaf’ which will be discussed further in Chapter Two (see Section 2.1). In this study being deaf is defined as more than 40dB<sup>1</sup> hearing loss in the better hearing ear for adults and 30dB for children (WHO, 2017).

It is possible for infants with hearing loss to match the language, socio-emotional and cognitive outcomes of their hearing peers provided their hearing loss is identified early and intervention is initiated by 6-9 months of age (Swanepoel et al., 2009). Therefore, in an attempt to provide infants with hearing loss the greatest opportunity for optimal outcomes, early hearing screening has become the standard of care in many places across the world (Swanepoel et al., 2009). In the United States of America, all states have now implemented early hearing detection and intervention programmes (NCHAM, 2017).

In South Africa, the Health Professions Council of South Africa (HPCSA) released a position statement, similar to international standards, advocating for the early detection of, and intervention for, infants with hearing loss (HPCSA, 2007). They recommend as best practice universal newborn and infant hearing screening in both the public and private sector (HPCSA, 2007). However, these are only guidelines and not legislature, resulting in both hearing screening and early intervention occurring on a haphazard basis (HI HOPES, 2013). In many developing countries, South Africa included, awareness of the importance of early hearing screening is poor and resources scarce (Swanepoel et al., 2009) which result in discord between policy and practice.

The detection of hearing loss is primarily the parent or caregiver’s responsibility. Often, caregivers only begin to suspect there is a problem when they become concerned about the child’s speech and language delays (Swanepoel, Störbeck & Friedland, 2009). Therefore, the child is diagnosed later than what is optimal. A study conducted in the Western Cape found the average age of diagnosis to be close to 2 years (van der Spuy & Pottas, 2008). This means that the critical period for intervention, before 6 to 9 months of age, (Swanepoel et al., 2009) is missed. This delay in diagnosis affects the holistic development of a child, especially his or her communicative, language and cognitive development (Störbeck & Calvert-Evers, 2008).

Therefore, early intervention programmes provide much needed support to parents of deaf children. The primary goal of early intervention is to have all new born babies screened for hearing at birth; hearing loss diagnosed by one month of age; a diagnosis confirmed by three months and an intervention underway by 6 months of age (HI HOPES, 2013). To improve the outcomes of children with hearing loss in South Africa, an early intervention programme called HI HOPES, advocates for the early identification of and intervention for infants with hearing loss (HI HOPES, 2013).

---

<sup>1</sup> A decibel (dB) is the unit used to measure sound intensity. The smallest audible sound is 0dB. A sound ten times louder will be 10dB.

### **1.1.2 Parents' reactions to their child's diagnosis**

After a parent hears their child is deaf, grief is a common reaction (Kurtzer-White & Luterman, 2003). However, this grief is different to the grief experienced following a death. The loss experienced after death is tangible loss. Whereas the loss experienced after hearing your child is deaf, is for the imagined, idealised child and even for the parents' own identities (Kurtzer-White & Luterman, 2003). This type of loss can be triggered every time an event occurs which highlights the disparity between the idealised child and reality (Kurtzer-White & Luterman, 2003).

However, the grief experienced by the parents has been compared to Kubler-Ross' grief cycle in that the range of emotions experienced by the parents include shock, denial, anger, guilt, depression, acceptance and growth (Anagnostou, Graham & Crocker, 2007). This process in itself can cause parental stress, however, fathers and mothers tend to react differently. Father's tend to be less satisfied with the child's improvement and less likely to accept help offered by family and friends (Anagnostou et al., 2007).

Guilt is another common reaction parents may have. The guilt that parents may feel tend to be based on traditional familial roles where mothers are constructed as safeguarding the health of her family and fathers as the family's protector (Kurtzer-White & Luterman, 2003). Therefore, a mother's guilt centres around the cause of the child's hearing loss whereas a father's guilt is related to their perceived failure to protect their child from pain (Kurtzer-White & Luterman, 2003). All of this can result in a lot of stress for the parents, which in turn have detrimental effects on family functioning (Nolte, 2011; Hintermair, 2006). Therefore, early intervention programmes are important resources and could play a role in mediating parenting stress.

## **1.2 Early Intervention**

According to Young and Tattersall (2007), early screening and early interventions are beginning to change the early family experiences associated with deafness in various ways. Firstly, diagnosis of deafness is moving from a process driven by parent observation to an institutionally-initiated or medically driven one. Secondly, children, predominately in first world countries are being diagnosed much earlier. In England, the average age of diagnosis is now two months as compared to the previous 26 months (Young & Tattersall, 2007). Thirdly, as diagnosis is happening earlier in the child's life, it is also occurring earlier during the formation of the relationship between parent and

child. Therefore, the child's deafness is an integral part of getting to know the new family member (Young & Tattersall, 2007).

For children who are deaf, "enrolment in an early intervention program is one of the single best predictors of positive developmental and educational outcomes" (Marschark, 2001, p.ii). A child diagnosed as deaf at two and a half years of age will have a significantly different language developmental outcome to a child diagnosed at six months of age. Therefore, early screening and diagnosis influences long term outcomes. HI HOPES is one such early intervention programme providing services to families of deaf children and will be discussed further in the next section (See Sub-section 1.2.1).

### **1.2.1 The HI HOPES Programme**

HI HOPES was established in 2006 by the Centre for Deaf Studies at the University of the Witwatersrand. It is based on materials and early intervention training developed in the United States of America (USA) by the SKI HI Institute, whose intervention programme has been utilised for over 35 years (Störbeck & Moodley, 2011). The HI HOPES programme operates in five provinces in South Africa, specifically Gauteng, Western Cape, Eastern Cape, KwaZulu-Natal and Limpopo (HI HOPES, 2017).

HI HOPES provides child-centred and family support in the homes of families (Störbeck & Calvert-Evers, 2008). The services they provide to the families are free of charge (Störbeck & Moodley, 2011) and involve fortnightly home visits with the families. These visits (discussed further in Sub-section 1.2.1.1 below) occur in the child's home, which can be (in)formal housing or an orphanage. The visits take place in the families' homes because this is the family's natural environment, where they are most comfortable and where the child is most open to learning (HI HOPES, 2013). The intervention is provided to the family until the child is three years old. However, the parents are supported in choosing the right school for their child (HI HOPES, 2013). If the child is diagnosed or referred to HI HOPES after the age of three, a short intervention programme can be provided (HI HOPES, 2017) to assist with schooling choices, amplification and accessing the care dependency grant (HI HOPES, 2013).

HI HOPES aims to empower and inform parents about all aspects of a child with hearing loss to ensure that parents are prepared to make decisions that are in the best interests of their child (Störbeck & Moodley, 2011). HI HOPES places emphasis on allowing parents to make an 'informed choice' through the presentation of information regarding preference of amplification or communication modality, in an unbiased and non-preferential manner (Störbeck & Moodley, 2011). Therefore, parents are given all the information needed and can decide what best suits their child and family.

### ***1.2.1.1 Parental Advisors***

Parental Advisors visit the homes of their clients fortnightly. Parental Advisors are trained by HI HOPES in early child development, the needs of the deaf child and home-based interventions (Störbeck & Moodley, 2011). During these visits and using adult education principles, the Parental Advisors provide parent-directed information in the language of the parents. The topics that are covered during these visits include child development, language and communication options, amplification, play, and literacy and behaviour issues. Parental Advisors address these topics with the parents within the context of the infant's natural routines (Störbeck & Moodley, 2011).

### ***1.2.1.2 Deaf Mentors***

Families within the HI HOPES programme are also introduced to Deaf Mentors. Deaf Mentors are deaf adults who fulfil the role of language and cultural role models (Störbeck & Moodley, 2011) to the families coming to terms with their child's diagnosis. Support provided by Deaf mentors is focused in three key areas (HI HOPES, 2013, p.4):

1. Communicating directly with the infant with hearing loss (both to teach him/her language and to model for the family how deaf people communicate);
2. Serving as a language and cultural role model on Deaf identity and culture;
3. Teaching the family how to communicate with their child in their chosen modality: Sign language or spoken language.

By providing support in these three key areas, Deaf Mentors provide the family with the opportunity to meet and interact with someone who grew up experiencing deafness and ask questions about how being deaf impacted their lives (HI HOPES, 2013).

## **1.3 Research Objectives**

The HI HOPES programme aims to improve the lives of deaf children and their families. It is a focused intervention which focuses on equipping the parents to be parents of a deaf child. In addition, parenting stress has been found to have detrimental effects on family functioning (Nolte, 2011; Hintermair, 2006) (discussed further in Section 2.3.1.3). Therefore, mitigating this stress could have a positive effect on a family. This research will investigate whether HI HOPES has an effect on parenting stress and the way the parent perceives their child's socio-emotional development by providing the parents with the tools to parent a deaf child. Social support has also been found to help parents cope with their child's hearing impairment (Nolte, 2011). As part of the HI-HOPES intervention, Parental Advisors work with the families for up to three years. Therefore, this research

will also investigate if by providing such support, the parents perceive themselves to have more social support. Therefore the questions to be researched are:

1. To evaluate if participation in HI HOPES is associated with lower parenting stress by maternal caregivers when compared to maternal caregivers who did not participate in the HI HOPES programme.
2. To evaluate if participation in HI HOPES is associated with increased perceived social support of participating maternal caregivers when compared to maternal caregivers who did not participate in the programme.
3. To evaluate if participation in HI HOPES is associated with maternal caregivers perceiving their child's socio-emotional development differently to maternal caregivers who did not participate in the HI HOPES programme.

## **1.4 Research Overview**

This dissertation will explore how the research questions listed above (in Section 1.3) were investigated. In Chapter Two, conceptual and theoretical ideas regarding disability, hearing loss, parenting stress, social support and socio-emotional development will be discussed. In Chapter Three, the methods used to procedures followed in the implementation of this research will be discussed. Three questionnaires were used to gather data to answer the questions posed in this research. The results of those questionnaires and the analyses done will be presented in Chapter Four. Finally, in Chapter Five the results of the research will be discussed in light of the conceptual and theoretical ideas discussed in Chapter Two.

## **1.5 Conclusion**

Early Intervention Programmes, such as HI HOPES, can act as a lifeline to parents who find themselves in a foreign, unfamiliar world of parenting a deaf child. This new world can leave a parent feeling very stressed. Intervention programmes, such as HI HOPES, aim to equip parents with the skills to cope with their new position as parent to a child with a hearing impairment. This research aims to explore if participation in an early intervention programme leaves parents of deaf children less stressed. This idea will be further explored in the next chapter.

## **Chapter Two: Literature Review**

### **2.1. Introduction**

In Chapter Two, the different ways in which disability is understood will be discussed, before providing a definition for how disability and deafness is understood in this study. A theoretical model of care is also proposed as a way of understanding the relationships between the variables of interest in this study, namely parental stress, perceived social support, the child's perceived socio-emotional development and participation in an early intervention programme.

### **2.2 Understanding Disability**

When discussing people with disabilities, it is important to first consider the contested nature of the concept of disability. Three dominant models that capture this contestation are discussed here. Two of these models are related to disability in general while the third model relates to deafness in particular. After these models are considered, a definition of deafness for this research project will be provided.

#### **2.2.1 Medical Model of Disability**

The medical model views disability as a deviation from the 'normal' human form. As such, a person's disability is perceived as an abnormality that interferes with a person's functioning or quality of life (Koch, 2001; Sullivan 2011). Due to this abnormality, or disability, a person with a disability cannot function as a 'normal' person would and are thus thought to be disabled.

Within the medical model a person's functional limitation or impairment is the cause of their disadvantage. To fully participate in society, the disabled person must attempt to overcome their impairment and thereby overcome the disadvantage that is inherent in having a disability. Overcoming this disadvantage caused by their impairment can either be done medically, by seeking a cure (Crow, 2007; Areheart, 2008), or through rehabilitation (Areheart, 2008) and determination or perseverance (Crow, 2007).

Therefore, in the context of being deaf, the medical model would argue that it is a condition which requires a cure (Power, 2005). The cochlear implant is one such device which offers the promise of a cure. By fitting the implant, the deaf person is "normalized" and the resulting gains in hearing is considered a miracle (Power, 2005).

The medical model also views disability as an individual rather than a societal issue. The individual is said to be the locus of disability while the larger society is devoid of responsibility for creating a disabling environment (Areheart, 2008). This means that when a child is diagnosed as deaf, it is the parent's responsibility to seek out remedies for the child and to teach them how to best fit into a (predominately) hearing society. For example, if a child wishes to be educated in a 'mainstream' school, it is up to the family to provide the support, aides and teaching assistant the child will need in that environment, rather than the school accommodating the child.

### **2.2.2 Social Model of Disability**

The social model of disability has attempted to shift the understanding of disability arguing that disability is not caused merely by a person's physical impairment. Rather disability is created through social and environmental barriers and through the attitudes of people. The social model redefines disability as a social construct (Areheart, 2008). For example, a person's social environment shapes and change a person as they move through their life. If one is deaf, that deafness is an integral part of that person and shapes how he/she interacts with "outside" influences and how those influences interact with them. Through those interactions a person, becomes a Deaf person (Power, 2005).

The following is a first person account (Crow, 2008) of the social model thinking:

It wasn't my body that was responsible for all my difficulties, it was external factors, the barriers constructed by the society in which I live. I was being dis-abled – my capabilities and opportunities were being restricted – by prejudice, discrimination, inaccessible environments and inadequate support (p.2)

As the above quote indicates, unlike the medical model, overcoming disability is not dependent on the perseverance of the individual but rather on society (Areheart, 2008). The quote argues that the way society is constructed is what disables a person. Therefore, the social model argues that the solution to one's disability is social change, through the removal of disabling barriers (Crow, 2008).

In the 2006 Convention on the Rights of Persons with disabilities, the WHO acknowledged that disability is an evolving concept and developed a broader definition of disability. It defined disability as "the interaction between persons with impairments and attitudinal and environmental barriers that hinders their full and effective participation in society on an equal basis with others" (The United Nations, 2006, art.1).

In the light of this model of disability, the onus would not be on the deaf child and their family to overcome the child's hearing impairment but rather on society as a whole. For example, the public health system provides limited accommodation to people with disabilities (Hanass-Hancock & Nixon, 2009). If they were to adopt a social model, clinics would be better equipped to meet the needs of people with disabilities by, for example, providing Sign Language interpreters.



### **2.2.3 The Linguistic Minority Model**

The third model to be considered is the Linguistic Minority model, which unlike the medical and social model relates specifically to Deaf people. Similar to the social model, the linguistic minority model does not consider deafness to be a disability (Skelton & Valentine, 2003). Instead, being deaf forms the basis of a cultural identity (Skelton & Valentine, 2003).

Those who belong to the Deaf community argue that they are an ethnic group rather than a group of similarly disabled people, because they have their own language and culture (Lane, 1995). Much like any other cultural group would, they capitalise the ‘D’ in Deaf (Valentine & Skelton, 2008; Lane, 1995). Deaf culture rejects the medical model of deafness (Valentine & Skelton, 2008) and seeks to change the way deafness is constructed and labelled (Lane, 1995). Therefore, people are not diagnosed as deaf but rather identified, and those seeking a *cure* for being deaf such as a cochlear implant have been criticised (Valentine & Skelton, 2008).

Members of the deaf culture have organised campaigns against cochlear implants for children. Advocates for, or members of the Deaf community argue that giving a child a cochlear implant before they can choose whether or not they want it, contravenes the child’s right to choose what happens to their bodies. It constructs being Deaf as an impairment to be cured, and the choice is made on the child’s behalf before s/he can choose to be part of the Deaf community. As such, it seen as an attack on Deaf culture and Deaf people as a linguistic group (Skelton & Valentine, 2008).

### **2.2.4 Defining disability for this research**

From the above discussion regarding the different models of disability, it is apparent that disability is not uniformly understood. Rather, how disability is seen or defined is quite contested. Therefore, how and why disability was understood for this research needs to be made explicit.

The medical model provides a description of the norms that have, in the past, directed the global understanding of disability. Although there has been a shift towards the social model, the norms established by the medical model persist in many aspects of life from the language we use to how disability is portrayed in the media (Sullivan, 2011).

Although the researcher did not wish to make any value judgments regarding the models of disability discussed above, the medical model of disability was implicitly used as the lens through which deafness was understood for this research. This implicit use is because of the assumption that disabling hearing loss is defined as more than 40dB hearing loss in the better hearing ear for adults and 30dB for children (WHO, 2017). Specifically, the research adopted a quantitative perspective towards being Deaf, which conceptualised deafness in relation to “normal” hearing levels.

In addition, the ideas being explored in this research have well established assessment tools which conceptualise these phenomena in a quantifiable manner. This way of understanding the phenomena lends itself to the medical model.

### **2.3 A Proposed Model for this Research**

As discussed in Chapter One, when a child is diagnosed as deaf, the parents may find themselves in a foreign and overwhelming situation (Kurtzer-White & Luterman, 2003). This situation may result in the parent feeling stressed. Parenting stress, which will be discussed further in Sub-section 2.2.1, can have a negative effect on overall family functioning and on the way the child is parented (Östberg & Hagekull, 2013; Crnic & Low, 2002; Deater-Deckard, 1998)).

However, if perhaps the parent feels more equipped to deal with their child's hearing impairment, then perhaps the parent will also feel less stressed. Intervention programmes are a convenient way of providing parents with the knowledge or skills they are required to navigate their child's hearing impairment.

There are many factors that could have an impact on the care a parent provides for their child. For this research, a model is proposed which considers some of those factors. Mash and Johnston (1990) have previously argued that parents are more stressed when they “have less knowledge, less perceived competence and fewer emotional and instrumental supports (e.g. “help” from partners, family members and friends) and, perhaps most importantly, when the parent views the child or children as being behaviourally difficult” (p. 315). In this quote, Mash and Johnston (1990) mention five interrelated variables, namely stress, knowledge, perceived competence and emotional and instrumental support. For this study a proposed model will be discussed that looks at those five variables, how they relate to each other, to the care the child receives and what role participation in an early intervention plays.

Figure 1 provides an illustration of the proposed model for this study. This proposed model argues that HI HOPES increases a parent's skills/knowledge in terms of parenting which further influences the care the parent provides the child with. However, what is unknown, and what this research will seek to answer is what, if any, effect does HI HOPES have on parenting stress, perceived social support and the perceived difficulty of the child. Before this question can be answered, those three concepts first need to be explored and explained.

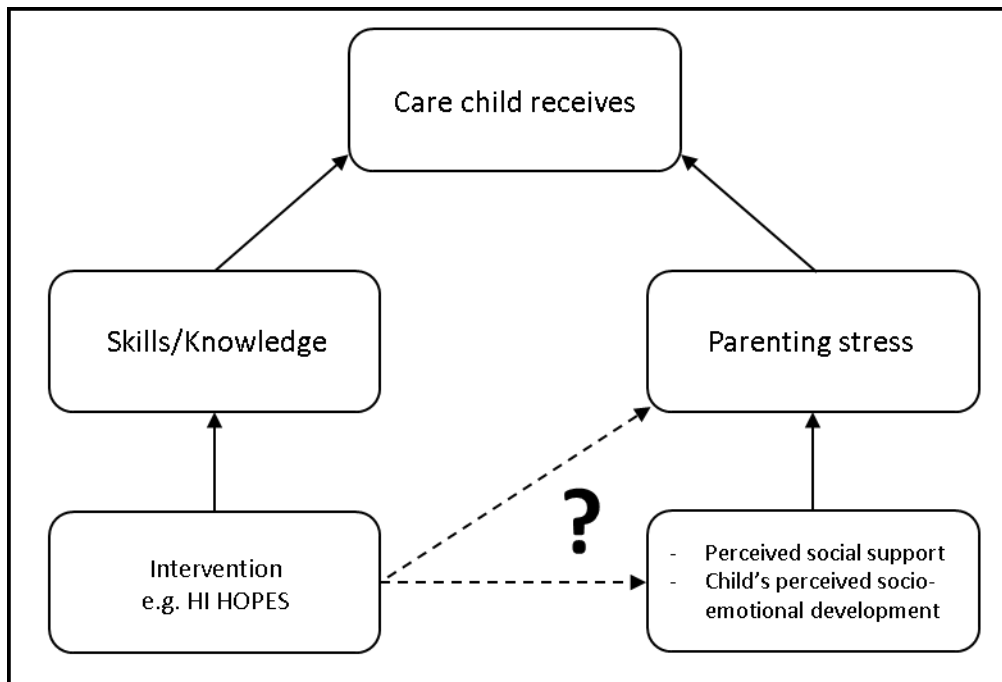


Figure 2.1: Proposed model of care

### 2.3.1 Parenting stress

#### 2.3.1.1. Parenting stress as a construct

Stress, in general, has been defined as “a physiological, cognitive or emotional strain or tension” by Pipp-Siegel, Sedey and Yoshinaga-Itano (2002, p.1). However, parenting stress has been defined differently. Parenting stress occurs when a parent feels there is a discrepancy between the personal resources they have available to them and the situational demands of parenthood (Deater-Deckard, 1998).

Parenting stress is a complex construct influenced by many factors. Knowing what these factors are can help with the planning and implementation of interventions to address parental stress (Nolte, 2011). The factors that can affect parenting stress have been divided into three domains, namely: factors inherent in the child, factors inherent in the parent and factors relating to the parent-child interaction (Abidin, 1995). When it comes to parenting a child with hearing loss, the factors inherent in the child that can affect parenting stress include the age at which the child was identified as being deaf, the degree of the child’s hearing loss and if the child has additional disabilities (Pipp-Siegel et al., 2002; Nolte, 2011). Factors that could affect parenting stress that relate to the mother include maternal education, social support and household income (Nolte, 2011).

#### 2.3.1.2. Parenting stress and children with disabilities

In the past two decades parenting stress has been given considerable attention (Åsberg, Vogel, Bowers, 2008). One question that has been repeatedly asked, but has yet to receive a conclusive answer, is whether parents of children with disabilities experience increased levels of parenting stress.

Receiving a diagnosis, or being told that your child is deaf may be a stressful experience, but it is uncertain whether that means the parent experiences more parenting stress compared to parents of hearing children (Lederberg & Golbach, 2002).

The literature has been somewhat divided, but it has been found that parents of children with disabilities tend to report greater parenting stress than parents of children without disabilities (Pipp-Siegel et al., 2002)., According to Calderon and Greenberg (1999), when it comes to parenting a child with hearing loss specifically, the greatest stressors are:

the diagnosis of the hearing loss, learning new communication methods, being more involved in educational decision making, increasing contact with professionals in a number of disciplines, and purchasing and using technological supports, as well as the everyday experience of having a child who is “different” and communicates in a different manner (p.7)

#### ***2.3.1.3. Problematising parenting stress***

The way a child is parented can be an important indicator of a child’s psychological adjustment later in life (Neuhaus, 2011). Furthermore, parenting stress can have various negative consequences on the child and the family functioning. Parents who have higher levels of parenting stress have children who experience more socioemotional problems including conduct problems such as tantrums, peer problems and even physical symptoms such as headaches (Nolte, 2011; Hintermair, 2006). Parents with higher levels of parenting stress have also been found to show less nurturing behaviours, be stricter with their children and have low expectations (Anthony et al, 2005 in Nolte 2011). Farmer and Lee (2011) found that parenting stress undermined the parent’s perceived mastery in their role as a parent which in turn affected their mental health.

In addition, research has also linked parenting stress to both the maltreatment of children with disabilities and the increased potential to abuse children with disabilities (Anoil, Mullins, Page, Boyd & Chaney, 2004; Rodriguez & Murphy, 1997; as cited in Farmer & Lee, 2011). Therefore, parenting stress can be potentially very damaging to the child and family (Östberg & Hagekull, 2013; Crnic & Low, 2002; Deater-Deckard, 1998).

#### ***2.3.1.4. Parenting stress and early intervention***

As discussed, parenting stress arises when a parent believes a discrepancy exists between their personal resources they have available to them and the situational demands of parenthood (Deater-Deckard, 1998). With this definition of parenting stress in mind, it can be argued that early intervention programmes work in the gap between the parent’s personal resources and the demands of the situation. By equipping parents with greater personal resources to handle the situational demands that arise, the early intervention programme plays a role in decreasing the stress of the parent. This study will examine the relationship between parenting stress and participation in an early intervention

programme to determine if participation in an early intervention programme decreases parenting stress.

#### ***2.3.1.5. Poverty, disability and stress***

In the year 2015, over 30 million South Africans were living in poverty in the year 2015 (Statistics SA, 2017). Therefore, it is worthwhile to consider the relationship between poverty, disability and stress. While the nuances of the relationship between disability and poverty are not yet completely understood, what is known is that people living with disabilities are amongst the poorest and most vulnerable all social groups (Groce, 2011). This poverty-disability nexus (Groce, 2011) seems to be bidirectional with disability being both a cause and a consequence of poverty (Emmett, 2005). Furthermore, it has also been shown that living in poverty can have detrimental effects on a person's psychological well-being due to the stress of living with less money than one needs (Santiago, Wadsworth & Stump, 2011). The types of stress that accompany living under poverty conditions have been characterised as gruelling and demoralising (Wadsworth, Raviv, Santiago & Etter, 2011). Therefore, when considering stress in the South African context, it is important to bear in mind the role that poverty could play.

#### **2.3.2 Perceived social support**

Social support plays an important role in a parent's ability to cope with their child's hearing impairment (Nolte, 2011). Studies have shown that how satisfied a mother is with her social support and an impact on the amount of stress she experiences (Lederberg & Golbach, 2002; Pipp-Siegel et al., 2002).

Social support can refer to different aspects of a person's social relationships such as the quantity of relationships or the structure of social networks (Åsberg, Vogel & Bowers, 2008). Hintermair (2006) outlined two types of social networks that can be available to a parent or caregiver of a deaf child. These are natural networks and artificial networks. A natural network is a parent's family and friends while an artificial network is the new contacts that are developed as a result of their child's hearing impairment. These can be other parents in similar situations to themselves, deaf adults or professionals. These social resources play an integral role in the parent's coping process (Hintermair 2006).

In a study that explored the social support of parents of deaf children, Lederberg and Golbach (2002) found that parents of deaf children had smaller social networks than parents of hearing children. Furthermore, parents of deaf children had less contact with their family and friends and listed the professionals that work with their child as a form of support (Lederberg & Golbach, 2002). However, these studies were conducted in American and European contexts. In an African context, family

support is considered to be of utmost importance when faced with a crisis or difficult situation (Iwelunmor et al., 2012).

Social support can also have an effect on parenting stress. Social support plays an important role in the parent's ability to cope with their child's hearing loss (Nolte, 2011) and increased social support has been shown to have a positive effect on stress in families where there is a child with a hearing impairment (Lederberg & Golbach, 2002).

### **2.3.3 Parental perceptions of the child's socio-emotional development.**

There is a long history of research which argues that children with hearing impairments have more socioemotional problems than their hearing counterparts (Hintermair, 2006). It is argued that this is perhaps because they share certain developmental experiences which are less than optimal such as communication deprivation, inadequate education and social stigma (Greenberg & Kuschè, 1998; as cited in Hintermair, 2006). A child's family is the primary place where the child engages in social, emotional and cognitive experiences (Hintermair, 2006). Thus the family plays an important role. Children with a hearing impairment who have parents with increased levels of stress, tend to exhibit more developmental problems (Hintermair, 2006).

However, it has been shown that when mothers were able to develop successful coping strategies for coping with their hearing impaired child, the children displayed greater levels of emotional sensitivity, reading competence and problem solving behaviour and less impulsive behaviour (Calderon, Greenberg & Kuschè, 1998; as cited in Hintermair, 2006; Calderon & Greenberg, 1993). Teachers of children whose parents have better problem-solving skills, rated those children as being better adjusted and more competent than their peers whose parents were poorer problem solvers (Calderon, 2000). Such findings suggest that maternal problem-solving and coping skills are positively related to the emotional understanding and social problem-solving skills of the child (Calderon, 2000). Therefore, it can be argued that if the parents are less stressed and have better developed coping strategies, their children will exhibit less socio-emotional behaviours.

## **2.4 Conclusion**

Parenting stress can have an impact on a child's socio-emotional functioning (Hintermair, 2006). Social support can have a positive impact on parenting stress (Nolte, 2011, Lederberg & Golbach, 2002, Hintermair, 2006). Parenting stress can have negative consequences for the child (Neuhaus, 2011). As discussed with the proposed model of this research, these variables are all interrelated. Early intervention programmes seek to equip parents and provide them with skills and knowledge. This research will explore what, if any, effect introducing an early intervention programme has on parenting stress, perceived social support and the perceived socio-emotional difficulties of the child.



# Chapter Three: Methodology

## 3.1 Introduction

In Chapter Three, the methods used to conduct this research will be explained and critically discussed. The design of the research will be explained first including the research setting, sampling and recruitment. This will be followed by a discussion on the data collection – how it was collected and what data collection tests were used. Each participant was asked to complete three different questionnaires: the Parental Stress Index (PSI), Social Support Questionnaire (SSQ) and the Strengths and Difficulties Questionnaire (SDQ). In addition they were asked to complete a participant information sheet. Each of these instruments will be discussed individually. Finally, the methods used and the processes of data analysis will be discussed.

## 3.2. Aims of this Study

The aim of this research was to determine whether there is an association between participation in the early intervention programme, HI HOPES, and parenting stress, perceived social support and the perceived socio-emotional functioning of the child.

### 3.2.1 Research objectives and associated hypotheses

1. To evaluate if participation in HI HOPES is associated with lower parenting stress by maternal caregivers when compared to maternal caregivers who did not participate in the HI HOPES programme.
  - a. There is no significant difference in parenting stress between the HI HOPES group and the non-intervention group.
  - b. Parenting stress in the HI HOPES group is significantly less than parenting stress in the non-intervention group.
2. To evaluate if participation in HI HOPES is associated with increased perceived social support of participating maternal caregivers when compared to maternal caregivers who did not participate in the programme.
  - a. There is no significant difference between perceived social support between the HI HOPES group and the non-intervention group.
  - b. Maternal caregivers from the HI HOPES group have significantly higher levels of perceived social support than the maternal caregivers in the non-intervention group.
3. To evaluate if participation in HI HOPES is associated with maternal caregivers perceiving their child's socio-emotional development differently to maternal caregivers who did not participate in the HI HOPES programme.



- a. There is no significant difference in the way in which maternal caregivers perceive their child's socio-emotional development between those who participated in the HI HOPES programme and those who did not.
- b. There is a significant difference in the way in which maternal caregivers perceive their children in terms of their socio-emotional development between those who participated in the HI HOPES programme and those who did not.

### **3.3 Research design**

This research was conducted within a positivist paradigm which argues that there is an objective reality which can be known and measured using scientific methods (Terre Blanche & Durrheim, 2006). The variables of interest in this study were parenting stress, perceived social support and how the parent perceives their child behaviourally, in terms of their strengths and weaknesses. These variables were measured using three standardised tests: PSI, SSQ, and SDQ. By administering such tests, implicit assumptions were made about the nature of stress, social support and the parent's perception of their child's socio-emotional functioning. These implicit assumptions were that these three variables can be objectively measured, and once measured, they can be compared to each other to determine who has "more" or "less" of the variables in question.

In line with the positivist paradigm, this study made use of a quantitative design, specifically a quasi-experiment. When a true experiment is conducted, groups are created for the explicit purpose of the study. For example, if this were a true experiment, parents would have been randomly divided into two groups at the beginning of the study and one group would be assigned the intervention and the other would not. For this research however, the two groups of interest were not created for this study. Rather the two groups existed prior to the study and instead of creating groups, the pre-existing groups were used. Therefore this study did not use a true experimental design but rather a quasi-experimental design (Tredoux & Smith, 2006). This does mean that it is not possible to control for certain variables in the groups or to make causal predictions.

#### **3.3.1 Study setting**

Data for this study was collected in 2012 from four districts across KwaZulu-Natal, namely eThekweni, uMunsduzi, Ugu and uThukela. These districts range from urban to rural. An urban area is legally proclaimed as urban while a non-urban area consists mainly of commercial farms and small settlements and is situated further away from cities. Based on the 2016 community survey, eThekweni

and uMunsduzi were classified as urban while Ugu and uThukela are considered non-urban (Statistics SA, 2016).

### **3.4 Sample**

The population of interest in this research was primary maternal caregivers of deaf children under the age of seven. Maternal caregivers were chosen because they tend to be the central figure of the family system (Heyman et al., 2004). Primary maternal caregivers have been defined as biological mothers, foster mothers, adoptive mothers or other female relatives such as grandmothers (Heyman et al., 2004). This research defined primary maternal caregiver similarly to Heyman et al. (2004) with the additional criteria of being primarily responsible for the child's well-being.

The majority of the sample returned completed test packs (discussed further in Section 3.4) without having met the researcher, due to the way the sample was recruited (also discussed further in Sub-section 3.3.1). The returned test packs needed to then be assessed to determine if the participant was eligible for inclusion. Three potential participants from the HI HOPES group and one potential participant from the non-intervention group were excluded due to their children being older than seven. In addition to not having met the inclusion criteria, seven participants were also excluded for completing the tests incorrectly or not fully completing them. After these groups of participants were excluded, the sample consisted of 35 mothers in the intervention group and 20 mothers in the non-intervention group.

#### **3.4.1 Sampling procedure**

Due to the population of interest being so specific and relatively small, non-probability, purposive sampling techniques were used to recruit participants (Durrheim & Painter, 2006). Non-probability samples are selected through non-random selection procedures and as such cannot be expected to generate a representative sample (Schutt, 2006).

Non-probability sampling techniques are more commonly used in qualitative research where generalisability of the findings is not a main objective of the research (Schutt, 2006). However, they can be used in quantitative research when using a probability method is not feasible (Schutt, 2006). Due to the small numbers of HI HOPES parents in KwaZulu-Natal who met the inclusion criteria, it was determined that drawing a random sample of those who were eligible would result in the sample size being too small. Therefore, the decision was made to sample all eligible HI HOPES participants thus making the sampling purposive instead of random.

The sampling procedure differed between the intervention and non-intervention groups, because different recruitment strategies were required. The intervention group proved easier to recruit because a sampling frame (HI HOPES membership list provided with permission from HI HOPES) was used. Participants for the non-intervention group were more difficult to recruit, because no formal sampling frame existed, like in the case of the HI HOPES group. Instead, personal contacts and snowball sampling had to be used. As such, the non-intervention group had fewer participants than the intervention group.

#### ***3.4.1.1 Recruitment of the HI HOPES (Intervention) group***

The intervention group consisted of primary maternal caregivers of deaf children under the age of seven who had participated in the HI HOPES programme. As explained in Chapter 2 (Section 2.3), HI HOPES is an early intervention programme aimed at equipping parents of deaf children in managing their child's hearing impairment. Parental Advisors are people who have received the HI HOPES intervention training and work closely with families to implement the intervention.

Permission to utilise the HI HOPES participants was received from the head of HI HOPES at the University of the Witwatersrand (Appendix 1). A list of all HI HOPES participants in KwaZulu-Natal and their Parental Advisors was provided. Those who did not meet the sampling criteria were excluded. Those who were eligible were contacted via their Parental Advisor. The HI HOPES management suggested contact with the family be facilitated through the family's Parental Advisor due to their pre-existing relationships. HI HOPES contacted all the Parental Advisors to inform them about the research and that they will be contacted. Letters were then sent to the Parental Advisors of every eligible maternal caregiver (See Appendix 3 for the letters to the Parental Advisors) outlining the purpose of the research and what participation in the research would entail.

Individual meetings were then scheduled with each Parental Advisor. During these meetings, the research and all the measures used were explained to the Parental Advisors. The Parental Advisors were given the opportunity to ask questions and it was ensured that the Parental Advisors understood. The Parental Advisors were provided with test packs in either English or isiZulu (depending on the language the maternal caregiver would be most comfortable with). The test packs (discussed further in Sub-section 3.4.1) were A4 envelopes which included the informed consent form, all four questionnaires to be completed by the participants and instructions on how to do so. The documents and instructions were all colour coded to facilitate the participants' easy completion of the documents. The measures were completed by the maternal caregivers with the Parental Advisors present in order to answer any questions they may have.

### ***3.4.1.2 Recruitment of the non-intervention group***

The members of the non-intervention group were maternal caregivers of deaf children under the age of seven who did not participate in the HI HOPES intervention. This group was predominately recruited through convenience and snowball sampling. Snowball sampling occurs through referrals of people who have/know of people who have, the characteristics of interest to the research (Biernacki & Waldorf, 1981). Snowball sampling is traditionally used when the topic being studied is a sensitive one (Biernacki & Waldorf, 1981) or the population is hard-to-reach or hard-to-identify (Schutt, 2006).

In order to find maternal caregivers for the non-intervention groups, a pre-existing network of audiologists working at deaf schools across KZN was used. These audiologists then acted as a liaison between the researcher and maternal caregivers within their caseloads. The audiologists were provided with test packs. Similar meetings were held with the audiologists as were held with the Parental Advisors and all queries were attended to. The audiologists then distributed the test packs to approximately 45 willing and eligible potential participants.

The audiologists would (often) send test packs home with the maternal caregivers to complete in their own time, or alternatively, with the child to pass on to his/her maternal caregiver. The response rate of the non-intervention group was poor (approximately 50%). Furthermore, amongst this group, missing data was a problem. In the HI HOPES group, the Parental Advisors sat with the participants and explained the questionnaires and answered any questions a participant may have had. The non-intervention group did not have anyone administering the tests to them and not all tests were completed (these were excluded).

### **3.4.2. Ethical issues in sampling**

This research protocol was reviewed and approved by the University of KwaZulu-Natal's Humanities and Social Sciences Research Ethics Committee (see Appendix 7). All participants were asked to sign an informed consent form (See Appendix 2), stating that they understood the nature of the research and agreed to participate.

Participant confidentiality was preserved by providing every participant with a unique code. This code, instead of the participant's name, was used as an identifier on all test responses. The informed consent forms, which contained the names and signatures of the participants, were kept separately from the participants test responses. Therefore, no personally identifiable information was written on the test responses.

## **3.5 Data collection**

### **3.5.1. Test packs**

Each participant received a test pack that included (in either English or isiZulu):

- i. Informed consent form (see Appendix 2)
- ii. Participant information sheet (see Appendix 4)
- iii. Parental Stress Index (PSI)
- iv. Social Support Questionnaire (SSQ)
- v. Strengths-Difficulties Questionnaire (SDQ)

The informed consent form and the participant information sheet were both developed for this research, while the three tests (PSI, SSQ and SDQ) were pre-existing measures. The informed consent form explained the research, what participation would require and that participation was entirely voluntary. The participant information sheet (See Appendix 4) was drawn up by the researcher and asked for basic demographic information about the maternal care-giver (age, race, marital status, level of education and number of children) and details about their deaf child (age of child, age of identification, severity of hearing loss, mode of communication and presence of other disabilities).

The informed consent form, participant information sheet, PSI and SSQ were translated into isiZulu by a post-graduate student. They were then back translated by a part-time isiZulu teacher to check the accuracy of the translation. An isiZulu version of the Strengths-Difficulties Questionnaire already exists and can be downloaded from the SDQ website (<http://www.sdqinfo.com/py/sdqinfo/b0.py>). Each of the three measures used will be discussed in turn below.

### **3.5.2 Parental Stress Index (PSI)**

The PSI created by Abidin (1995), is a tool used to measure parenting stress. One of the primary uses of the PSI is in research investigating the effects of stress in the parent-child interaction (Abidin, 1995). The PSI uses a Likert Scale where each item is rated from 1 (strongly disagree) to 5 (strongly agree). The scores are then added together. High scores indicate high levels of stress (Reitman, Currier & Stickle, 2002). Each respondent receives a Total Stress score which is comprised of their scores from two sub-scales: the Parent Domain and Child Domain. Along with these scores, respondents also receive a Defensive Responding score and a Life Stress score.

The raw scores are compared to the normative sample for children of the same age. From this comparison, a t-score and percentile ranking can be derived. Table 3.1 shows how the percentile

groupings are interpreted. Using the t-score and percentile ranking, profiles can be developed for each parent and compared to a normative profile.

**Table 3.1: PSI percentiles and corresponding interpretations**

<b>Percentile</b>	<b>Percentile interpretation</b>
<b>16<sup>th</sup> to 84<sup>th</sup> percentile</b>	Normal
<b>85<sup>th</sup> to 89<sup>th</sup> percentile</b>	High
<b>90<sup>th</sup> percentile and higher</b>	Clinically significant

Parenting stress was the central construct being explored in this research and therefore careful thought was put into deciding on a measure. The PSI was chosen because of its strong psychometric properties and widespread use (Haskett, Ahern, Ward & Allaire, 2006).

### ***3.5.2.1 Standardisation***

The PSI was originally standardised on a group of parents from the United States. The sample consisted of 2633 mother and 200 fathers ranging in age from 16 to 61 and 18 to 85 respectively (Abidin, 2012). All the parents had children between the ages of 1 month and 12 years. The sample was non-randomly recruited by approaching potential participants at school, clinics and child-care centres (Abidin, 2012). Internal consistency was measured using Cronbach’s Alpha. The overall scale, namely the Total Stress scores had a Cronbach score of .91.

### ***3.5.2.2. PSI domains***

Parenting stress can be conceptually complex and involves variables related to both the person and the context (Nolte, 2011). The PSI is grounded in a system-oriented perspective of stress by recognising the interactive nature of the parent-child system (Abidin, 2012). The PSI measures stress on different domains in order to capture different aspects of parenting stress. These domains take into account both factors inherent in the child and the parent (Nolte, 2011). Having domain specific measures also allows for the acknowledgement that parents and children are still individuals outside their respective roles of parent and child (Pipp-Siegel et al., 2002). The parent-child interaction itself is thought to be separate from the characteristics of either the parent or child. It is therefore measured on a separate domain (Pipp-Siegel et al., 2002; Nolte, 2011). The focus of the Parent-Child Interaction Domain is the quality of the parent-child attachment (Pipp-Siegel et al., 2002).

The Parent Domain measures how affected the parent feels by their role as a parent (Lederberg & Golbach, 2002). Things contributing to stress in the Parent Domain include characteristics of the parent which impacts their parenting such as depression and social isolation (Pipp-Siegel et al., 2002). The Child Domain measures the parent’s perception of how difficult their child is to parent due to socio-emotional problems (Lederberg & Golbach, 2002). Contributors to stress in the Child Domain

include factors inherent in the child such as difficult temperament and non-compliant or demanding behaviour (Abidin, 1995). Contributors to stress in the Parent-Child Interaction Domain include difficulties in the way the parent and child interact with each other such as the parent feeling rejected, abused or disappointed by the child (Pipp-Siegel et al., 2002).

If someone scores higher on the Child Domain than the Parent Domain it indicates that the perceived characteristics of the child may be the biggest source of stress in the parent-child system. The child characteristics could increase parenting stress by making it difficult for the parent to fulfil their parental role (Abidin, 2012). For parents of children with disabilities, scores on the Child Domain are typically greater than scores on the Parent Domain (Abidin, 2012).

#### ***3.5.2.3. Life Stress Scale***

The Life Stress scale measures the level of stress experienced by the parent outside the parent-child relationship (Adamakos et al., 1986). A high life stress score can be an indication of parents who find themselves in situations outside their control and is a risk factor for dysfunctional parenting (Abidin, 2012). Examples of items of the life stress scale include divorce”, “began new job”, “death of a family member”, or “went deeply into debt” (Abidin, 2012).

#### ***3.5.2.4. Defensive Responding***

The Defensive Responding Scale measures if the parent is responding to the items in the PSI in a defensive way. It was derived from the Marlowe-Crowne Scale of Social Desirability (1960). It is designed to assess if the parent has a bias towards presenting themselves in a way which minimises problems or stress in the parent-child system (Abidin, 1995; Uzark & Jones, 2003). If a parent responds defensively to the items in the PSI, their results should be interpreted with caution (Abidin, 2012). Examples of items that are used on the defensive responding scale include “I often have feelings that I cannot handle things very well” (Abidin, 2012, p.4) and “I often feel that my child’s needs control my life” (Abidin, 2012, p.5). Responding in the negative to these items, may constitute a defensive responding style. Abidin (2012) found that parents feel that if they admit to having negative feelings towards their role as a parent, they may “fall apart and be overwhelmed” (Abidin, 2012).

### **3.5.3 Social Support Questionnaire (SSQ)**

In relation to the SSQ, Sarason, Sarason, Shearin and Pierce (1983) argue that social support is comprised of two basic elements. The first element is the perception a person has that he/she has a sufficient number of people to turn to when in need. The second element of Sarason et al.’s (1983) idea of social support is the degree to which that person feels they are satisfied with their support. To that end, the SSQ measures two variables. The first is whether the respondent has people they can rely in various hypothesised situations. The second variable is how satisfied the respondent is with the

social support available to them. Therefore, each question in the SSQ has two parts. For the first part, the respondent is given a scenario, for example, “Whom can you really count on to care about you, regardless of what is happening to you?” (Sarason et al., 1987, p.512). They are asked to list the people, and their relationship to those people (e.g. husband, mother), to whom they would turn to in such a situation. For the second part of the question, the respondent is then asked to rate how satisfied they are with the social support they have available to them in such a situation. This rating is done on a six point Likert Scale ranging from very satisfied to very dissatisfied.

To score the SSQ, the number of people listed for each question is added up to get a score for the ‘People’ subscale and the Likert rating is added up to provide a score for the ‘Satisfaction’ subscale (Sarason et al., 1987).

Various studies have been conducted to assess the psychometric properties of the SSQ. In one such study the SSQ was administered to 602 University of Washington undergraduate students. The results of that study showed that the SSQ has high internal consistency amongst items and test-retest scores after a four week period (Sarason et al., 1987). The SSQ has been used in various research to assess social support (Salakari, Pyllkänen, Sillanmäki, Nurminen, Rautava, Koskenvuo & Suominen, 2017; Fair & Rupp, 2016).

The SSQ was chosen for use in this study for pragmatic rather than theoretical reasons. The SSQ is both easy to administer and freely available. In addition to this, the SSQ does not take long to complete. This was an important consideration as there were three measures for the participants to complete and the PSI is very lengthy.

#### **3.5.4 Strengths and Difficulties Questionnaire (SDQ)**

The SDQ is as a twenty-five item measure of psychological adjustment in children and adolescents (*What is the SDQ?*, 2012) developed by Robert Goodman (1997) in the United Kingdom. It is used for various purposes such as; a screening measure for behavioural and emotional problems (Hawes & Dadds, 2004), and/or part of a clinical assessment and/or as a research tool (Goodman, 2001). The 25 items are divided into five subscales: emotional symptoms, conduct problems, hyperactivity-inattention, peer problems and prosocial behaviour (Goodman, 2001). For children aged between three and 16 years, the SDQ is completed by either a parent or teacher (Goodman, 2001). For this research, the SDQ was completed by the maternal caregiver. There is also a self-report version available for children aged between 11 and 16 years (Goodman, 2011).



The internal reliability of the SDQ has been found to be generally sound (Hawes & Dadds, 2004). In a study assessing the reliability and validity of the SDQ (Goodman, 2001), just over 10 000 British children ranging in age from five to fifteen years were assessed using the SDQ. The study found that the SDQ had a satisfactory internal reliability with a Cronbach Alpha of .73 (Goodman, 2001). Dutch, Swedish, Arabic and Finnish studies have also found the SDQ to have satisfactory internal reliability (Hawes & Dadds, 2004).

Although the SDQ has been translated into numerous languages, including *isiZulu*, the cultural appropriateness of the SDQ remains a question (Hawes & Dadds, 2004). It does not appear that the SDQ has been standardised on any South African populations but rather just translated into South African languages.

The SDQ was chosen for this research for very pragmatic reasons. These reasons were that it is quick to administer, freely available, and an *isiZulu* translation already exist, meaning that the research did not need to get the SDQ translated and back translated.

### **3.6 Data analysis**

The statistical software IBM SPSS Statistics version 24 was used to analyse the data for this research. Once the completed measures were received by the researcher, the answers were scored and coded and entered into SPSS. The questions in the participant information sheet that were not answered were coded as unknown. Once all data was entered into SPSS and checked for accuracy, the data was analysed in two distinct steps: descriptive and inferential. Both steps will be explained after a brief note on how the measures were scored.

#### **3.6.1 Scoring the measures used (PSI, SSQ, SDQ)**

Both the results for the SSQ and SDQ were easily determined by scoring each individual item (taking note of reverse scored items) and adding the individual items together to obtain scores for each subscale and an overall score.

Obtaining the results for the PSI involved more a few more steps. As with the SSQ and SDQ, individual items were scored (again taking note of reverse scored items) and added together to obtain scores for each subscale and an overall score. The defensive responding score and the life stress score were also calculated by totalling individual items together.

Once these scores had been calculated, the T-score and percentile profile for each participant could be determined. The mean profiles for the two groups, HI HOPES and non-intervention, can be found in Appendix 5 and Appendix 6 respectively. The profiles were created by referring to the tables in the PSI manual which convert the raw scores into T-scores and percentiles based on the age of the child. The T-scores and percentiles are then used to interpret the parent’s stress profile.

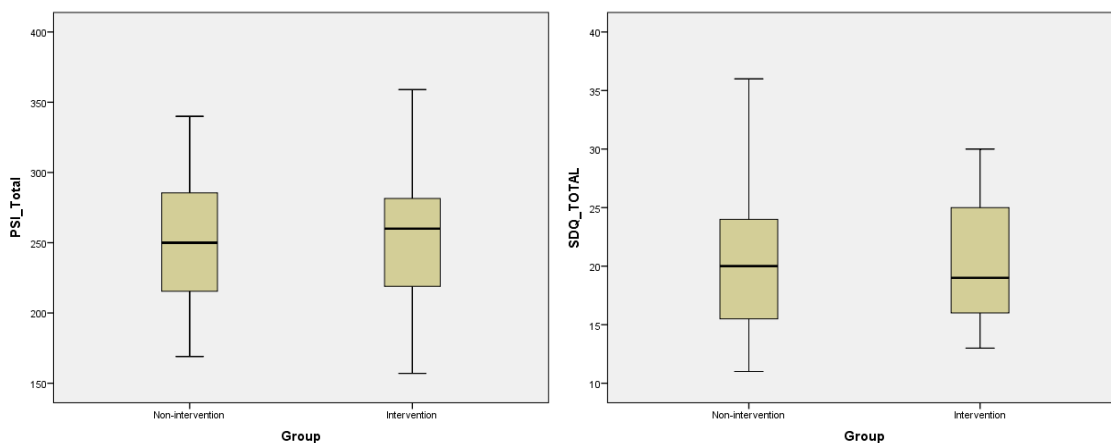
### 3.6.2 Descriptive statistics

Descriptive statistics were first done in order to characterise the sample and the data. The participant information sheet was used to characterise the sample by providing basic demographic data. Descriptive statistics for each of the three measures were then performed to characterise the data. The means and standard deviations for each measure and its sub-scales were calculated. For the PSI, the percentiles were also calculated.

### 3.6.3 Inferential Statistics

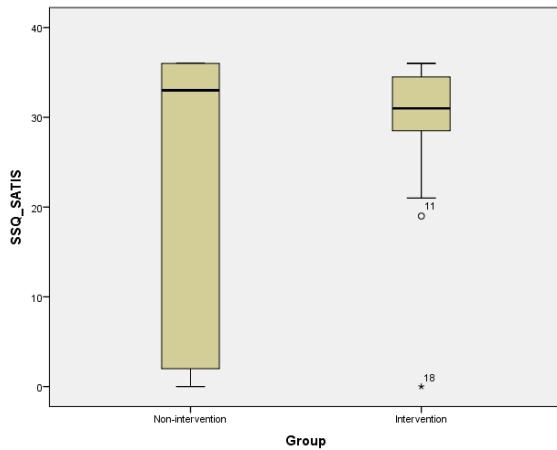
In order to determine if there was a difference between the HI HOPES and non-intervention group in terms of parenting stress, perceived social support and the perceived socio-emotional functioning of the child, the means of the two groups needed to be compared. To compare the means, three independent sample t-tests were done for each of the variables.

However, in order to do a t-test, the dataset must meet various assumptions. For a t-test, the most important assumption about the data is that there is homogeneity of variances (Nunez, 2006). Therefore, the box-plots for each of the three measures were reviewed before t-tests were done. The box-plots for both the PSI and SDQ showed there was homoscedasticity between the two groups (see Graph 3.1 below).



**Graph 3.1: Box-plots showing the homoscedasticity between the HI HOPES and non-intervention group for the PSI and the SDQ.**

However, the box-plot for the SSQ did not show homoscedasticity (see Graph 3.2 below). As such, a non-parametric test, the Mann-Whitney U-test, was decided upon.



**Graph 3.2: Box-plot comparing the HI HOPES and non-intervention groups SSQ results**

### 3.7. Conclusion

In this Chapter, the methods used to in this study were discussed. The methodological limitations of this study are discussed in Chapter Five. In the next Chapter, the results of this research will be discussed.

## **Chapter Four: Results**

### **4.1 Introduction**

This chapter will report on the results from the data collected in this project. Power calculations indicated that the sample size is not big enough to draw any conclusions from and therefore should be noted that the research is exploratory. The demographic and descriptive information gathered with the participant information sheet will be presented first, followed by the results from the three measures (PSI, SSQ and SDQ). Each of the three research questions will then be presented.

### **4.2 The Participant Information Sheet**

The participant information sheet was used to gather background demographic data on the maternal caregiver and her deaf child. In many cases, not all the maternal caregivers answered all the questions asked. When this occurred the data was considered missing, and it was coded as ‘unknown’.

#### **4.2.1 Maternal caregiver demographics**

Table 4.1 below provides a summary of the demographic information for the maternal caregivers. The intervention and non-intervention groups were comparable in terms of their basic demographic data. In both the intervention and non-intervention groups, the majority of participants were between the ages of 30 and 40. Specifically, in the intervention group, 45.7% of the participants were between the ages of 30 and 40 (with a mean age of 34.5 years), while in the non-intervention group, 39.1% of the participants were between the ages of 30 and 40 (with a mean age of 35 years) (see Table 4.1).

The majority of the participants were Black (80% Black participants in the intervention group and 85% Black participants in the non-intervention group).

In terms of relationship status, the majority of participants in both groups were single. However, in the non-intervention group, the relationship status of four participants was not recorded and therefore unknown. As the non-intervention group was small, the non-disclosure of relation status resulted in 20% of the participants in the non-intervention group as having an ‘unknown’ relationship status. This was the second largest “categorisation” of relationship status in the non-intervention group thus rendering it difficult to obtain a meaningful indicator of the nature of the relationships in this group.

**Table 4.1: Maternal Caregiver Demographics**

	HI-HOPES Group (n=35)		Non-Intervention Group (n=23)	
	Total count	Percentage	Total Count	Percentage
<b>Age (years)</b>				
<i>20-30</i>	11	31.4	7	30.4
<i>30-40</i>	16	45.7	9	39.1
<i>40-50</i>	6	17.1	4	17.4
<i>50+</i>	1	2.9	2	8.7
<i>Unknown</i>	1	2.9	1	4.4
<b>Race</b>				
<i>Indian</i>	3	8.6	0	0
<i>Black</i>	28	80	20	87
<i>Coloured</i>	2	5.7	1	4.3
<i>White</i>	2	5.7	2	8.7
<b>Relationship status</b>				
<i>Single</i>	16	45.7	12	52.2
<i>Married</i>	12	34.3	3	13
<i>Separated</i>	1	2.9	0	0
<i>Long-term relationship</i>	4	11.4	1	4.3
<i>Unknown</i>	2	5.7	7	30.4
<b>Education</b>				
<i>Primary</i>	9	25.7	6	26.1
<i>Grade 10</i>	7	20	3	13
<i>Grade 12</i>	12	34.3	8	34.8
<i>Tertiary</i>	7	20	5	21.7
<i>Unknown</i>	0	0	1	4.3
<b>Employment</b>				
<i>Yes</i>	5	14.3	5	21.7
<i>No</i>	30	85.7	18	78.3
<b>No. of children</b>				
<i>1</i>	7	20	6	26.1
<i>2-3</i>	19	54.2	7	30
<i>4+</i>	7	20	7	30.4
<i>Unknown</i>	2	5.7	3	13

Information pertaining to the participants' highest level of education was also requested in the participant information sheet. In the intervention group, the largest proportion of participants reported having completed Grade 12. In both groups, approximately 20% of the participants reported having some kind of tertiary education.

Only five participants from the intervention group (14.3%) and five participants from the non-intervention group (21.7%) were employed. Furthermore, those who did work, were asked the number of hours a week they work. All the participants who indicated working reported that they work full time. The question pertaining to employment status was one of the only questions in the participant information sheet that was completed by 100% of the sample.

In the intervention group, the majority of participants (54.2%) reported having two to three children while in the non-intervention group, the majority of parents reported having four or more children (30.4%).

#### **4.2.2. Participants' children demographics**

Participants were also asked specific information about their hearing impaired child (summarised in Table 4.2). The average age of the deaf children are 5.8 years in the non-intervention group and 5.0 years in the intervention group. In terms of the gender of the child, two groups were similar with the non-intervention and intervention group having 56.5% and 54.3% boys respectively.

In the participant information sheet, parents were also asked whether their children had any disabilities in addition to being deaf. The intervention group had seven children with additional disabilities while the non-intervention group had two. The age at which the child's hearing loss was identified in the non-intervention group was from two years and older. While a substantial proportion of the HI HOPES children had their hearing loss identified after two, there were also children whose hearing loss was identified before they were 6 months old. This was not the case with the non-intervention group. Only one child was identified before they were 6 months old.

The participants were asked what degree of hearing loss their child has. In both groups, 20% of participants rated their child's hearing loss as moderate while a similar percentage of participants rated their child's hearing loss as severe (37.14% in the intervention group and 35% in the non-intervention group).

**Table 4.2: Demographics of participants' children**

	HI-HOPES Group (n=35)		Non-Intervention Group (n=23)	
	Total Count	Percentage	Total Count	Percentage
<b>Age (years)</b>				
<b>&lt;3</b>	5	14.3	1	4.3
<b>4-5</b>	16	45.7	4	17.4
<b>6-7</b>	13	37.1	17	73.9
<b>Unknown</b>	1	2.9	1	4.3
<b>Gender</b>				
<b>Male</b>	19	54.3	13	56.5
<b>Female</b>	16	45.7	10	43.5
<b>Additional disabilities</b>				
<b>Yes</b>	28	80	21	91.3
<b>No</b>	7	20	2	8.7
<b>Age of identification</b>				
<b>&lt;6 months</b>	7	20	1	4.3
<b>6 months - &lt;1 year</b>	1	2.9	1	4.3
<b>1 year - &lt;2years</b>	6	17.1	2	8.7
<b>2 years - &lt;3 years</b>	14	40	9	39.1
<b>3 years +</b>	7	20	7	30.4
<b>Unknown</b>	0	0	3	13
<b>Degree of hearing loss</b>				
<b>Mild</b>	0	0	1	4.3
<b>Moderate</b>	7	20	6	26.1
<b>Severe</b>	13	37.1	7	30.4
<b>Profound</b>	14	40	9	39.1
<b>Unknown</b>	1	2.9	0	0

### 4.3 The Parental Stress Index (PSI) results

The overall PSI results, presented in Table 4.3, show that both groups had similar Total Stress scores, with the HI HOPES group having a mean of 254 and the non-intervention group a mean of 252.17. The non-intervention group had more defensive responders than the HI HOPES intervention group. The mean scores that the HI HOPES and non-intervention groups obtained on the Life Stress scale were also similar, with the former obtaining 11.1 and the latter obtaining 11.8.

**Table 4.3: Parental Stress Index results**

	HI HOPES Group (n=35)			Non-intervention Group (n=23)			Deaf Profile
	Mean	Std. Dev	Percentile	Mean	Std. Dev	Percentile	
<b>Total Stress</b>	254	45.5	69	252.17	48.9	59	-
<b>Mean Life Stress</b>	11.1	-	53	11.8	-	57	-
<b>Interpretation</b>	Normal			Normal			-
<b>Defensive responders (total count)</b>	1			3			-
<b>Child Domain</b>							
<b>Distractibility/Hyper activity (DI)</b>	25.1	5.4	66	26.2	6.8	68	27
<b>Adaptability (AD)</b>	28.3	5.0	69	27.3	6.2	57	28
<b>Reinforces Parent (RE)</b>	12.7	3.4	71	12.4	3.9	60	10
<b>Demandingness (DE)</b>	21.5	5.4	68	20.4	8.7	51	23
<b>Mood (MO)</b>	14.1	4.8	76	12.8	5.3	65	11
<b>Acceptability (AC)</b>	15.7	4.7	71	16.4	5.7	72	14
<b>Child Domain Total</b>	117.9	20.3	71	115.1	24.9	57	113
<b>Parent Domain</b>							
<b>Competence (CO)</b>	34.7	7.6	74	34.1	6.1	67	30
<b>Isolation (IS)</b>	14.7	4.0	66	15.7	5.2	73	13
<b>Attachment (AT)</b>	16.9	5.1	79	16.1	5.8	69	13
<b>Health (HE)</b>	12.6	5.1	70	12.0	3.8	65	13
<b>Role Restriction (RO)</b>	19.9	6.4	73	21.0	6.3	75	20
<b>Depression (DP)</b>	22.3	4.9	64	21.9	8.8	63	21
<b>Spouse/Parenting partnership (SP)</b>	18.5	8.4	55	15.8	5.8	44	18
<b>Parent Domain Total</b>	137.9	30.1	68	135.9	29.1	63	128

On the basis of each group’s mean scores, profiles were created. These profiles are attached in Appendix 5 and Appendix 6. Each group’s profile was compared to the normative profile for parents with hearing impaired children available in the 4<sup>th</sup> Edition of the PSI Manual (Abidin, 2012). These profiles are discussed further in Chapter Five.

### 4.3.1 Results for research objective one

The first objective of this research project was to determine if participation in HI HOPES is associated with lower parenting stress. To answer this question an independent samples t-test was performed to compare the mean overall stress scores of the two groups. The results from the independent samples t-test are presented in Table 4.4 below.



**Table 4.4: SPSS Output for Independent samples T-test for the PSI**

	t-test for Equality of Means			Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
	T	df	Sig. (2-tailed)			Lower	Upper
<b>PSI Total</b> Equal variances assumed	-.145	56	.885	-1.826	12.573	-27.012	23.360
<b>PSI Total</b> Equal variances not assumed	-.143	44.802	.887	-1.826	12.762	-27.534	23.882

The hypothesis for this research question was directional (HI HOPES parents experience less stress than the non-intervention group). This was taken into account when interpreting the results. As can be seen from Table 4.4, the results of the t-test were not significant ( $t=-.145$ ;  $df=56$ ;  $p=.4425$ ; 95% CI). Therefore, we fail to reject the null hypothesis and conclude there is no significant difference in the maternal caregivers parenting stress, as measured by the PSI, between the HI HOPES and the non-intervention group.

#### 4.4 Social Support Questionnaire (SSQ) results

The Social Support Questionnaire (SSQ) is divided into two subscales: “people” and “satisfaction”. Each item on the questionnaire is a two part question measuring both the subscales. For each question, the participant is given a scenario (e.g. “Who can you trust with information that can get you into trouble?” (Sarason et al., 1987, p.512)). For the “people” subscale, the participant is asked to list those who they would rely on in such a situation. For the “satisfaction” subscale and the second part of the question, they then rate how satisfied they feel with the support they would receive on a Likert scale from very satisfied to very dissatisfied.

Table 4.5 provides a summary of the results obtained for the SSQ. The “satisfaction” subscale varied noticeably between the two groups, with the non-intervention group obtaining a mean score 6.11 points less than the HI HOPES group. The total possible score a participant could achieve for this subscale is 36, and this means that the intervention group is 83.03% satisfied with their social support, while the non-intervention group is only 66.05% satisfied with their social support. The non-intervention group also had a standard deviation of 16.0. This means, as the box-plot in Sub-section 3.5.2 showed, there were large discrepancies within the non-intervention group, with how satisfied they were with their social support.

**Table 4.5: SSQ Results**

	<b>HI HOPES Group (n=35)</b>		<b>Non-Intervention Group (n=23)</b>	
<b>Subscale</b>	Mean	Std. dev	Mean	Std. dev
<b>“People”</b>	10.4	6.3	7.8	8.5
<b>“Satisfaction”</b>	29.9	6.9	23.9	16.0

#### **4.4.1 Results for research objective two**

The second objective of this research was to determine if participation in the HI HOPES programme was associated with increased perceived social support among maternal caregivers. Due to the lack of equality of variances between the HI HOPES and non-intervention groups with regards to their SSQ results, a non-parametric test, namely the Mann-Whitney U test, had to be performed to compare the two groups' means.

The Mann-Whitney U test showed that social support satisfaction between the HI HOPES and the non-intervention was not significant ( $u=389$ ;  $p= .416$ ). Therefore, we fail to reject the null hypothesis and conclude there is no significant difference in perceived social support between the HI-HOPES and the non-intervention group.

As a further analysis for the SSQ, the answers for the “people” subscale of the questionnaire (e.g. “who can you turn to when...”) were reviewed for the HI HOPES group. The maternal caregivers in the HI HOPES group never listed their PA or deaf mentor (support provided to them by the HI HOPES group) as a form of social support. Much like the non-intervention group, they predominately listed female family members (e.g. mother or sister) as sources of social support.

#### **4.5 Strengths Difficulties Questionnaire (SDQ) results**

The SDQ is a test that aims to measure psychological adjustment in children and adolescents. It is completed by the caregiver about their child. Table 4.6 below is a summary of the results of the SDQ for the HI HOPES and non-intervention groups. The overall results are presented as well as the results for each of the five sub-scales.

**Table 4.6: SDQ Results**

	HI HOPES Group (n=35)		Non-intervention Group (n=23)	
	Mean	Std. Dev	Mean	Std. Dev
<b>Emotional symptoms</b>	3.00	2.2	3.5	3.0
<b>Conduct problems</b>	3.1	2.1	2.4	1.9
<b>Hyperactivity</b>	4.1	2.1	3.7	2.4
<b>Peer problems</b>	3.2	1.8	2.8	2.0
<b>Prosocial</b>	6.7	2.3	8.5	2.2
<b>Total</b>	20.0	5.2	20.9	6.6

#### 4.5.1 Results for research objective three

The third objective of this research was to determine if parents who participated in the HI HOPES intervention perceived their child’s socio-emotional development differently to maternal caregivers who did not participate in the intervention. Table 4.6 is an overview of the results for the SDQ. As can be seen in that table, the maternal caregivers from both groups rated their children similarly on the five sub-scales. The HI HOPES group did score their children slightly higher on three sub-scales: Conduct Problems, Hyperactivity and Peer Problems. The maternal caregivers in the non-intervention group scored their children higher for Emotional Symptoms but also Prosocial Behaviour. In order to determine if the overall results for the SDQ were significant, indicating that the HI HOPES and non-intervention groups perceive their children’s socio-emotional development differently, an independent samples t-test was performed. Below, in Table 4.7 is the output for the t-test.

**Table 4.7: Independent Samples T-Test results for the SDQ**

	t-test for Equality of Means				95% Confidence Interval of the Difference		
	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
<b>SDQ Total Equal variances assumed</b>	.542	56	.590	.841	1.551	-2.266	3.948
<b>SDQ Total Equal variances not assumed</b>	.517	39.683	.608	.841	1.626	-2.446	4.128

As can be seen from Table 4.7, the results of the t-test were not significant. Therefore, the null we fail to reject the null hypothesis and conclude there is no significant difference in how the maternal caregivers perceive their child's socio-emotional development, as measured with the SDQ, between the HI HOPES and the non-intervention group ( $t=.542$ ;  $df=56$ ;  $p=.590$ ; 95% CI).

#### **4.6. Conclusion**

In Chapter Four, the results of this study were presented along with the demographic information for the two groups obtained using the Participant Information Sheet. In addition to reporting similar results in terms of the two groups demographic profiles, the Participant Information Sheet also provided some basic information regarding the maternal caregivers' deaf child. Each of the three research objectives were assessed using different questionnaires. The results for each of the questionnaires as well as the descriptive statistics used to analyse these results in terms of the three research objectives were reported. These results showed that there were no significant associations for any of the three research objectives. In the next chapter, these results will be further discussed and interpreted.

# Chapter Five: Discussion

## 5.1 Introduction

In Chapter Five, the results presented in Chapter Four will be discussed in terms of associated theoretical and conceptual ideas. As presented in Chapter Four, the results of the questionnaires used to measure parenting stress, perceived social support and the child's perceived socio-emotional functioning were non-significant. Possible reasons for these non-significant results will be explored. The limitations of the study will also be considered before suggesting possible avenues for future research in this area.

## 5.2. Non-significant Findings

The three objectives of this research were to determine if participation in the HI HOPES programme is associated with decreased parenting stress, increased perceived social support and a difference in the way the maternal caregiver perceives the socio-emotional development of their child. As the results presented in the previous chapter (see Chapter Four) show, there was no significant difference between the intervention and the non-intervention group for any of the main variables of interest, namely parenting stress, perceived social support and the perceived socio-emotional development of the child.

The absence of significant findings could be partly attributed to the study's methodological and conceptual limitations, which are outlined and discussed towards the end of this chapter. However, before these potential explanation for the results of the study are discussed, each of the three research objectives and results will be individually discussed in relation to the study's conceptual framework. The methodological and conceptual limitations of the study, and how these may have contributed to the non-significant results will be discussed towards the end of this chapter.

Importantly, this study was not a HI HOPES programme or outcome evaluation. Rather it sought to evaluate the possible association between participation in the HI HOPES programme and three theoretically informed variables. From those three variables of interest, a proposed model of care was created for this research (see Figure 2.1). This model depicted how the three variables of interest could relate to one another. Primarily, it argued that the HI HOPES intervention could have an impact on parenting stress, social support and the perceived socio-emotional functioning of the child. Through this relationship, the care the child receives would then also be effected. However, in light of the non-significant findings of this study, the likely efficacy of the proposed model could not be established.

### **5.3. Research Objective One: Decreasing Parenting Stress**

The first objective of this research was to evaluate if participation in the early intervention programme HI HOPES is associated with decreased levels of parenting stress when compared to maternal caregivers who did not participate in the intervention programme HI HOPES. In order to answer this question, the PSI was administered with maternal caregivers. As shown in Sub-section 4.2.1, there was no significant difference between the two groups in terms of the means scores obtained from the PSI, measuring parenting stress. No baseline assessment was performed prior to participation in HI HOPES, therefore, it is difficult to claim that HI HOPES does not have an impact on parenting stress. However, based on the data obtained during the course of this study, it is possible to say that there is no association between participating in the HI HOPES intervention and lower parenting stress levels.

Past research has shown that parenting stress can reduce the effectiveness of an early intervention programme. Specifically, in a study conducted to examine the effect of parenting stress on an early intervention programme for families of autistic children, it was found that when parents experienced higher levels of parenting stress levels, the intervention produced less positive gains (Osborne, McHugh, Saunders & Reed, 2008). This finding makes intuitive sense, especially if the impact of stress on learning and memory is considered more broadly. While a moderate level of stress can have a positive impact on memory, high levels of stress can be detrimental (Lindau, Almkvist & Mohammed, 2016).

Considering that high levels of parenting stress have been found to render an intervention less effective (Osborne et al., 2008) and have detrimental effects on both the child (Nolte, 2011; Hintermair, 2006) and family functioning (Östberg & Hagekull, 2013; Crnic & Low, 2002; Deater-Deckard, 1998; Farmer & Lee, 2011), then addressing parenting stress could have a positive impact both in terms of the intervention and child and family outcomes. The HI HOPES intervention programme does not specifically address parenting stress but rather focuses on teaching the parents about their child's development and potential behaviour issues as well as presenting the parents with options available to them in terms of language, communication and amplification. By not explicitly addressing parenting stress in the HI HOPES programme, it is possible that the knowledge retained by parents from the HI HOPES programme is compromised. Furthermore, HI HOPES could be missing an opportunity to improve the family outcomes which are negatively affected by parenting stress such as socio-emotional problems for the child and stricter, less nurturing behaviours from the parent (Nolte, 2011).

The HI HOPES and non-intervention groups were comparable in terms of other important factors that can result in stress. One way in which the HI HOPES and non-intervention group were similar was in

terms of employment. In the HI HOPES group, 85.7% of maternal caregivers were unemployed and in the non-intervention group 78.3% of maternal caregivers were unemployed. This finding suggests that the maternal caregivers in this study may not be financially secure and this is interesting for two reasons. The first relates to stress while the second is more systemic.

Firstly, living with less money than one needs is known to cause stress and even psychological distress (Santiago, Wadsworth & Stump, 2011). Therefore, the maternal caregivers in both groups may have similar stress experiences. Secondly, this finding supports the idea that people living with disabilities are amongst the poorest and most vulnerable of groups (Groce, 2011) and more needs to be done in terms of researching the nuances of this relationship (Groce, 2011).

#### **5.4. Research Objective Two: Increasing Perceived Social Support**

The second objective of this research was to determine if maternal caregivers who participated in HI HOPES perceived themselves to have more social support when compared to the non-intervention group. The parents who participate in the HI HOPES programme interact with their Parental Advisors once every two weeks for up to three years. They are also provided with Deaf Mentors to help them and their child navigate what it means to be deaf (HI HOPES, 2013). Due to the duration and nature of this relationship, it is conceivable that the maternal caregivers in the HI HOPES group, would consider their Parental Advisors or Deaf Mentors as a form of social support. In fact, literature has shown that parents who have developed artificial networks (professionals etc.) through the diagnosis of their child's hearing loss, often do consider them as a form of social support (Hintermair, 2006).

However this was not the case in this study. The maternal caregivers in the HI HOPES group did not list any professionals, including their Parental Advisors or Deaf Mentors, as a form of social support. They did however often list women relatives such as mothers or sisters as the person they would most often turn to. Furthermore, the maternal caregivers in the non-intervention group also listed their women relatives as their primary source of social support.

A defining characteristic of the African family system is the strong emotional ties between family members which encourage mutual sharing and dependence (Iwelunmor et al., 2012). Studies have shown that when it comes to coping with HIV/AIDS, families are the first and best line of defence for caring for people living with HIV (Iwelunmor et al., 2012). It is the extended family network and family cohesion which provides strength and support in times of need and crisis (Iwelunmor et al., 2012). However, in the African context especially, gender plays a large role in shaping the burden of care and it is often women who take on caring roles (Schatz, 2007). Therefore, in the context of this study, the maternal caregivers, from both groups, listed their women relatives (mothers and sisters) as their primary source of social support.

Artificial networks, or the network of professionals that a parent develops after their child is diagnosed, are important. However, they may be considered less important, or perhaps not regarded as social support, in the South African context where family networks provide an important resource for resilience. Furthermore, in a resource constrained environment, are not as readily available as they are in less constrained contexts. The women in a South African context provide support through “non-artificial” means. Therefore, the maternal caregivers in the HI HOPES groups and in the non-intervention group, have similar networks of social support available to them.

### **5.5. Research Objective Three: The Perceived Socio-Emotional Development of the Child**

The third objective of this research was to determine if maternal caregivers who participated in the HI HOPES intervention perceived their children differently in terms of socio-emotional functioning, when compared to maternal caregivers who did not participate in the HI HOPES intervention. This was assessed using the Strength-Difficulties questionnaire. When the two groups were compared, the results were not significant.

However, the HI HOPES group, on average, rated their children slightly poorer than the non-intervention group. A possible reason for this could be that once maternal caregivers go through the intervention, they have adjusted their expectations for their child (Hintermair, 2006). Part of the HI HOPES intervention included educating the parents on the behavioural issues they may be confronted with as a parent of a deaf child (Störbeck & Moodley, 2011). This may have resulted in a form of confirmation bias occurring when the HI HOPES maternal caregivers were evaluating their children.

### **5.6. Limitations**

Several methodological limitations can be identified which are likely to have had an impact on the results of the study.

The sample size of this research was small with just 35 maternal caregivers in the HI HOPES group and 23 in the non-intervention group. In the non-intervention group, the sample size was small due to problems with recruitment. Specifically, the researcher had to rely on personal relationships and connections in order to recruit for the non-intervention group. In addition, for the most part, there was no interaction between the researcher and the participants. The researcher was mostly dependent on others for data collection. For the HI HOPES group, the Parental Advisors helped with data collection and in the non-intervention group, audiologists helped with data collection. This was a limitation of the study because it meant that the researcher could not determine if the tests were implemented uniformly across the participants. In order to minimise this and to try ensure uniform understanding,



informal training sessions were held with those helping to implement the study. In future, if a study were to adopt a similar design, more rigorous training needs to be conducted for those responsible for data collection.

Furthermore, the small sample size meant the study was not sufficiently powered rendering it difficult to detect an effect, even if there was one (Durrheim & Painter, 2006).

For the HI HOPES group, all eligible maternal caregivers were approached through their Parental Advisors and the response rate was good for this group. While the exact response rate is not known, it was greater than 80%. Therefore, the HI HOPES group would not have been much larger, even if every eligible maternal caregiver had participated. For this reason, it may have been prudent to approach this study from a different methodological paradigm. For example, if the research design had of been qualitative in nature, then having a smaller sample would not have been a limitation (Trotter, 2012).

Furthermore, all three of the questionnaires used in this study (PSI, SSQ, SDQ) have been standardised and used in other research (Abidin, 1995; Sarason et al., 1983; Goodman, 2001). However, none of the questionnaires have been standardised on a South African population. Even the SDQ which has an isiZulu translated version available on the website has not been standardised on a South African population.

The questionnaires not being standardised in the South African context may be potentially problematic due to the different ways the constructs being measured are understood and enacted in different contexts. As an example, an item from the SSQ reads: “Whom can you talk with frankly, without having to watch what you say” (Sarason et al., 1983, p.7). In some context, being able to talk to someone freely and frankly is perhaps a sign of a healthy relationship from which that person receives a lot of social support. However, in other contexts, it is may be considered rude to talk frankly to someone and not doing so is a sign of respect. By this show of respect, the relationship may be considered healthy and supportive. As this example illustrates, it is problematic to take a questionnaire from one context and implement it in another without first checking for cultural appropriateness (Pakseresht & Sharma, 2010).

## **5.7. Future Research**

Parenting stress, perceived social support and the perceived socio-emotional functioning of the child were assessed in this study using standardised measures. However, these are all conceptually complex variables. To fully understand the experiences of maternal caregivers with regards to these variables, a qualitative study would be useful. With a qualitative study aspects of parenting stress can be explored

to determine what it is that causes the most stress and in what ways HI HOPES has facilitated this relationship.

The same can be done for perceived social support and the perceived socio-emotional functioning of the child. Through doing qualitative research, these ideas can be more fully explored and unpacked.

## **5.8 Conclusion**

For this study, maternal caregivers of deaf children were compared in terms of their parenting stress, perceived social support and the perceived socio-emotional functioning of the child. The variable for which these maternal caregivers were grouped together was their participation, or lack thereof, in the early intervention programme HI HOPES. This was done in order to test the hypothesis that participation in an early intervention programme, through equipping parents with the skills to cope with their child's hearing impairment, in turn decreases their parenting stress, increases their perceived social support and has an effect on the way the parent perceives their child's socio-emotional functioning. This was not the case however, although the small sample size may make it difficult to make a definitive assertion.

## References

- Abidin (1995). *Parental Stress Index: Professional Manual* (3<sup>rd</sup> ed.). Odessa, FL: Psychological Assessment Resources.
- Abidin (2012). *Parental Stress Index: Professional Manual* (4<sup>th</sup> ed.). Lutz, FL: Psychological Assessment Resources.
- Adamakos, H., Ryan, K., Ullman, D.G., Pascoe, J., Diaz, R., & Chessare, J. (1986). Maternal social support as a predictor of mother-child stress and stimulation. *Child Abuse & Neglect, 10*, 463-470.
- Anagnostou, F., Graham, J., & Crocker, S. (2007). A preliminary study looking at parental emotions following cochlear implantation. *Cochlear Implants International, 8*(2), 68-86.
- Areheart, B. (2008). When disability isn't "Just Right": The Entrenchment of the Medical Model of disability and the Goldilocks dilemma. *Indiana Law Journal, 83*(1), 181-232.
- Åsberg, K.K., Vogel, J.J., & Bowers, C.A. (2008). Exploring correlates and predictors of stress in parents of children who are deaf: Implications of perceived social support and mode of communication. *Journal of Child and Family Studies, 17*, 486-499.
- Biernacki, P., & Waldorf, D. (1981). Snowball sampling: Problems and techniques of chain referral sampling. *Sociological Methods Research, 10*(2), 141-163.
- Calderon, R. (2000). Parental involvement in deaf children's education programmes as a predictor of child's language, early reading and emotional development. *Journal of Deaf Studies and Deaf Education, 5*(2), 140-155.
- Calderon, R., & Greenberg, M.T. (1999). Stress and coping in hearing mothers of children with hearing loss: Factors affecting mother and child adjustment. *American Annals of the Deaf, 144*(1), 7-18.
- Cnic, K.A., & Low, C. (2002). Everyday stresses and parenting. In M. Bornstein (Ed.), *Handbook of Parenting* (Vol.2, 2<sup>nd</sup> ed), (pp.243-268). Hillsdale, NJ: Erlbaum.
- Crow, L. (2007). Including all of our lives: Renewing the social model of disability. In N. Watson (Ed), *Disability. Major themes in health and social welfare*. London: Routledge.
- Crowne, D.P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24*(4), 349-354.
- Deater-Deckard, K. (1998). Parenting stress and child adjustment: Some Old Hypotheses and new questions. *Clinical Psychology: Science and Practice, 5*, 314-332.
- Durrheim, K., & Painter, D. (2006). Collecting quantitative data: Sampling and measuring. In M. Terre Blanche, K. Durrheim & D. Painter (Eds.), *Research in Practice* (pp. 131-159). Cape Town: University of Cape Town Press.
- Emmett, T. (2005). *Disability and poverty. Augmentative and alternative communication interventions: beyond poverty*. London: Whurr.

- Fair, C.D., & Rupp, S. (2016). Transition: The role of social support in self-management within education and employment settings for adolescents and young adults with end-stage renal disease. *Journal of Adolescent Health, 58*(2), S63-S85.
- Farmer, A.Y., & Lee, S.K. (2011). The Effects of Parenting Stress, Perceived Mastery and Maternal Depression on Parent-Child Interaction. *Journal of Social Service Research, 37*(5), 516-525.
- Feher-Prout, T. (1996). Stress and Coping in Families with Deaf Children. *Journal of Deaf Studies and Deaf Education, 1*(3), 155-166.
- Goodman, R. (1997). The strengths and difficulties questionnaire: A research note. *Journal of Child Psychology and Psychiatry, 38*(5), 581-586.
- Goodman, R. (2001). Psychometric properties of the Strengths and Difficulties Questionnaire. *Journal of the American of Child and Adolescent Psychiatry, 40*(11), 1337-1345.
- Groce, N., Kett, M., Lang, R., & Trani, J. F. (2011). Disability and poverty: The need for a more nuanced understanding of implications for development policy and practice. *Third World Quarterly, 32*(8), 1493-1513.
- Haskett, M.E., Ahern, L.S., Ward, C.S., & Allaire, J.C. (2006). Factor structure and validity of the Parenting Stress Index-Short Form. *Journal of Clinical Child and Adolescent Psychology, 35*(2), 302-312.
- Hawes, D.J., & Dadds, M.R. (2004). Australian data and psychometric properties of the Strengths and Difficulties Questionnaire. *Australian and New Zealand Journal of Psychiatry, 38*, 644-651.
- Heyman, M.B., Harmatz, P., Acree, M., Wilson, L., Moskowitz, J.T., Ferrando, S., & Folkman, S. (2004). Economic and psychological costs for maternal caregivers of gastrostomy-dependent children. *The Journal of Paediatrics, 145*(4), 511-516.
- HI HOPES (2013). *HI HOPES Annual Report*. Retrieved 2014, from <http://www.hihopes.co.za/literature/publications/>
- HI HOPES (2017). *What is HI HOPES*. Retrieved September 23, 2017, from <http://www.hihopes.co.za/>
- Hintermair, M. (2006). Parental resources, parental stress, and the socioemotional development of deaf and hard of hearing children. *Journal of Deaf Studies and Deaf Education, 11*(4), 493-513.
- Iwelunmor, J., Airhihenbuwa, C.O., Okoror, T.A., Brown, D.C., & Belue, R. (2012). Family systems and HIV/AIDS in South Africa. *International Quarterly of Community Health Education, 27*(4), 321-335.
- Kurtzer-White, E., & Luterman, D. (2003). Families and children with hearing loss: Grief and coping. *Mental retardation and developmental disabilities research reviews, 9*, 232-235.
- Lane, H. (1995). Constructions of Deafness. *Disability and Society, 10*(2), 171-190.
- Lederberg, A.R., & Golbach, T. (2002). Parenting Stress and Social Support in Hearing Mothers of Deaf and Hearing Children: A longitudinal study. *Journal of Deaf Studies and Deaf Education, 7*(4), 330-345.

- Lindau, M., Almkvist, O., & Mohammed, A.H. (2016). Effects of Stress on learning and memory. In G. Fink (Ed.), *Stress: Concepts, Cognition, Emotion and Behaviour* (pp.153-160). Cambridge: Academic Press.
- Marschark, M. (2001). Language development in children who are deaf: A research synthesis. Retrieved February 9, 2012, from [http://www.projectforum.org/docs/language\\_development.PD](http://www.projectforum.org/docs/language_development.PD)
- Mash, E.J., & Johnston, C. (1990). Determinants of parenting stress: Illustrations from families of hyperactive children and families of physically abused children. *Journal of Clinical Child Psychology, 19*, 303-328.
- NCHAM (2017). *Newborn Hearing Screening*. Retrieved October 12, 2017, from <http://www.infanthearing.org/screening/>
- Neuhaus, D (2011). Parenting regarding children with special needs: Parental Perceptions and Stress. *ETD Collection for Pace University*. Retrieved June, 2016, from <http://digitalcommons.pace.edu/dissertations/AAI3451003>
- Nolte, S.R. (2011). *The importance of addressing stress in parents of hearing impaired children*. Unpublished Masters Thesis. Washington University School of Medicine. Washington, DC.
- Nunez, D. (2006). T-Tests. In C. Tredoux & K. Durrheim (Eds.), *Numbers, Hypotheses & Conclusions: A course in statistics for the social sciences*. (pp. 142-159). Lansdowne: UCT Press
- Osborne, L.A., McHugh, L., Saunders, J. & Reed, P (2008). Parenting stress reduces the effectiveness of early teaching interventions for Autistic Spectrum Disorders. *Journal of Autism & Development Disorders, 38*, 1092-1103.
- Östberg, M., & Hagekull, B. (2013). Parenting stress and external stressors as predictors of maternal ratings of child adjustment. *Scandinavian Journal of Psychology, 54*, 213-221.
- Pakseresht, M., & Sharma, S. (2010). Validation of a culturally appropriate quantitative food frequency questionnaire for Inuvialuit population in the Northwest Territories, Canada. *Journal of human nutrition and dietetics, 23*(s1), 75-82.
- Pipp-Siegel, S., Sedey, A.L., & Yoshinaga-Itano, C. (2002). Predictors of parental stress in mothers of young children with hearing loss. *Journal of Deaf Studies & Deaf Education, 7*(2), 1-17.
- Power, D. (2005). Models of deafness: cochlear implants in the Australian daily press. *Journal of Deaf Studies and Deaf Education, 10*(4), 451-459.
- Reitman, D., Currier, R.O., & Stickle, T.R. (2002). A critical evaluation of the Parental Stress Index-Short Form (PSI-SF) in a head start population. *Journal of Clinical Child and Adolescent Psychology, 31*(3), 384-392.

- Salakari, M., Pylkkänen, L., Sillanmäki, L., Rautava, P., Koskenvuo, M., & Suominen, S. (2017). Social support and breast cancer: A comparative study of breast cancer survivors, women with mental depression, women with hypertension and healthy female controls. *The Breast*, 35, 85-90.
- Santiago, C. D., Wadsworth, M. E., & Stump, J. (2011). Socioeconomic status, neighbourhood disadvantage, and poverty-related stress: Prospective effects on psychological syndromes among diverse low-income families. *Journal of Economic Psychology*, 32(2), 218-230.
- Sarason, I.G., Sarason, B.R., Shearlin, E.N., & Pierce, G.R. (1983). A brief measure of social support: Practical and theoretical implications. *Journal of Social and Personal Relationships*, 4, 497-510.
- Schatz, E. J. (2007). "Taking care of my own blood": Older women's relationships to their households in rural South Africa. *Scandinavian Journal of Public Health*, 35(69), 147-154.
- Schutt, R.K. (2006). *Investigating the social world. The process and practice of research* (5th ed.). Thousand Oaks, California: Sage Publications.
- Shakespeare, T. (2013). The social model of disability. In L.J. Davis (Ed.), *The Disability Studies Reader* (pp. 214-221). New York: Routledge.
- Skelton, G., & Valentine, T. (2003). 'It feels like being Deaf is normal': an exploration into the complexities of defining D/deafness and young D/deaf people's identities. *The Canadian Geographer*, 47(4), 451-466.
- Statistics SA (2012). *Census 2011*. Pretoria: Statistics South Africa.
- Statistics SA (2016). *Community Survey 2016. Statistical Release*. Pretoria: Statistics South Africa.
- Statistics SA (2017). *Poverty trends in South Africa. An examination of absolute poverty between 2006 and 2015*. Pretoria: Statistics South Africa.
- Störbeck, C., & Calvert-Evers, J. (2008). Towards integrated practices in early detection of and intervention for deaf and hard of hearing children. *American Annals of the Deaf*, 153(3), 314-321.
- Störbeck, C., & Moodley, S. (2011). ECD policies in South Africa. What about children with disabilities? *Journal of African Studies of Development*, 3(1), 1-8.
- Störbeck, C., & Pittman, P. (2008). Early intervention in South Africa: Moving beyond hearing screening. *International Journal of Audiology*, 47(S1), 36-43.
- Sullivan, K. (2011). The prevalence of the medical model of disability in society. *2011 AHS Capstone Projects* (13).
- Swanepoel, D., Störbeck, C., & Friedland, P. (2009). Early hearing detection and intervention in South Africa. *International Journal of Paediatric Otorhinolaryngology*, 73, 783-786.

- Terre Blanche, M., & Durrheim, K. (2006). Histories of the present: social science research in context. In M. Terre Blanche, K. Durrheim & D. Painter (Eds.), *Research in Practice* (pp. 2-17). Cape Town: University of Cape Town Press.
- The United Nations (2006). Convention on the Rights of Persons with Disabilities, *Treaty Series*, 2515, 3.
- Tredoux, C., & Smith, M. (2006). Evaluating research design. In M. Terre Blanche, K. Durrheim & D. Painter (Eds.), *Research in Practice* (pp. 160-186). Cape Town: University of Cape Town Press.
- Trotter, R.T. (2012). Qualitative research sample size and sample design: Resolving and unresolved issues and inferential imperatives. *Preventive Medicine*, 55(5), 398-400.
- Uzark, K., & Jones, K. (2003). Parenting stress and children with heart disease. *Journal of Paediatric HealthCare*, 17(4), 163-168.
- Valentine, T., & Skelton, G. (2008). Changing spaces: The role of the internet in shaping Deaf Geographies. *Social and Cultural Geography*, 9(5), 496-485.
- Van der Spuy, T., & Pottas, L. (2008). Infant hearing loss in South Africa: age of intervention and parental needs for support. *International Journal of Audiology*, 47(1), S30-5.
- Wadsworth, M. E., Raviv, T., Santiago, C. D., & Etter, E. M. (2011). Testing the adaptation to poverty-related stress model: Predicting psychopathology symptoms in families facing economic hardship. *Journal of Clinical Child & Adolescent Psychology*, 40(4), 646-657.
- What is the SDQ?* (2012). Retrieved March 7, 2012, from <http://www.sdqinfo.org/a0.html>
- WHO (2017). *Deafness and hearing loss*. Retrieved 17 October, 2017, from <http://www.who.int/mediacentre/factsheets/fs300/en/>
- Wood Jackson, C., & Turnbull, A. (2004). Impact of deafness on family life: A Review of the literature. *Topics in Early Childhood Special Education*, 24(15), 15-29.
- Young, A., & Tattersall, H. (2007). Universal newborn hearing screening and early identification of deafness: Parents' responses to knowing early and their expectations of child communication development. *Journal of Deaf Studies and Deaf Education*, 12(2), 209-220.

# Appendices

## Appendix 1: Permission email from HI HOPES



Rosemary Brown <rosemaryannbrown@gmail.com>

---

### Hi-Hopes UKZN request letter.

---

**Dianne Hi Hopes KZN** <HiHopesKZN@global.co.za>

Wed, May 2, 2012 at 12:33 PM

To: Claudine Storbeck <claudine.storbeck@gmail.com>, Selvarani Moodley <Selvarani.Moodley@wits.ac.za>

Cc: Killian@ukzn.ac.za, rosemaryannbrown@gmail.com

Dear Claudine

I have a couple of initial questions and comments. It will be great for Hi Hopes to be part of this research.

Families on the waiting list are quite few, but I will go through our current list now and see what figures I can find.

Kind regards  
Dianne Goring  
KZN Provincial Coordinator

— Original Message —

**From:** Claudine Storbeck

**To:** Selvarani Moodley ; Dianne Hi Hopes KZN

**Sent:** Tuesday, May 01, 2012 8:47 PM

**Subject:** Fwd: Hi-Hopes UKZN request letter.

Dear Sel and Dianne,

A formal request to do research in KZN with families in the programme ...

Can you two please make an appt to chat about this research opp as a matter of urgency this week, as we need to give them an indication

if we have enough parents in the programme .... I have asked the University and they are happy for this research to go ahead.

I would like to answer Dr Bev K by friday please.

Looking forward to hearing from you both re the numbers of families in KZN (see the criteria in the letter attached), regards,

c

Professor Claudine Storbeck  
Director: Centre for Deaf Studies  
Director: HI HOPES  
University of the Witwatersrand  
JhB, South Africa



## **Appendix 2: Informed consent (English)**

### **INFORMATION FORM**

Dear Parent/Caregiver,

My name is Rosemary Brown. I am doing a Masters Degree in Research Psychology at the University of KwaZulu-Natal. The subject of my Masters thesis is stress relating to parenting a deaf child and participation in an early intervention programme.

Please understand that your participation in this research is completely voluntary. However, it would be greatly appreciated if you take some time to participate. Your participation would require the completion of a test measuring parenting stress, social support and the strengths and difficulties of your child. There are no right or wrong answers but please answer truthfully. It should take no longer than an hour of your time. Please bear in mind that as a participant you will not personally benefit from this study in any way.

Your test results will be kept absolutely confidential and will only be analysed by me. Your identity will be kept confidential through the use of a coding system. The results of this research will be released in a Masters thesis and possibly at psychology conferences and in psychology journals. If the results prove significant they may be used as the basis for further study. However, at no stage of this research or thereafter will any details that could personally identify you be released.

Please detach this form from the consent form and return only the signed consent form. Please keep this form so that if you have any questions or complaints about the study, you may contact either me or my supervisor, Dr, Beverley Killian.

Rosemary Brown  
Cell: 072 148 6346  
Email: [rosemaryannbrown@gmail.com](mailto:rosemaryannbrown@gmail.com)

Dr. Beverley Killian  
Office: 033 260 5371  
Email: [Killian@ukzn.ac.za](mailto:Killian@ukzn.ac.za)

**Thank you for taking the time to participate in my study!**

## CONSENT

I hereby agree to participate in the research regarding parenting stress and early intervention programmes. I understand that I am participating of my own freewill and can choose to not complete the test at any time should I wish to do so.

The purpose of this research has been explained to me and I understand what is expected of my participation. I also understand that this is a research project whose purpose is not necessarily to benefit me personally.

I have received the telephone numbers of a person to contact should I wish to speak about any issues that may arise during my participation.

I understand that this consent form will not be linked to my answers in any way and that my answers will remain confidential.

---

Signature of Participant

Date

### **Appendix 3: Letter of instruction to Parental Advisors included in test pack**

#### **INSTRUCTIONS**

Dear Parental Advisor,

Inside each envelope you will find:

- An Informed Consent Form
- A Participant Information Sheet
- The Parental Stress Index
- The Social Support Questionnaire
- The Strengths and Difficulties Questionnaire

All of the forms/tests in an envelope are for ONE participant (i.e. each parent must complete all of the forms/tests in one plastic sleeve). Please familiarise yourself with these tests and the instructions before administering them. For the most part they are very straight forward but should your parent have any questions please answer them as best as you can.

The informed consent form should be carefully read and signed by the parent/caregiver before they complete any of the tests. If the parents/caregivers have any difficulties, questions or uneasiness regarding this research and/or their results, please encourage them to contact either myself or my supervisor. Both of our details are on the informed consent form.

Please encourage the parent/caregiver to answer the questions truthfully and to not leave any out, as this may have implications when the data is being analysed. I would also ask that you respect the privacy of the participant both during the administration of the test and with their results. As soon as they have completed the test, please place them back in the envelope provided.

Once this research is completed, HI HOPES will be provided with a copy of the report should you be interested.

Thank you once again for agreeing to help me gather my data. Should you have any questions please feel free to phone or email me. Please enjoy your chocolate as a small token of my appreciation.

## Appendix 4: Participant information sheet

### Participant Information sheet

1. What is your current marital status? (Please tick one)

Single	Married	Divorced	Widowed	In a relationship	Other
--------	---------	----------	---------	-------------------	-------

2. What is your highest educational qualification?

Primary School	Grade 10	Grade 12	Tertiary Education	Other (specify)
----------------	----------	----------	--------------------	-----------------

3. Are you currently employed? If yes, how many hours a week do you work?

Yes	No	Hours/week:
-----	----	-------------

4. How many children do you have?

---

#### Information regarding your deaf/hearing impaired child

1. How old is your child?

---

2. What is your child's gender?

Male	Female
------	--------

3. How old was your child when his/her hearing loss was identified?

---

4. What is your child's degree of hearing loss?

Mild	Moderate	Severe	Profound
------	----------	--------	----------

5. How do you communicate with your child? (Mode of communication)

---

6. Does your child speak? If yes, how many words does he/she know?

Yes	No	No. of words:
-----	----	---------------

7. Does your child have any other disabilities?

---

# Appendix 5: HI-HOPES (Intervention) Group PSI Profile form

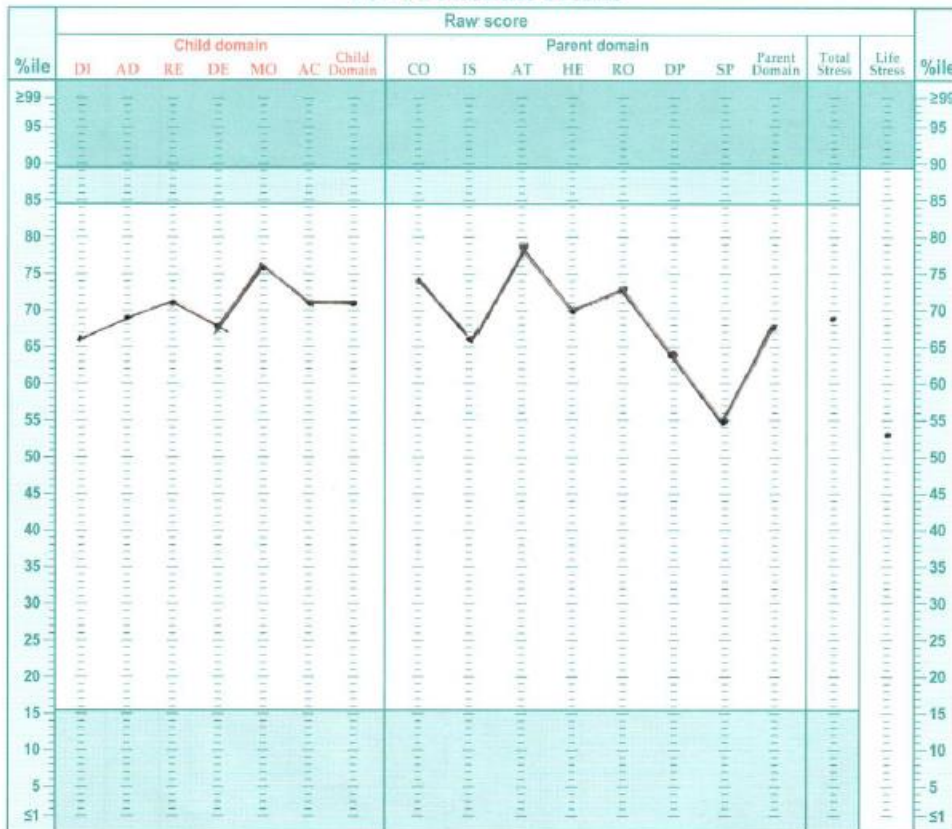


## Profile Form

Richard R. Abidin, EdD

Name INTERVENTION GROUP Gender \_\_\_\_\_ Date of birth \_\_\_\_/\_\_\_\_/\_\_\_\_  
 Ethnic group \_\_\_\_\_ Marital status \_\_\_\_\_ Today's date \_\_\_\_/\_\_\_\_/\_\_\_\_  
 Child's name \_\_\_\_\_ Child's gender \_\_\_\_\_ Child's date of birth \_\_\_\_/\_\_\_\_/\_\_\_\_  
 Mean Age 5.03 years

### PSI-4 Percentile Profile



	DI	AD	RE	DE	MO	AC	Child Domain	CO	IS	AT	HE	RO	DP	SP	Parent Domain	Total Stress	Life Stress	%ile
%ile	66	69	71	68	76	71	71	74	76	79	70	73	64	55	68	69	53	%ile
MEAN Raw score	25	28	13	22	14	16	118	35	15	17	13	20	22	19	138	254	11	Raw score

Normative table used (child age): 5 years

Defensive Responding   
(significant if score is 24 or less)

PAR • 16204 N. Florida Ave. • Lutz, FL 33549 • 1.800.331.8378 • www.parinc.com

Copyright © 1990, 1996, 2012 by PAR. All rights reserved. May not be reproduced in whole or in part in any form or by any means without written permission of PAR. This form is printed in green and orange ink on carbonless paper. Any other version is unauthorized. Printed in the U.S.A. Reorder #RD-10270 1 2 3 4 5 6 7 8 9

**WARNING! PHOTOCOPYING OR DUPLICATION OF THIS FORM WITHOUT PERMISSION IS A VIOLATION OF COPYRIGHT LAWS.**

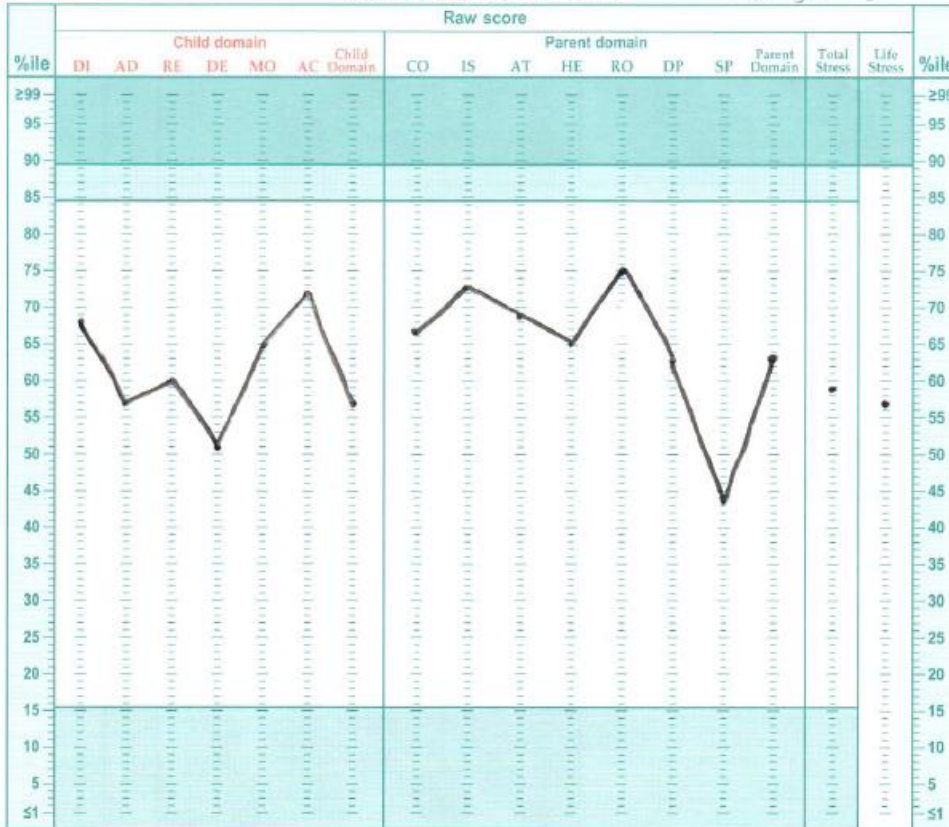
# Appendix 6: Non-intervention Group Profile form



Name NON-INTERVENTION GROUP Gender \_\_\_\_\_ Date of birth \_\_\_\_/\_\_\_\_/\_\_\_\_  
 Ethnic group \_\_\_\_\_ Marital status \_\_\_\_\_ Today's date \_\_\_\_/\_\_\_\_/\_\_\_\_  
 Child's name \_\_\_\_\_ Child's gender \_\_\_\_\_ Child's date of birth \_\_\_\_/\_\_\_\_/\_\_\_\_

mean age : 5.82 years  
(6 years)

## PSI-4 Percentile Profile



	DI	AD	RE	DE	MO	AC	Child Domain	CO	IS	AT	HE	RO	DP	SP	Parent Domain	Total Stress	Life Stress	%ile
%ile	68	57	60	51	65	72	57	67	73	69	65	75	63	44	63	59	57	%ile
MEAN Raw score	26	27	12	20	13	16	115	34	16	16	12	21	22	16	136	252	12	Raw score

Normative table used (child age): 6 years

Defensive Responding   
 (significant if score is 24 or less)

PAR • 16204 N. Florida Ave. • Lutz, FL 33549 • 1.800.331.8378 • www.parinc.com

Copyright © 1990, 1995, 2012 by PAR. All rights reserved. May not be reproduced in whole or in part in any form or by any means without written permission of PAR. This form is printed in green and orange ink on carbonless paper. Any other version is unauthorized. Printed in the U.S.A. Reorder #RO-10270 1 2 3 4 5 6 7 8 9

**WARNING! PHOTOCOPYING OR DUPLICATION OF THIS FORM WITHOUT PERMISSION IS A VIOLATION OF COPYRIGHT LAWS.**

## **Appendix 7: Ethical approval of research protocol**



8 August 2012

Ms Rosemary Brown 207500587  
School of Applied Human Sciences – Psychology

Dear Ms Brown

Protocol reference number: HSS/0321/012M  
Project title: Early intervention programmes and parenting deaf children: Parental experiences of stress

**EXPEDITED APPROVAL**

I wish to inform you that your application has been granted Full Approval through an expedited review process.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Professor Steven Collings (Chair)

/px

cc Supervisor Dr Beverley Killian  
cc Academic leader Professor JH Buitendach  
cc School Admin. Ms Nondumiso Khanyile

Professor S Collings (Chair)  
Humanities & Social Sc Research Ethics Committee  
Westville Campus, Govan Mbeki Building  
Postal Address: Private Bag X54001, Durban, 4000, South Africa  
Telephone: +27 (0)31 260 3587/8350 Facsimile: +27 (0)31 260 4609 Email: ximbap@ukzn.ac.za / snymanm@ukzn.ac.za  
Founding Campuses: ■ Edgewood ■ Howard College ■ Medical School ■ Pietermaritzburg ■ Westville

Inspiring Greatness





## Appendix 8: Turnitin Originality Report

Document Viewer

### Turnitin Originality Report

Processed on: 31-May-2018 1:58 PM CAT  
 ID: 970706721  
 Word Count: 18036  
 Submitted: 1

Dissertation By Rosemary Brown

[refresh](#)

Similarity Index	Similarity by Source
14%	Internet Sources: 12% Publications: 6% Student Papers: 5%

1% match (student papers from 04-Dec-2013) <a href="#">Submitted to University of KwaZulu-Natal on 2013-12-04</a>	✕
1% match (Internet from 11-Sep-2017) <a href="http://mjltm.org">http://mjltm.org</a>	✕
1% match (Internet from 31-Jan-2015) <a href="http://www.hihopes.co.za">http://www.hihopes.co.za</a>	✕
<1% match (student papers from 27-May-2013) <a href="#">Submitted to North West University on 2013-05-27</a>	✕
<1% match (Internet from 06-Sep-2017) <a href="http://digitalcommons.wustl.edu">http://digitalcommons.wustl.edu</a>	✕
<1% match (Internet from 30-Aug-2017) <a href="http://open.uct.ac.za">http://open.uct.ac.za</a>	✕
<1% match (Internet from 16-Dec-2013) <a href="http://www.hihopes.co.za">http://www.hihopes.co.za</a>	✕
<1% match (Internet from 27-Feb-2012) <a href="http://www.hihopes.co.za">http://www.hihopes.co.za</a>	✕
<1% match (publications) <a href="#">Kirby Deater-Deckard, "Parenting Stress and Child Adjustment: Some Old Hypotheses and New Questions", Clinical Psychology Science and Practice, 09/1998</a>	✕
<1% match (Internet from 14-Apr-2016) <a href="http://www4.parinc.com">http://www4.parinc.com</a>	✕
<1% match (publications) <a href="#">Kia K. Åsberg, "Exploring Correlates and Predictors of Stress in Parents of Children Who are Deaf: Implications of Perceived Social Support and Mode of Communication", Journal of Child and Family Studies, 08/2008</a>	✕
<1% match (Internet from 30-Aug-2017) <a href="http://open.uct.ac.za">http://open.uct.ac.za</a>	✕
<1% match (student papers from 15-Mar-2018)	✕