

# The association between maternal self-efficacy and maternal perception of child language competence.

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## Summary

The aim of this study was to describe maternal self-efficacy beliefs within the parenting domain and maternal rating of pre-school child's language abilities, where the child has a communication disability. The association between these two constructs was also investigated. Twenty-five Mothers completed a questionnaire consisting of two subsections: parental self-efficacy and maternal rating of child language ability. The results revealed that mothers generally had high self-efficacy beliefs within certain parenting roles, in spite of the fact that their child has a communication disability. The lowest competence was reported in discipline and teaching roles. In addition, mothers' reports of patterns of child ability correlated with what has been written in the literature. Correlation statistics generally revealed weak association between the constructs, with the strongest association between the parental domain of discipline and maternal reports of their child's receptive language abilities. Possible reasons suggested for the weak correlation values include the presence of a disability, which may alter the factors that contribute to the way parents construct and maintain self-efficacy beliefs; as well as the fact that the two sections of the questionnaire measure maternal appraisals at two very different levels (objective observations and evaluative self-regulatory processes). Suggestions for further research are provided.

### Key terms:

- Parental beliefs
- Self-efficacy
- Maternal perceptions
- Language abilities
- Communication disability
- Parent child interaction

## Opsomming

Die doel van die studie was die beskrywing van moeders se opvatting van hulle eie doeltreffendheid in die ouerskap domein, en moeders se beoordeling van hul kommunikasie gestremde voorskoolse kinders se taalvermoëns. Die verband tussen die twee konstrunkte is ook ondersoek. Fyf-en-twintig moeders het 'n vraelys voltooi wat bestaan het uit twee sub-afdelings: ouerskap doeltreffendheid beoordeling en moeders se beoordeling van kindertaalvermoëns. Die resultate het getoon dat moeders se self-beoordeling binne sekere ouerskaprolle oor die algemeen hoog was, ten spyte van die feit dat hul kinders 'n kommunikasie gestremdheid het. Die laagste bevoegdheid is aangemeld in die dissipline en onderrig rolle. Bykomend hiertoe het moeders se verslae van hul kinders se vermoëns gekorreleer met inligting uit die literatuur. Korrelasie statistieke het oor die algemeen 'n swak verband tussen die konstrunkte getoon, met 'n sterk verband tussen die ouerskap domein van dissipline en moeders se verslae van hul kinders se reseptiewe taalvermoëns. Moontlike redes vir die swak korrelasie sluit in die teenwoordigheid van 'n gestremdheid wat moontlik die faktore wat kon bydra tot die wyse waarop ouers opvattinge van hulle eie doeltreffendheid konstrueer en handhaaf, kon wysig, asook die feit dat twee afdelings van die vraelys moeders se beoordeling gemeet het op twee verskillende vlakke (objektiewe waarnemings en waardeoordelende self-regulerende prosesse). Aanbevelings vir verdere navorsing is ingesluit.

### Sleutelwoorde:

- Ouer-opvattinge
- Self-doeltreffendheid
- Persepsies van moeders
- Taalvermoëns
- Kommunikasie gestremdheid
- Ouer-kind interaksie

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## Chapter 1: Introduction to the study

### 1.1 Problem statement

Over the past years there has been a shift in the intervention process away from client-centered therapy towards inclusion of significant others (often parents) as consultants in the intervention process. Parents are frequently viewed as having expert knowledge regarding their child's needs and abilities. Parents, therefore, form an integral part of the assessment and intervention team, and are often asked to rate or describe their child's ability across a certain developmental domains. In recent years checklists and questionnaires have been developed with the aim of allowing parents to monitor their child's language progress, or to record the parents' perception of the child's current level of functioning in a specific domain. Few of these tests, however, include measures of parents' belief of competence in the parenting roles such as discipline, emotional availability, teaching and nurturing.

Literature has shown that these beliefs about competence have a direct impact on parent behaviour and therefore on parent-child interaction (Coleman & Karraker, 1998; Johnston & Mash, 1989; Mash & Johnston, 1983; Scheel & Rieckmann, 1998; Teti & Gelfand, 1991; Wells-Parker, Miller & Topping, 1990). Within parenting literature, beliefs refer to a system of ideas about a child's nature and development, ideas regarding causality, and opinions regarding conditions that may influence development (Miller, 1988). It appears as if more adaptive child-rearing behaviours are associated with a well-developed complex system of beliefs regarding child development and an appropriate perception of the child's ability.

Studies in the literature report consistent inverse relationships between parental perceptions of child's behaviour problems and parenting self-esteem. People's actions and level of motivation are, to an extent, based on what they believe rather than on what is objectively the case. As a result, the potential importance of parents' beliefs in forming perceptions regarding abilities is widely acknowledged. Within the parenting literature, it is said that these beliefs impact on the way parents interact with their child and could ultimately influence their child's behaviour in a positive or negative manner.

Mothers of children with disabilities typically participate in interactions with their child that are more stressful, as they often provide considerably less positive feedback compared to mothers of typically developing children. This suggests that having a child with a disability may create ongoing stress for mothers that could potentially undermine their belief and confidence in their ability to care for their child and stimulate his/her development. In addition, Conti-Ramsden (1994) states that the variations in maternal interaction patterns are usually related to the mother's perception of individual characteristics of the child with atypical language development. Furthermore, she states that when parents are no longer able to accurately perceive their child's language level, they may adopt a more directive style of interaction. This implies that the adult's language adjustment may be a compensatory mechanism partially triggered by the adult's perception of their child's language ability (Mirenda & Donnellan, 1986).

According to Teti and Gelfand (1991), maternal self-efficacy correlates significantly with maternal competence, as well as maternal perceptions of child difficulty and levels of maternal depression. In addition to this, they report that perceptions of child difficulty are significantly associated with maternal self-efficacy, which in turn is related to beliefs of maternal competence. Therefore, there appears to be a positive correlation between parents' belief of self-efficacy or competence and positive maternal behaviour and perception of child difficulty.

It has been proposed in the literature that self-efficacy has a mediating effect on parenting behaviour. Studies investigating self-efficacy report that beliefs of self-efficacy can enhance or impair performance behaviour, as self-efficacy affects cognitive, affective and motivational processes. Bandura describes self-efficacy as "a belief in one's own capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1995). As a result, people who have a high sense of self-efficacy in a given domain think and feel differently from those who believe themselves to be inefficacious. Furthermore, people generally act in a way that is congruent with their beliefs of self-efficacy.

A high sense of efficacy fosters cognitive planning of effective actions (Bandura, 1977). Efficacious people are more motivated, goal-orientated and more empowered to overcome challenges in the environment. Mothers with strong self-efficacy beliefs may

become more responsive caregivers and are likely to create a more stimulating home environment in which their child can reach their full potential. It is within the context of beliefs affecting perception and behaviour that this study is conducted. It investigates the association between these two aspects of personal agency: maternal self-efficacy and the parent's perception of a specific aspect of their child's development, in this case language development. The information will be useful as a first step in considering how maternal beliefs may interact with maternal perceptions.

## **1.2 Definition of terms**

Belief: "Within parenting literature beliefs refer to a system of ideas about a child's nature and development, ideas regarding causality, and opinions regarding conditions that may influence development" (Mize, Pettit & Glyn Brown, 1995, p. 311).

Perception: "The set of processes by which we recognize, organize, and make sense of [attach meaning to] the sensations we receive from environmental stimuli" (Sternberg, 1995, p. 168).

Self-efficacy: "Self-efficacy is a belief in one's own capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1995, p. 2).

Parent-child interaction: "Is a basic platform for learning about each other as well as about the larger environment" (Kelly & Barnard, 2000, p. 276).

## **1.3 Outline of chapters**

Chapter 1 provides a motivation for the study and an outline of the chapters as well as a definition of the key terms used in the remaining chapters.

Chapter 2 describes the role of parental perception of their children's ability on the child's interaction behaviour as well as communication development. It also investigates the concept of self-efficacy and describes the influence that self-efficacy may have within the parenting domain and how this may impact on maternal perception of child ability.

The methodology is described in Chapter 3. This includes a description of the aims, the research design, pilot study, the participants of the study, the materials used in the study, the data collection procedures and finally the data analysis and statistical procedures.

Chapter 4 presents a description and discussion of the results, in accordance with the aims of the study. A description of the self-efficacy of the participants is described, together with correlation between aspects of parental self-efficacy and perception of child language ability.

An integrated discussion of the results is the focus of Chapter 5. A critical evaluation of the study is presented followed by implications and limitations of the current study and finally recommendations for future research.

#### **1.4 Abbreviations**

SETPI: Self-efficacy for parenting tasks index questionnaire.

REEL: Receptive Expressive Emergent Language scale.

SD: Standard deviation

#### **1.5 Summary**

This chapter has provided a motivation for the study, highlighting the importance of maternal self-efficacy beliefs on future maternal behaviour as well as current maternal perceptions of child's abilities and behaviour. This chapter concluded with definitions of key terms and an outline of the chapters to follow.

## Chapter 2: Literature review

### 2.1 Introduction

This chapter describes the role of parental perception of their children's ability on the child's interaction behaviour as well as communication development. It also investigates the concept of self-efficacy and describes the direct and mediational roles that self-efficacy may play on maternal perception of child abilities.

### 2.2 The role of parental beliefs and perceptions on parent-child interaction

Parental beliefs provide a framework within which parental behaviour can be understood. Much of the research conducted in this field has assumed that parental beliefs will directly influence child behaviour through their influence on child-rearing practices. Therefore parental behaviour is often seen as the outward manifestation of parental belief systems (Wachs, 2000). Differences in parental beliefs will be manifested in the ways parents interact with their children (Booth, 1997). These parental beliefs may be communicated directly or indirectly to the child and they can affect the child's own development and success (Wachs, 2000). According to Miller (1988), more adaptive parenting behaviours are associated with relatively sophisticated parental beliefs regarding child development or relatively accurate perceptions of children's abilities. In addition, he states that parental beliefs may vary depending on the different parenting domains.

An individual has the ability to perceive, interpret and recall events in a unique way that is consistent with their beliefs but incongruent with the views of others. In this way an individual is able to construct a unique reality. The relationship between parental beliefs and child outcomes is bidirectional as parental beliefs may influence a child's characteristics in a certain way and child characteristics can turn influence parental beliefs (Wachs, 2000). In this way parental beliefs may lead to cognitive "discrepancies", causing parents to perceive, interpret and recall events in a manner consistent with their individual beliefs but inconsistent with what others observe. Strong negative beliefs result in inappropriate reaction to, or interaction with the child as beliefs influence cognitive processes such as interpretation, problem solving and emotional orientation. Parental

beliefs and perceptions are influenced by past experiences and further influence parental future construction of the parent-child relationship. This perceived experience might also influence their beliefs about their children's abilities and behaviours, as well as parents' beliefs about their own capabilities.

Miller (1988) states that not all of the important parental beliefs are likely to be expressed through direct interaction with the child. He states that some parental beliefs may only be conveyed to the child through cumulative experiences and repeated exposure. According to Booth (1997), the impact of parental beliefs may be broader than the parent-child interaction and may affect the child's general development. Parental beliefs influence the structure of the early physical environment, the amount of stimulation or opportunities that parents provide, as well as parents' general expectations for their children (Booth, 1997). Light and McNaughton (1993) express the same sentiment by stating that parental beliefs and expectations determine the quantity and quality of opportunities parents create for their child. Using literacy as an example, they state that low parental expectations for their child to develop a skill might translate into a lower priority given to specific activities in which that skill can be acquired.

The impact of parental beliefs is not limited to shaping a child's development, but may also influence a parent's persistence during difficult periods of child development, as well as sensitivity to the child's needs (Weis & Lovejoy, 2002). Results from a study by Mash and Johnston (1983) indicate consistent inverse relationships between parenting self-esteem (mothers' belief in their own worth) and maternal perceptions of child behaviour problems. They indicate that mothers of children with hyperactivity believe themselves to be less competent parents than parents of typically developing children. In a second study they also suggest that parenting self-esteem may be particularly sensitive to the effects of atypical child behaviour. They reported a mild to moderate correlation between child behaviour and maternal beliefs (Johnston & Mash, 1989).

This link between perceived child behaviour and maternal competency beliefs suggests that maternal self-esteem significantly correlates to mothers' perception of child behaviour and that a cumulative deficit in parenting self-esteem, as a result of maternal perception of child behaviour problems or unsuccessful child-rearing experiences, could occur. Weis and Lovejoy (2002) conclude that a positive orientation towards parenting may be a key element in sustaining optimal parent-child interaction and that mothers with positive

beliefs reported higher levels of supportive parenting and positive child behaviour.

The parent-child interaction from birth through to preschool years is the major vehicle for opportunities to stimulate the construction of a child's knowledge, organize the child's development and shape future interactions (Kelly & Barnard, 2000; Smith, 2003). In the early years the mother is the dominant partner in the interaction process. Maternal perceptions of the child characteristics, the environment, as well as maternal beliefs shape the interaction. If interaction is perceived as successful then the mother's competence increases. If not, it may lead to feelings of increased stress and decreased competence. Successful interaction allows the child to acquire new developmental skills and unsuccessful interaction may negatively impact on this acquisition. This process is embedded within a broader context in which ecological factors (such as socioeconomic status, family structure and social support) and other parental factors (such as maternal education and cultural values) may all contribute towards maintenance or adjustment of parental perceptions, beliefs and behaviours. These factors are all potential moderators or mediators of the link between parental beliefs and parental outcomes and child characteristics (Wachs, 2000). In summation, beliefs play a critical role in organizing signals parents perceive from their children, as well as their perceptions of their own abilities and therefore influence construction of parent-child interaction and child development over time.

### **2.3 The role of parental perception of child language ability on mother-child interaction and language development**

Von Tetzchner and Grove (2003, p. 11) state that language competence is an individual skill, that is constructed jointly with others before it becomes an individual skill through internalization. This structured guidance provided by the communication partner leads to a gradual mastery of a given language skill and ultimately to the child's autonomous control of the skill (Bedrosian, 1997). According to Vygotsky (1978) good learning opportunities, created by people in the child's environment, promote development. This zone of proximal development is the region where the competent partner is able to facilitate more advanced developmental processes that the child alone would be unable to attain at the point.



According to von Tetzchner and Grove (2003) language intervention is based on this premise: that it is possible to influence child development through environmental adaptation. As the developmental opportunities of children using alternative forms of communication are so dependent on planning, the beliefs and attitudes of the parents and professionals are crucial. The scaffolding of the language environment depends on the behaviour and the beliefs of the people in the environment (von Tetzchner and Grove, 2003).

The importance of judgment-based assessment has been reported in the literature (Dinnebeil & Rule, 1994; Neisworth & Fewell, 1990) as a way to better understand parents' perceptions and perspectives about their child. This alternative viewpoint is not only important to guide interventionists, but also to develop a sensitivity towards the diversity of parental perceptions, and gain insight into the resultant variation in behaviours the child may exhibit when in different contexts. When maternal perceptions are realistic, they can provide interventionists with a clearer understanding of a child's ability, as well as the types of behaviours and adaptation strategies that they themselves may be utilizing to optimize the exchange of communication between the child and themselves.

The results of a literature review study conducted by Dinnebeil and Rule (1994) seems to suggest that there is a strong, positive correlation between parental and professional judgments regarding children's language ability, although parents do report higher estimates of ability. According to the results reviewed by Dinnebeil and Rule, approximately half of the studies reported higher parental estimates of their children's abilities than professionals' estimations. According to Hauerwas and Addison-Stone (2000) parental reports often accurately reflect a child's relative pattern of strengths and weaknesses within the language domain, however, they state that parents generally overestimate a skill relative to the child's actual performance. Conti-Ramsden (1994) states that the variations in maternal interaction patterns or behaviours are usually related to the mother's perception of individual characteristics of the child with atypical language development. Acknowledging the presence of these discrepancies is important in that it provides interventionists with a look into the parents' unique perception of their child's ability and functioning as a key to a more comprehensive understanding of child ability, as well as maternal communication patterns and behaviours.

It is generally accepted that some aspects of maternal behaviour whilst in interaction with children with atypical language development, may well differ when compared to the maternal interaction with typically developing children. Numerous researchers have attempted to qualify different aspects of the interaction patterns of mothers with a child with atypical communication development and mothers of typically developing children. Romski, Sevcik and Adamson (1997) noted that partners of young children using a system for augmenting language (SAL) were sensitive to a child's comprehension level and adjusted their input according to their perception of the child's ability. The mother modifies or adapts her input according to perception of her child's responses, i.e. if the child is unable to respond in interaction the interaction patterns of the caregiver is altered. According to Snow (1995), this process is known as fine-tuning.

When looking at findings highlighted in the literature regarding the interaction between adults and children with communication disabilities, adults tend to produce a high percentage of questions, commands, and requests for clarification, whereas the children tend to produce yes/no answers and provide information when it is requested (Harris 1982, Light, Collier & Parnes, 1985b). According to Harris (1982) and Light, Collier & Parnes, (1985a) caregivers frequently direct interaction by initiating conversations, choosing topics and controlling how the conversation progresses. Mothers make use of more questions and shorter responses when in interaction with children who have low expressive language ability, compared to those children with higher verbal abilities (Conti-Ramsden & Dykins, 1991). Directive parents tend to use language to primarily control a child's behaviour and maintain a topic, rather than as an opportunity to facilitate their communicative development (Conti-Ramsden, 1994).

Results from studies conducted by Pennington and McConachie (1999) and Light et al., (1985a) indicate that mothers' communication that requested a reply from children with a physical disability were likely to be followed by a child's response, whilst mothers' communication that did not solicit a reply was most likely to be followed by another maternal initiation. In other words, children forfeited responses that were optimal and replied only when obligated to do so. A mother's increased directiveness, as seen in the increased number of initiations, has typically been thought to be an indication of the mother's effort to maintain discourse and to get the child to take a turn (Light et al., 1985a). Conti-Ramsden (1994) argues, however, that when parents are no longer able to accurately perceive their child's language level, they may adopt a more directive style

of interaction. This implies that adults' language adjustment may be a compensatory mechanism partially triggered by the adult's perception of their child's language ability (Mirenda & Donnellan, 1986).

Maternal perception of child language ability influences maternal language use and behaviour in interaction. The behavioural changes in interaction with the child, which can be brought about as a direct result of maternal perception of child language ability, may therefore ultimately affect the child's language development. To further explore the link between parental beliefs and parental perception of their child's abilities, as well as the influence they have on parental behaviour in parent-child interaction, the concept of self-efficacy will be discussed.

#### **2.4 Definition and development of self-efficacy as part of an individuals belief system**

"Self-efficacy is a belief in one's own capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1995). According to Shelton (1990) general self-efficacy is relatively stable over time but is influenced by the accumulation of success and failure experiences that a person attributes to himself or herself. Bandura (1977) states that self-efficacy is not only influenced by past experiences, but also by a person's attribution of success to chance or to skill. It follows then that individuals differ in levels of self-efficacy and that a link may exist between self-efficacy and behavioural outcomes.

Tipton and Worthington (1984) state that in a familiar situation specific self-efficacy beliefs influence behaviour or performance whereas in a less familiar situation, general self-efficacy beliefs would exert more influence on a person's behaviour. The construct of general self-efficacy promotes an overarching orientation towards either success or failure. Haidt and Rodin (1999) state that generalized control beliefs, such as general self-efficacy, are not that accurate predictors of specific behaviour, however, they are useful in predicting successful adaptation in broad domains of activity, as well as performance in novel situations. They postulate that this fairly stable control belief is most likely to have the strongest influence in domains in which the person has the least prior experience, as domain specific beliefs have not yet been formulated. Therefore

generalized self-efficacy may enhance or inhibit the formation of domain specific self-efficacy. As stated earlier self-efficacy levels may vary across different domains.

Various factors influence the development of self-efficacy. According to Earley and Lituchy (1991) personal self-efficacy is a belief that mediates between an individual's ability and their performance. Bandura postulates that the following four factors influence the growth of an individual's personal efficacy beliefs, namely, vicarious experience (watching others achieve outcomes); direct experience or enactive learning; verbal persuasion from other sources; and emotional arousal experienced in a situation, such as fear (Bandura, 1977). The impact of an experience on self-efficacy beliefs is further influenced by how the individual perceives and interprets the experience. This appraisal implies an evaluative process whereby an individual assigns meaning to an experience. This process of initial perception and subjective interpretation of the subsequent experience influences the adjustment or maintenance of self-efficacy beliefs. This process, therefore impacts on subsequent performance responses (Levy-Shiff, Dimitrovsky, Shulman & Har-Even, 1998).

Bandura (1977) describes 3 dimensions that may be used to describe the aspects of self-efficacy and the resulting behaviour. These 3 dimensions are the generality, strength, and magnitude of an individual's efficacy beliefs. Generality implies that a certain situation allows individuals to generate positive self-efficacy feelings that can be transferred across to other situations, particularly to those most similar to the situation in which the self-efficacy was enhanced. The second dimension is that of strength. Certain circumstances foster strong feelings of efficacy that are hypothesized to be resilient in nature and not easily overridden. The difficulty of the task further influences the enhancement of self-efficacy, in that mastery of a challenging task is more likely to lead to enhanced self-efficacy beliefs than mastery of an easy task. Efficacy beliefs also differ in magnitude, which affects the level of optimal performance of an individual. Therefore, according to Bandura (1989) people who have higher beliefs of self-efficacy in a given domain will think, feel and act differently from those who perceive themselves as less efficacious. Haidt and Rodin (1999) state that self-efficacy beliefs are among the best predictors of success and performance in many contexts.

Finally, in a process of self-attribution, performance success that is believed to result from an individual's ability and skills is more likely to enhance self-efficacy rather than success that is due to external or situational factors. In addition to self-attribution processes, Haidt and Rodin (1999) state that environmental supportiveness and social variables may either support or inhibit individual success and failure. According to these authors, a supportive system will lead to high individual involvement and sufficient motivation to master tasks. Therefore, nurturing environments will enhance individual self-efficacy beliefs by providing opportunity for success that can be attributed by the individual to his/her own actions. In direct contrast to this, stressful environments in which limited success is perceived will either negatively influence self-efficacy beliefs or will be attributed, by the individual, to external factors.

## **2.5 The mediating influence of self-efficacy on behaviour**

Bandura (1977) states that self-efficacy beliefs can affect behaviour in numerous ways. Firstly, it determines the type of activity a person engages in. Schwarzer (1992) concurs with this and states that apart from the process of intention, self-efficacy influences the processes of 'action taking' (or behaviour) and action control. According to the health action process approach, Schwarzer proposes that self-efficacy directly influences intention, which he describes as a decision to either adopt a behaviour measure, or change the behaviour in favour of other behaviour(s). Secondly, Locke, Frederick, Lee and Babko (1984), also state that the self-efficacy influences behaviour. This influence on behaviour is manifested through the individual's choice of goals. According to Locke and Latham, (cited in Earley & Lituchy, 1991) the relationship between self-efficacy and goal setting is such that successful achievement of the goal gives an individual a sense of mastery and improves efficacy. This enhanced efficacy, in turn, increases subsequent goal aspirations. Therefore, these authors agree that self-efficacy directly influences behaviour and believe that efficacious individuals will engage proactively in tasks, achieve their goals and take on increasing challenges.

Thirdly, Schwarzer (1992) states that the number and quality of action plans an individual makes and executes are dependent on an individual's perceived competence or self-efficacy beliefs. Once an action has been initiated, it has to be controlled by cognition in order to be maintained. Whilst the behaviour is being performed, self-efficacy determines the amount of effort invested and degree of perseverance with the action or behaviour.

Schwarzer states that people with a strong belief of self-efficacy visualize success scenarios that guide their actions and let them persevere under difficult situations. However, it is also possible that high self-efficacy beliefs may allow individuals to become more self-critical and may suppress the human tendency to attribute failure to external causes. In so doing, by becoming more open in acknowledging problems, these individuals may pave the way for pro-active approaches to problem solving. Lastly, Schwarzer states that self-efficacy affects the initiation and persistence of coping behaviour in a stressful situation, where there is no evident or immediate solution to the problem.

Although much has been written on the influence that self-efficacy exerts on behaviour, it is clear from the literature that a reciprocal nature between self-efficacy beliefs and actions or behaviour exists (Shelton, 1990). The very factors that influence the development of self-efficacy, such as the perception of past experience and self-attributional process, are in themselves mediated by a person's self-efficacy beliefs. Therefore performance outcomes and perceived competence both influence and are influenced by self-efficacy. Eden (cited in Earley & Lituchy, 1991) proposes that the relationship between self-efficacy and achievement of personal goals is mutually reinforcing, in that high self-efficacy makes more difficult goals attainable and the achievement of more challenging goals promotes higher self-efficacy expectations.

In conclusion from the above-cited literature, it is clear that ability, past achievements past experience and performance have a direct influence on self-efficacy. In turn self-efficacy influences intention, choice of goals, visualization of success scenarios, as well as the selection and initiation of coping strategies, all of which directly impact on performance. This implies that individuals with previous negative experiences within a specific domain, as well as a perception of their inability or inadequacy to perform certain tasks are likely to have poorer self-efficacy beliefs. This will negatively impact on their performance in these activities and attainment of the goals they choose, as well as the implementation of coping strategies. Thus optimal performance and behaviour may be compromised.

## 2.6 Self-efficacy and the effect on parenting behaviour

Various studies (Coleman & Karraker, 1998; Hastings & Brown, 2002; Johnston & Mash, 1989; Mash & Johnston, 1983; Scheel & Rieckmann, 1998; Teti & Gelfand, 1991; Wells-Parker, et al., 1990) have investigated the role of self-efficacy in relation to predicting parenting practices, as well as the mediating role that it plays in relation to perceived child temperament, parent-child interaction and bonding, as well as perceived maternal stress and depression.

Teti and Gelfand (1991) investigated the link between self-efficacy and various aspects of maternal behaviour including: depression, perception of child difficulty, and social-marital supports. The results they obtained indicate that self-efficacy and maternal reports of competence were positively related. They conclude that maternal self-efficacy is a belief that mediates between feelings of maternal competence and perception of infant difficulty, maternal feelings of depression and available support. In addition, maternal perception of child difficulty was significantly associated with maternal competence after the demographic variables were controlled. Perhaps most striking, however, was the finding that maternal self-efficacy was the factor that most directly related to parenting behaviour. This implies that if maternal self-efficacy is controlled for, neither maternal competence nor external support is significantly related to maternal behaviour. These findings seem to suggest a link between mothers' belief in their own abilities and maternal behaviour. Teti and Gelfand (1991) support this and state that self-efficacy plays a mediational role between perception of child behaviour and maternal feelings of competence, as well as having a direct impact on mothers' behaviour towards their child.

In their research Wells-Parker et al., (1990) report that strong self-efficacy beliefs and adaptive coping strategies were positively related. They state that self-efficacy beliefs predict active or passive coping orientation in the roles of parenting and marriage. They found that in the roles of parenting and marriage, lower scores of self-efficacy were correlated with passive coping strategies such as avoiding or minimizing problem areas. In addition, self-efficacy was also found to be negatively associated with subjective perception of parenting stress. They conclude that role-specific efficacy is a significant predictor of parenting stress and coping responses even after accounting for self-esteem.

Similarly Mash and Johnston (1983) report an inverse relationship between parenting self-esteem and parents' own perception of their child's behaviour problem. Results from their study indicate that parents of children with behaviour problems perceive themselves as significantly less skilled and knowledgeable in their roles as parents, and derived less value and comfort from their parenting roles than the parents of typical children. They also report a high correlation between mothers' perception of child behaviour problems and parenting stress. They suggest that having a child with a disability such as behaviour problems creates on-going stress for parents that may negatively influence their self-esteem. Mash and Johnston state that in addition to the elevated stress levels that are present in families who have a child with a disability or behaviour problems, parents' confidence in their ability to care for their children may also be adversely affected. This may be because they are unable to be critical about their behaviours as they place the outcome of the situation on external circumstances, or adopt passive emotionally orientated coping strategies i.e. anxiety or minimizing the problem as previously discussed. This parental belief of confidence in their abilities is very similar to the concept of self-efficacy, which Bandura (1977,1982, & 1989) describes.

There have been some studies where insignificant correlations have been found between maternal self-efficacy and child and parental outcomes. Coleman (1998) investigated maternal efficacy as a predictor of parenting competence and toddler development. Contrary to her hypothesis, domain specific and general efficacy scale ratings failed to predict parenting competence or child behaviour. However, using Baron and Kenny's (cited in Coleman, 1998) mediation techniques, the author found that domain-specific self-efficacy beliefs do operate as a mediator between perception of toddler temperament and parenting stress and satisfaction.

Hastings and Brown (2002) identified self-efficacy as an important variable in understanding relationships between child behaviour problems in children with autism and parental mental health outcomes. However their data reveals that efficacy has a different effect on outcomes depending on parental gender. Results for mothers indicated that self-efficacy functioned as a mediator of maternal perception of child behaviour problems and mothers' mental health outcome. For fathers, however, self-efficacy was a moderating variable, in that it reduced the impact of child behaviour problems on anxiety only for those fathers dealing with the most difficult children. Johnson and Mash (1989), report that differences for mothers and fathers do exist. They



suggest that for fathers, perception of parenting efficacy may be partially based on the extent to which the child is perceived as problematic. For mothers, however, they report that feelings of parenting efficacy appear to reflect other influences. They state that mothers may rely more on social comparison processes or on estimates of their ability to handle child problems when evaluating their competency as parents. These studies indicate that self-efficacy is an important construct to investigate, however, the direct link between self-efficacy and outcomes may not always be present and self-efficacy may act as a mediator or moderator in the presence of certain other variables.

The studies mentioned above highlight the fact that parental self-efficacy could be affected by gender, perceived parental stress, as well as perceived child behaviour problems. Likewise the studies suggest that parenting belief of self-efficacy also has a mediating role to play between perceptions of stress, and the perceptions of child difficulty as well as having an influence on the type of coping strategies parents use to mitigate stress. In addition, Scheel and Rieckmann (1998) state that without strong parental self-efficacy beliefs, generalization and success of intervention appears to be in jeopardy as these parents who often feel disempowered (attribute outcomes to factors outside their control) are less likely to participate fully in the intervention process. They propose that higher levels of self-efficacy will promote a pro-active approach to parenting and will induce a willingness to acquire new parenting skills, become engaged with the child's treatment agency, and locate and utilize the appropriate community resources. This could be described either as positive coping strategies or positive behaviour based on strong self-efficacy beliefs. Therefore, strong positive self-efficacy beliefs are likely to pre-empt the initiation of coping strategies, accommodations and positive behaviours. In conclusion, although a uni-directional relationship between self-efficacy and other parental beliefs and parental behaviour does not exist, there is a strong literature base to suggest that self efficacy is associated with maternal beliefs of competence, adaptive parenting behaviour, and parental coping strategies in stressful situations. All of the above have a positive influence on perceived child behaviour.

Due to the fact that self-efficacy is domain specific and is likely to vary for different behaviours in different domains, it may be a particularly significant factor in the understanding of the effects that childhood disability has on parents (Hastings & Brown, 2002). In the parenting domain, self-efficacy has been shown to impact on parental behaviours and parenting stress. However, there is very little research that investigates

the association between these aspects of parental cognitive frameworks namely parental self-efficacy and the parent's perception of a specific domain of their child's development, where the development is known to be delayed or altered.

In this study the focus is on a particular dimension of disability, namely a communication disability, and the effects of this stressor on maternal levels of self-efficacy within various parental domains. Existing research within the field of parental beliefs suggests that there could be a positive correlation between perception of child communication ability and levels of self-efficacy beliefs. The aims for this study were to describe self-efficacy ratings of mothers of children with a communication disability, as well as to describe mothers' perception of their child's language ability in order to explore the relationship between perception of child ability (or disability) and maternal sense of competence. This was done in an attempt to begin to understand the impact that maternal beliefs and perceptions have on parent-child interaction.

## **2.7 Summary**

In this chapter, emphasis was placed on highlighting the importance of perception of child language ability on maternal interaction behaviours, as well as the possible influence that self-efficacy beliefs have on maternal behaviour. Relevant studies were discussed in order to emphasize the importance of conducting research that investigates maternal feelings of self-efficacy in the presence of a child with a disability.

## Chapter 3: Methodology

### 3.1 Introduction

This study investigated whether a correlation exists between mothers' perception of their parenting self-efficacy and their rating of their child's language abilities. In this chapter the research methodology used in the study is discussed. The aims of the study are identified first, followed by an analysis of the research design and development of the questionnaire. A brief description of the pilot study, including the results and recommendations is presented. The main study is described according to the participants, the material used, the data collection procedure, and finally the data analysis process and statistical procedures utilized. The development and adaptation of the questionnaires used in this study are discussed in detail within this chapter.

### 3.2 Aims of the study

#### 3.2.1 Primary aims

The primary aim of the study was to investigate whether there is an association between maternal ratings of self-efficacy and mothers' perceptions of the language ability of their pre-school child who has a communication disability.

#### 3.2.2 Subaims

The subaims of the study were to:

- Investigate mothers' self-rating of their efficacy in the parenting role to their child with a communication disability
- Investigate the mothers' perceptions of their child's language competence where their child has a communication disability
- Conduct a preliminary investigation to determine if an association exists between maternal self-efficacy ratings and maternal perception of child language abilities.

### 3.3. Research design

#### 3.3.1 Research design

The study employed a descriptive survey research design, in which the relationship between maternal rating of parental self-efficacy and mothers' perception of their child's language abilities in mothers of children with a communication disability was investigated using a questionnaire format. The researcher chose the survey instrument as surveys have been identified as a suitable instrument for determining self-efficacy beliefs (see Coleman & Karraker, 1998 for a breakdown of the available measures of parenting self-efficacy and related constructs). In this study, the mothers completed a questionnaire that investigated aspects of parenting self-efficacy and mothers' perception of their child's language abilities. Purposive selection was employed in order to ensure that participants had a relevant contribution to make to the study (Leedy & Ormrod, 2001).

#### 3.3.2 Research process

The research followed a linear course that involved:

- adapting the questionnaire from existing questionnaires evaluating the same constructs;
- translating the questionnaires from English to Afrikaans ;
- conducting a pilot study to pre-test the survey instrument;
- identifying all the specials schools in the Pretoria area that included preschool classrooms;
- establishing personal contact with the schools was established;
- obtaining permission to conduct the study;
- arranging dates and times for fieldwork;
- conducting the fieldwork;
- capturing and analyzing data by coding the raw data in the pre-designed block on the survey instrument in order to facilitate data capturing by computer;
- computerizing the results and then conducting the statistical analysis.

### **3.4 Designing the questionnaires**

#### **3.4.1 Rationale for the use of a questionnaire as measurement instrument**

The questionnaire, comprising two sections, was adapted, for the purpose of this study, from existing instruments. The questionnaire was designed to measure mothers' perception of their self-efficacy beliefs in the domain of parenting, as well as their perception of their child's language abilities. A questionnaire was the chosen instrument as it "provides a lot of information fairly speedily and allows speed of analysis (it can be coded and edited quickly)" (Edwards & Talbot 1994, p. 25). Questionnaires have been successfully used to determine self-efficacy beliefs (Brackett Ballenski & Cook, 1982; Coleman, 1998; Hastings & Brown, 2002; Johnston & Mash, 1989; Mash & Johnston, 1983; Teti & Gelfand, 1991), and have also been used by parents to rate aspects of their child's language abilities (Dinnebeil & Rule, 1994, Rescorla, 1993; Reznick & Goldfield, 1994; Thal, O'Hanlon, Clemmons & Fralin, 1999; Yoder, Warren & Biggar, 1997). As self-efficacy beliefs are highly individualized beliefs, testing these beliefs may arouse sensitive feelings. The physical presence of the researcher during data collection may influence the nature of the responses in that the participants may provide the expected response rather than the one that actually describes their situation. Questionnaires can be filled without the researcher necessarily being present and thus they may foster greater honesty and co-operation with regard to data collection (Huysmen, 1994). Therefore the final rationale for make use of a questionnaire was its usefulness in relation to sensitive studies, such as this one.

The data was gathered from the two sections of the questionnaire (excluding the demographic information, which can be viewed in Appendix A). The questions in the questionnaire followed a 5-point Likert format. The rationale for the development of each of the questionnaires is discussed separately.

#### **3.4.2 The Self-Efficacy for Parenting Tasks Index - (SEPTI) questionnaire**

This 53-item scale was developed by Coleman (1998) in order to provide a comprehensive index of domain-specific parenting self-efficacy for use with parents of toddlers. The measure represents the only existing instrument available that uses

“Bandura’s recommended multi-dimensional approach to domain level assessment of parent of children beyond the infancy period” (Coleman, 1998 p. 22). The questionnaire in its original form consisted of seven subsections and was designed to assess parents’ sense of competence pertaining to the following discrete sub-domains of parenting: a) emotional availability, b) nurturance, and responsiveness, c) protection from harm or injury, d) discipline and limit setting, e) play, f) teaching and g) instrumental care and establishment of structure and routines. The original scale items were rated on a 6-point Likert scale with possible responses ranging from “Strongly Agree” to “Strongly Disagree” (Coleman, 1998). The total score of the scale has a range of 53 to 318. High scores on both the subscales and on the total scores were indicative of higher self-efficacy after several items were reverse scored.

Internal consistency reliability coefficients were provided for each subscale of the instrument (Coleman, 1998). The Cronbach, alpha coefficients were computed for each subscale and are as follows: emotional availability = .67; nurturance = .71; protection = .53; discipline = .81; play = .92; teaching = .73; and instrumental care = .46. Furthermore, total scores of the SEPTI-TS were found to be significantly correlated with scores on the MEQ ( $r = .43$ ), a maternal efficacy questionnaire designed to assess mothers self-efficacy beliefs in relation to specific areas of infant care; as well as with scores on the parenting sense of competence (PSOC)-Efficacy subscale ( $r = .57$ ). These results provide preliminary construct validity for the scale.

However, for the purpose of this study the researcher chose five of the seven sections that scored the highest internal consistency reliability as measured by Cronbach's alpha coefficients. Co-efficients of the protection and instrumental care subscales do not have high enough Alpha values to be considered reliable and the author of the test stated that these sections would need to be refined before they could be considered reliable (Coleman, 1998). The adapted measure therefore contained the following five subscales: nurturing/responsiveness; discipline/limit setting; play; teaching and learning (with the focus on learning language); and emotional availability. The emotional availability subsection of this scale explored the mothers’ perception of their ability to “be there for their child when they are needed”. The nurturing subsection allowed mothers to rate how easy it is for them to perceive their child’s moods and act accordingly, while in the play subsection parents were asked to rate the level of interaction with their child as well as how easy it was for them to engage in this activity. Discipline subsection asked mothers

to rate how they feel regarding imposing limits and structure in everyday life. The teaching subscale asked parents to rate how competent they feel during instruction in and explanation of concepts.

The final questionnaire used in this study consisted of 38 statements; each of the items is rated on a 5-point Likert type scale. A 5-point Likert type scale (with neutral “sometimes”) was decided on above the original 6-point scale as the researcher felt that as this is an exploratory study a neutral opinion on a question was as important as a positive or negative stance. The researcher therefore, did not want to force participants in a direction (positive or negative) by not providing them the neutral option. Possible responses on the adapted scale range from “Never” (score of 1) to “Always” (score of 5). Higher scores on the scale are indicative of stronger self-efficacy beliefs after several items are reverse scored. The finalized parent self-efficacy scale (in both English and Afrikaans) used in this study can be viewed in Appendices B and C respectively.

#### 3.4.3 Receptive-Expressive Emergent Language scale, 2nd edition (REEL-2).

The second variable being investigated related to mothers' perception of their child's language competence. In the questionnaire used for this study questions were selected from the REEL-2 (Receptive-Expressive Emergent Language Scale) 2nd edition (Bozch & League, 1991). Bzoch & League state that The REEL-2 was designed for use with infants and toddlers from birth through to 3 years, and may also be used for older children when significant delays in the child's language development are suspected. Furthermore, the REEL-2 is designed on the stages and patterns of development of emergent language skills, which are similar in most languages (Bzoch & League, 1991). This measure was therefore decided on for a number of reasons. Firstly, it covers language development through a variety of developmental stages. Secondly, although it is designed for screening children between the ages of 0-36 months it may be used to for older children with significant delays in language development. One of the criteria for inclusion in this study was that the child had to have a communication disability. Inherent in this criterion is the probability of delayed or deviant language development, which makes this instrument a valid choice. Thirdly, the test measures competence in receptive and expressive language similarly for children from different socioeconomic backgrounds and race. Therefore, the REEL-2 may be used to obtain reliable language scores without

the child's home language, gender, socio-economic status or race significantly influencing the results. As none of these variables were controlled for in the present study the need for a valid and reliable instrument that could be used irrespective of these variables was imperative.

This measure is a language test (focusing on development of vocabulary and syntax) and does not assess to any great depth other skills necessary for successful communication i.e. alternative forms other than verbal communication; cognitive skills that are precursors to communication. In its original format the REEL-2 is administered in is through a structured interview with the mother or primary care-giver of the child. The REEL-2 consists of two subscales, the expressive language subscale and the receptive language subscale. Each subscale contains a total of 66 questions (3 questions at each specific age level within a stage). Each subscale is marked in 4 stages:

- stage 1: birth to 3 months
- stage 2: 3-9 months
- stage 3: 9-18 months
- stage 4: 18-36 months.

The reliability and validity of the scale has been previously established. Internal consistency co-efficients were computed (using completed scales from normative samples) for each of the one-year intervals. Alpha co-efficients were averaged using the z-transformation technique and the co-efficients are .95, for both the receptive and expressive subscales and .97 for the total test. Content validity was estimated using item analysis (item discrimination) and was also found to be satisfactory (Bozch & League, 1991).

In order to facilitate the comparison of the data obtained on the self-efficacy and language sections of the questionnaire the original REEL-2 scale was adapted for the purpose of this study. Questions from the original REEL-2 were worded in such a manner that maternal responses could be captured using a 5-point Likert type scale; examples of the original questions and modifications can be viewed in Appendix D. Out of a possibility of 3 questions per age level, one statement was identified for the adapted measure, starting from the 12-month receptive level (stage 3) and the 6-month expressive level (stage 2). These values were decided on as the children targeted at the schools should be communicating at a symbolic level and the researcher did not want to include



unnecessary number of questions in the questionnaire. The statement selected from each stage was the one that the researcher rated as being the easiest for the mothers to identify and answer considering that the mother would be responsible for completing the questionnaire and that no prompting could be given during completion.

The composite receptive language questionnaire thus contained 10 items and the composite expressive language questionnaire contained 16 items. The final questionnaire used in this study consisted of 26 statements. Each of the items is rated on a 5-point Likert type scale. Possible responses on the adapted scale range from “Never” (score of 1) to “Always” (score of 5). Higher scores on the scale are indicative of higher language abilities of the child as perceived by the mother. The finalized language questionnaire (in both English and Afrikaans) used for this study can be viewed in Appendices B and C respectively.

### **3.5 Pilot study**

#### **3.5.1 Objectives, results and recommendations of the pilot study**

The objectives of the pilot study were to refine the adapted measurement for use in this study for the South African context, translate it and pretest the quality of the two subsections of the questionnaire. The following were considered during the piloting of the questionnaire:

- the ease at which the sections of the questionnaire were understood with specific reference to the terminology of the questionnaire;
- elimination of the presence of ambiguous or misleading statements;
- the minimization of any difficulties the participants may have had in completing the two questionnaire sections;
- the clarity of instructions and the layout of the questionnaire;
- the time taken to complete the questionnaire as well as the ease of data coding.

These objectives, as well as the results and recommendations of the pilot study, can be viewed in Table 3.1 and will be discussed in more detail in the following sections.

### 3.5.2 Adapting the questionnaires for the South African context.

Two mothers of children with communication disabilities participated in this initial phase of the pilot study. They reviewed the questionnaire for relevance of questions, clarity of wording, use of jargon, and ambiguous or misleading questions. Both of the participants were English speaking. The questionnaires were emailed to the respective parents. One participant returned the questionnaire by fax and the second one via email. The comments were considered and the necessary modifications to the questionnaire were made. The revised questionnaire was then re-sent to the participants for final comments and to ensure that their input had been correctly interpreted. The results and recommendations from this phase can be seen in Table 3.1. In the second phase of the pilot study, the questionnaire was translated into Afrikaans.

### 3.5.3 Translation of questionnaires

The following procedure was followed during the translation process.

- The provisional English questionnaire (including the modifications of the first pilot phase) was translated into Afrikaans by a speech therapist whose mother tongue is Afrikaans. She was presented with the English questions and provided the Afrikaans translation for each question
- The provisional Afrikaans version was then presented to a second speech therapist who is fluent in both English and Afrikaans. She performed a blind-back translation of the provisional Afrikaans questionnaire into English
- The researcher and the original translator compared the provisional English version and the back-translated English version in order to identify which questions in the Afrikaans version differed in meaning to the provisional English version
- The researcher and the original translator then made the necessary modifications to the provisional Afrikaans questionnaire based on the results of the blind-back translation process. This was done to ensure that the researcher could say that the questions in the English and Afrikaans versions of questionnaires respectively, were essentially equivalent in meaning. Examples of the modifications can be viewed in Appendix E.
- The finalized English and Afrikaans questionnaires were edited to minimize

spelling and grammatical errors.

Results from the translation process indicated 22 out of the 26 questions in the child language section of the questionnaire were accurately translated as can be seen in Table 3.2. In the finalized questionnaire questions 5 and 8 were modified from the original Afrikaans version. Questions 18 and 24 were re-worded in the finalized Afrikaans version. Thirty-one out of the 38 questions in the child language section of the questionnaire required no modification from the provisional Afrikaans translation to the final translation. In the finalized Afrikaans questionnaire, questions 3, 8, 17 and 30, were modified. Questions 9, 26 and 37 were re-worded in the finalized Afrikaans version. These changes can be viewed in Appendix E.

Table 3.2 Accuracy of translation of questionnaires during the translation process

Modifications	Self-efficacy subsection	Child language subsection
100% agreement (synonyms accepted)	n=31	n=22
Conceptual agreement (with minor phrasing or word discrepancies)	n=4	n=2
Problematic discrepancies- (clarification needed)	n=3	n=2
Total	n=38	n=26

In the second pilot study the finalized English and Afrikaans versions of the questionnaire were then field tested a final time.

#### 3.5.4 Field testing questionnaire

Three mothers of children with communication disabilities participated in this phase of the pilot study. One participant was English speaking and two were Afrikaans speaking and they complied with the selection criteria for the participants of the main study. This was done to facilitate the identification of possible difficulties, as the pilot study participants would have a similar understanding of the questionnaire statements as the research participants. Table 3.3 describes the participants in this phase of the pilot study.

Table 3.3 Participants in the third phase of the pilot study

Mothers Age	Child's Age	Child's Diagnosis	Home Language
22	3,9 years	Delayed speech and language development	Afrikaans
34	4,6 years	Diffuse cerebral dysfunction, Epilepsy, little or no functional speech	Afrikaans
43	6,8 years	Athetoid Cerebral Palsy, little or no functional speech	English

The procedure of the third phase of the pilot study was the same as the first. The questionnaire was emailed or faxed to the participants, who then completed the questionnaire. The completed questionnaire as well as the comments were then emailed or faxed back to the researcher.

Table 3.1 Phases of the pilot study and the results and recommendations: Materials comprised of the self-efficacy and language sections of the questionnaire

Objectives	Procedures	Recommendations	Results
Phase One: adapting the questionnaire to the South African context			
1. To determine any difficulties the participants may have with the adapted questionnaire content and terminology.	Participants completed the questionnaire and were encouraged to question any word(s) they did not understand and to comment on the clarity of the individual questions.	<ul style="list-style-type: none"> <li>• Questions and statements identified by the participants as ambiguous were primarily as a result of using unfamiliar terminology or jargon.</li> <li>• Participants suggested some of the questions that used American phrases in the maternal self-efficacy questionnaire needed to be re-phrased using South African English.</li> </ul>	<ul style="list-style-type: none"> <li>• Some American phrases were replaced. An example is: "I find it hard to just loosen up" which was replaced with "I find it hard to relax."</li> <li>• Problematic statements were re-phrased in order to ensure parents would be able to fill in. Examples include: "...does not seem to be coming as naturally for me..." which was replaced by "is not as natural for me."</li> <li>• Words such as 'often' and 'always' were deleted from the questions as they clashed with the 5-point Likert legend and made the questions awkward to answer. An example is: "I can always think of something to play with my child" which was replaced with "I can easily think of something to play with my child".</li> </ul>
2. To determine any difficulties the participants may have experienced whilst completing the questionnaire.	Participants were encouraged to comment on any formatting aspects or aspects of the written instructions that made it difficult for them to complete the questionnaire.	<ul style="list-style-type: none"> <li>• Participants commented that it was difficult to ensure that they had completed every question.</li> <li>• Participants commented that the instructions were clear however it was suggested that a key to the questionnaire be added to the top of each page.</li> </ul>	<ul style="list-style-type: none"> <li>• It was decided that the questionnaires would be spaced in 1,5 spacing in the final version in order to facilitate easy reading of the questions.</li> <li>• It was decided to place the legend (key to 5-point Likert scale) on top of every page of the questionnaire so that participants would not have to continually refer to the front page.</li> </ul>

Table 3.1 Phases of the pilot study and the results and recommendations continued

Objectives	Procedures	Recommendations	Results
Phase Two: Translating the adapted questionnaires into Afrikaans			
1. To translate the two subsections of the questionnaires into Afrikaans.	A qualified speech therapist whose home language is Afrikaans translated the questionnaires into Afrikaans.	<ul style="list-style-type: none"> <li>The questionnaire was translated into Afrikaans while the researcher was present.</li> </ul>	<ul style="list-style-type: none"> <li>This provisional Afrikaans translation of the questionnaire was given to a qualified speech therapist to do a blind-back translation of the Afrikaans questionnaire into English.</li> </ul>
2. To conduct a blind-back translation of the questionnaire from Afrikaans into English and to compare to original in order to ensure that the English and Afrikaans questionnaires are equivalent.	A qualified speech therapist did a blind back translation of the provisional Afrikaans questionnaire into English. The researcher and original translator compared the two English questionnaires for degree of equivalence.	<ul style="list-style-type: none"> <li>Minor adaptations to the provisional Afrikaans version of the questionnaires were suggested based on the blind back translation.</li> </ul>	<ul style="list-style-type: none"> <li>Some of the questions on the provisional Afrikaans questionnaires were modified to ensure that the questions in both the English and Afrikaans questionnaire were equivalent.</li> <li>Examples of these questions and their modifications can be seen in Table 3.2.</li> </ul>
Phase Three: Field test the final English and Afrikaans version of the questionnaire			
1. To determine user-friendliness of the finalized version of the English and Afrikaans questionnaires.	Three participants completed the questionnaires (1 English speaking participant and 2 Afrikaans speaking participants).	<ul style="list-style-type: none"> <li>They stated that they completed the questionnaires easily: and did not find any questions that they could not answer.</li> </ul>	<ul style="list-style-type: none"> <li>The researcher felt that the adapted subsections of the questionnaire was ready for use.</li> </ul>
2. To determine the estimated time it takes to complete the questionnaire.	Participants completed the questionnaire and were asked to record the time it took them to complete the questionnaire.	<ul style="list-style-type: none"> <li>Participants related that it took between 20-30 minutes to complete both sections of the questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>This will be noted in the letter that the parents receive when they requested to participate in the project.</li> </ul>

## 3.6 Main study

### 3.6.1 Selection of participants

Purposive selection was employed in order to ensure that participants had a relevant contribution to make to the study (Leedy & Ormrod, 2001). Four schools catering for children with special needs were targeted in the Gauteng province. Mothers of children in the pre-school and Grade R classes from all the participating schools were targeted to participate in the research project. Mothers were randomly assigned to Group A or to Group B. Group A completed Questionnaire Booklet A and Group B completed Questionnaire Booklet B. Booklet A and Booklet B contained the same questionnaire, however the order of the sections of the questionnaires differed to ensure that the participants completed the questionnaires in a specific order. This was necessary in order to account for order effects in administration of the questionnaires.

### 3.6.2 Selection criteria for children with communication difficulties

The following selection criteria were used to identify children with communication difficulties whose mothers would be included in the project. The speech therapist at the targeted schools was solicited to judge whether the child met with the given criteria.

- Children must be between the ages of 3,0 – 6, 11 years and should attend a pre-school for children with special educational needs.
- The children must attend a school where the medium of educational instruction is English or Afrikaans.
- The child must be living at home with the mother and therefore mothers of children in the school hostels were not targeted.
- The child must have a communication disability as identified by the speech therapist that provides services to the learners at the school.

### 3.6.3 Description of children with communication difficulties

Of the 25 children whose mothers consented to participate in the study, 19 were male and 6 were female. The children's age, diagnoses and birth order can be viewed in the figures below.

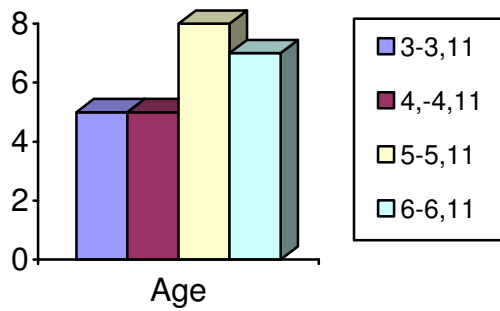


Figure 3.1 Ages of the children

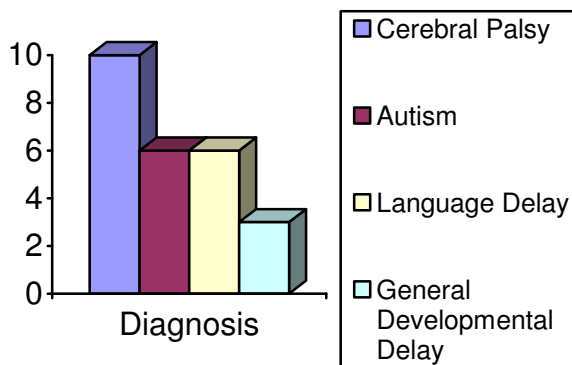


Figure 3.2 Diagnosis of children

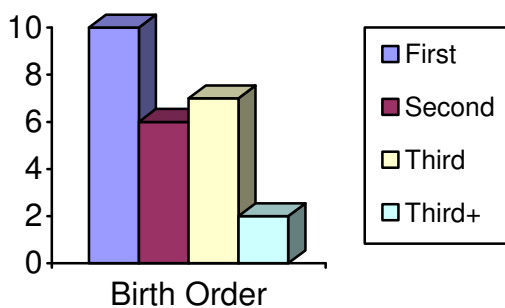


Figure 3.3 Birth-order of the children



#### 3.6.4 Participant selection criteria

The participants (mothers) were selected according to the following criteria:

- The participants should be mothers of children complying with the criteria discussed under 3.6.2.
- The mothers' level of proficiency in English or Afrikaans should be at a level where they are able to complete the questionnaires. To ensure that the mothers have the level of proficiency needed the researcher included those mothers where English or Afrikaans is the language spoken at home, or those mothers whom the therapists reported were fluent in either English or Afrikaans
- The mother and child should reside in the same home and the mother should be actively involved in parenting the child. Mothers of children who are weekly borders were therefore excluded.

The mothers should also be willing to participate as well as provide information regarding the nature of the child's disability, age, position in the family and gender. Mothers signed a consent form indicating their willingness to participate.

#### 3.6.5 Description of participants

Twenty-five mothers participated in the project. Descriptive information that was obtained from this group of mothers included age, employment status and level of education achieved as well as previous exposure to parent counseling or guidance and was collected from a demographic questionnaire attached to the front of the questionnaire. The completed demographic questionnaire can be viewed in Appendix A. Although information was not specifically requested regarding socioeconomic status, the mothers all resided in an area with reasonable proximity to the target schools as their children were day scholars. Three of the four schools are located in a predominantly urban middle class neighbourhood. One school although set in the same geographic area, has a higher attendance of scholars from one or two previously disadvantaged neighbourhoods – four parents participated in this study from this school. The mothers' ages at the time of completing the questionnaire ranged from 24 - 48 as can be seen in Figure 3.4 below. The participants' age, ethnicity, level of education and current

employment status can be viewed in the figures below.

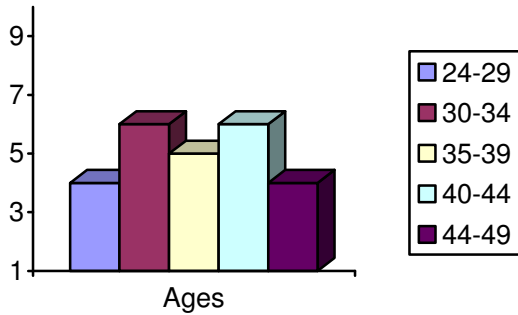


Figure 3.4 Current ages of participants

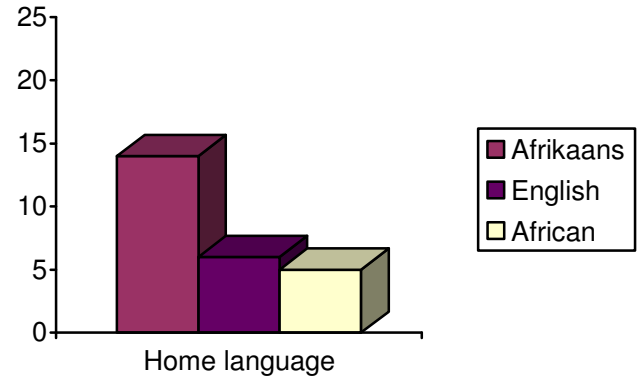


Figure 3.5 Home language of the participants

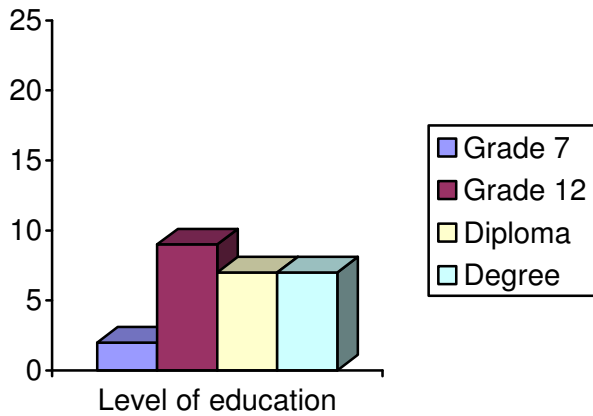


Figure 3.6 Highest educational qualifications of participants

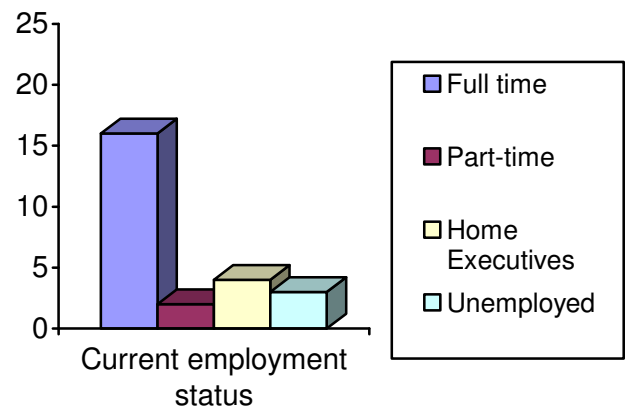


Figure 3.7 Current employment status of participants

### 3.6.6 Materials for the study

The measuring instrument used in the main study, comprised the self-administered questionnaire consisting of 2 subsections (a language section and a self-efficacy section) and contained a total of 64 questions. A demographic questionnaire accompanied the questionnaire. Construction of the questionnaire is discussed in section 3.4.2 and 3.4.3 and field-testing of the questionnaire is discussed in detail in Table 3.1.

### 3.6.7 Data collection procedures

#### 3.6.7.1 *Preparation for fieldwork*

The preparation for the fieldwork can be condensed into the following steps:

- step 1: The Gauteng Education Department's permission was obtained for the study to be done within four schools for learners with special educational needs in the Gauteng Province;
- step 2: The principals of the four schools were contacted to request permission to conduct the study at their school. Letters of permission were signed and a written description of the nature and importance of the research to be conducted was given to the principals (see Appendix F);
- step 3: Children in the schools that fitted the selection criteria discussed above were identified by the teachers and or speech therapist(s) working at the schools and a letter was sent home stating the purpose of the research and asking mothers if they would be willing to consent to participate in the study (see Appendix G). A return slip with consent (as well as a contact telephone number) was required before the questionnaires were distributed;
- step 4: A formal arrangement was made with the schools to confirm the date and time for the distribution of the questionnaire;
- step 5: The questionnaires were compiled. A yellow cover identified group A's questionnaire whilst the Group B's questionnaire was identified by a blue cover. In Group A the questionnaires were arranged in the following order: the demographic information, followed by the parenting self-efficacy questionnaire, followed by the child language questionnaire. In Group B the questionnaires were arranged in the following order: the demographic information, followed by the child language questionnaire, followed by the parenting self-efficacy questionnaire. Each questionnaire was coded with a unique respondent number.

### 3.6.7.2 Data collection

- Step 1: The mothers were assigned to either group A or Group B and received the questionnaire with the subsections in the specified order. The questionnaires were sent home with the child. The classroom teacher wrote a letter in the child's homework book to ensure that the mothers acknowledged the receipt of the questionnaires. The mothers were asked to complete the questionnaire in their own time and return the questionnaire by a given date to the classroom teacher
- Step 2: The researcher's contact telephone number appeared on the permission form and the researcher telephoned the participants to ensure that they had received the questionnaire and stated that she could be contacted should they experience any difficulty in completing the questionnaire
- Step 3: The researcher collected the completed questionnaire (1 week after they were distributed)
- Step 4: The researcher checked the questionnaires to ensure that all of the data were present. If questions were not answered the researcher contacted the mother telephonically and requested the missing data
- Step 5: After coding the data, statistical procedures were implemented and the results were analyzed according to the aims and objectives of the study.

Steps 1 through to 5 were repeated at each of the 4 schools targeted. A total of 35 questionnaires were distributed to the 4 schools. The researcher received 21 questionnaires within the initial time frame. The researcher contacted the participants who had not yet returned their questionnaire and requested that they to return the questionnaires. At the end of the stipulated time an additional 4 questionnaires had been returned. This implies that there is a response rate of 72%. The data of 25 questionnaires were then coded and analyzed.

### 3.6.8 Data analysis and statistical procedures

All the data were coded on the questionnaire, in the pre-designed column, marked "For Official Use". The encoded data were then subsequently computerized for statistical analysis using the SAS program. The statistical procedures used and the motivation for their selection is presented in Table 3.4.

Table 3.4 Statistical procedures selected

Type of statistics utilized	Statistical procedure selected	Motivation for selection
Statistics to determine internal reliability	Item analysis	To determine the internal consistency of the scale by correlating all items on a single test with each other.
	Cronbach's Alpha method	According to McMillan and Schumacher (2001) Cronbach's alpha is generally the most appropriate type of reliability for survey research in which there is a range of possible answers for each item.
Simple descriptive statistics: measures of central tendency	Mean and median scores	The mean is considered the most stable measure of central tendency, whilst the median is the best value of central tendency for ordinal data (Brink, 1999).
	Standard deviation	This measurement indicates the nature of the distribution of a set of scores (McMillan & Schumacher, 2001).
Descriptive statistics: measures of relationship	Corelational co-efficients: Spearman's rank co-efficients	To determine the nature and extent of the relationship between the variables Spearman's rank is used when both variables are measured on an ordinal scale (Brink, 1999).
	Scatterplot (total score per participant for each of the two subsections of the questionnaire)	The scatterplot is a graphic representation of the relationship of each subject's scores on the two variables. This provides a general indication of the nature of the relationship, the direction of the relationship and the strength of the relationship (McMillan & Schumacher, 2001).
Inferential non-parametric statistics	Kruskal-Wallis test	This test is used to determine whether the difference between two or more means deviate from one another significantly or merely by chance. If a statistically significant if found other tests could be used to determine which of the means differ significantly (Brink, 1999).

### 3.7 Summary

This chapter described the methodology of the study. It included the aim and sub-aims of the study. A description of the pilot study and its results were discussed. The modifications and translation of the questionnaire were highlighted. Criteria for subject selection, as well as descriptive information regarding the material and equipment utilized for the main study were provided. Finally, data collection and analysis were discussed.

## Chapter 4: Results and discussion

### 4.1 Introduction

The purpose of this study was to explore whether an association exists between the two constructs of maternal self-efficacy and maternal perception of child language abilities, and to determine the strength of this association. In this chapter the reliability of the measure is discussed in terms of item analysis and subscale correlation. The overall ratings of the participants are discussed, followed by the correlation results as well as associations between subscales and the child diagnosis.

### 4.2 The reliability of the measuring instrument

According to Brink “internal consistency is a useful device for establishing reliability in a highly structured quantitative data-collection method” (1999, p.172). The ITEMAN programme was used to compute Cronbach alpha values and to do an item analysis to determine the internal consistency of the questionnaire. Co-efficient alpha values for the five self-efficacy subscales are as follows Nurture = .82; Discipline = .61; Play = .74; Teaching = .77; Emotional availability = .75. The deletion of items 15 and 23 improved the Cronbach alphas for discipline from .56 to .61 and teaching from .74 to 0.77. For the language subscale the alpha co-efficient for the receptive subscale was .86 and for the expressive subscale .83. According to McMillan and Schumacher (2001) an alpha value of .70 is acceptable for instruments that measure personality type traits. The Cronbach alpha values are presented in Tables 4.1 and 4.2.

Table 4.1 Comparison of Cronbach Alpha values for the self-efficacy subscale

Self efficacy subscale					
	Nurture subsection	Discipline subsection	Play subsection	Teaching subsection	Emotional availability subsection
Alpha values	.82	.61	.74	.77	.75

Table 4.2 Comparison of Cronbach Alpha values for the language subscale

Language subscale		
	Receptive subsection	Expressive subsection
Alpha values	.86	.83

The above tables indicate that the measurement instrument possesses internal consistency, which can be described as “the extent to which all items on an instrument measure the same variable” (Brink, 1999, p. 171). Once internal consistency of the questionnaire was established, overall ratings of self-efficacy and perception of child language abilities were investigated.

### 4.3 Overall ratings of self-efficacy and perception of child language abilities

#### 4.3.1 Self-efficacy ratings

The first subaim of this study required a description of the mothers’ ratings of their parental self-efficacy. Figure 4.1 indicates the mean scores of each of the subsections of the self-efficacy questionnaire. The mean self-efficacy subsection scores for the group of participants are relatively high ranging from 3.3 (SD=0.6) to 4.3 (SD=0.5). The small variation in standard deviation implies that scores obtained for each section are fairly stable across this group of participants. Coleman (1998) also found high means for the participants in her study. She reports the mean value for the entire scale as 5.11 (potential range of 1 to 6) with a standard deviation of .42). The reasons she provides for the high means for the group of mothers participating in the her study include, the absence of behavioural or disabling conditions; presence of interesting environment in which the observations took place; the possibility of a halo effect (due to the parents having some idea of the research aims and knowing that their interactions were being recorded), as well as the fact that only half of the mothers contacted to participate in the study consented to do so which may have biased the sample.

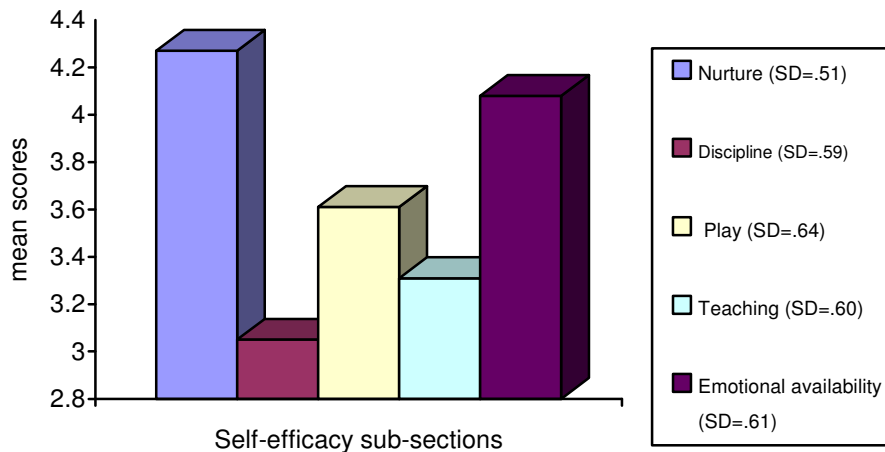
For this group of mothers the presence of high means was unexpected. Not only could

the mothers in this study arguably have had more negative parenting experiences (due to the child's disability), but the presence of a disability could be considered a stressor and could have negatively impacted on self-efficacy beliefs. Maddux (2002) states that self-efficacy beliefs are cumulative i.e. they develop throughout the lifespan, therefore, negative experiences due to the presence of a childhood disability could have led to a decrease in competence and self-efficacy beliefs over time.

Possible reasons for the high means reported in this study, could again have been the result of a relatively small sample of participants (many of whom shared similar demographic variables). In spite of their variation in age, variation in the diagnoses of their children, as well as their children's ages, the mothers in this group are all limited to a specific geographical area, the majority of mothers have a diploma or degree, reside in a middle class neighbourhood, and all of the participants were married at the time of the study. These variables have in previous studies mediated on maternal self-efficacy beliefs (Johnston & Mash, 1989; Teti & Gelfand, 1991). In addition, these mothers have relatively easy access to services and the severity of their child's disability is not such that the child is unable to attend the special school in their area. These factors could have impacted on mothers' sense of parental self-efficacy and may partially account for the reported mean scores.

The researcher feels that the halo effect, although postulated to have contributed to the high means in the study by Coleman (1998), did not influence the results of the current study for two reasons. Firstly, parents were not videotaped in interaction with their child, in other words there was no physical contact between the researcher and the participants, and secondly no identifying information was requested in the questionnaire. Therefore, the participants should have felt more comfortable in expressing their true feelings in response to the questions.





Scores: 1 = never 2 = seldom 3 = sometimes 4 = often 5 = always

Figure 4.1. Means of the five subsections of the self-efficacy subscale of the questionnaire

From Figure 4.1 above, it is clear that mothers in this sample have highest self-efficacy on the nurturing and emotional availability subscales. The mean values are 4.2 and 4.0 for nurturing and emotional availability respectively. This implies that a large percentage of the participants answered on the positive side (i.e. sometimes (3), often (4) or always (5) to questions in these subscales). The construction of the scales was discussed in detail in section 4.3.2 (the self-efficacy for parenting tasks index (SEPTI) questionnaire). Numerous factors may have influenced the means obtained for nurturing and emotional availability in this sample.

The mothers in this sample are all actively involved in parenting their child as all of the children reside with their parents. This may have enhanced their feelings of competence, as they are currently actively engaged in this role. In other words these mothers are "regularly available for the protection, nurturance and care of [their] children" (Coleman & Karraker, 1998, p.47). The children in this sample all have access to school based interventions services that they require. This could be seen as having a positive impact on maternal self-efficacy. The fact that the children have access to services may have impacted positively on the parents' sense of efficacy in the nurturing and emotional availability sections of the self-efficacy questionnaire, as these mothers would feel that they were contributing significantly toward the management of their child's disability and overall well-being. In addition, they all receive support from the school-based intervention

teams. The results from this group of mothers indicate that, irrespective of their child's communication difficulties, these mothers feel that they are able to love, and provide emotional and physical support to their child.

The lowest self-efficacy rating for these mothers is on the discipline, play and teaching subscales as can be seen in Figure 4.1. It would appear as if these participants feel least capable in these parenting domains. According to Brackett Ballenski and Cook (1982) mothers of typically developing preschool children (ages 3-5) found discipline and limit setting amongst their most difficult parenting roles. Thus it would appear as if discipline appears to be a part of parenting, during the preschool phase, that all mothers (irrespective of whether their child has a disability or not) find challenging. Mothers in this sample scored high on nurturing and it is plausible that they may be protective of their child, who already has some form of disability and this may impact on their ability to choose appropriate discipline strategies and engage in disciplining their child. This may negatively impact on their competence and self-efficacy in this domain.

For the group of mothers in this study, teaching is a challenging part of parenting. This is, however, in direct contrast to results of mothers of typically developing toddlers and preschoolers who rated teaching talking, social interaction skills and numbers and letters amongst the roles that they felt most comfortable with (Brackett Ballenski & Cook, 1982). The mothers participating in this study all share the "teaching" role with other professionals whose primary role it is to "minimize" the effects of the disability and promote development. The presence of other professionals (interventionists) may impact on a mother's feelings of efficacy in a variety of ways.

Firstly, parental disempowerment within the professional-parent relationship impacts directly on parental competence. Turnbull, Turbiville and Turnbull (2000) state that parent-professional partnerships have been traditionally marked by "power over" relationships that are characterized by professionals presuming a higher sense of competence and greater knowledge than mothers. This results in professionals exerting the most control in the intervention process. Smith (2003) states that parents of children with disabilities often employ teaching strategies, when in interaction with their child, as they believe that they are the best method of meeting the goals that professionals set in intervention. However, parents often perceive these directive strategies as counter-intuitive. von Tetzchner and Grove (2003) state that whilst in interaction with their child,

parents of children using alternative communication forms may find it difficult to utilize strategies that they feel are counter-intuitive.

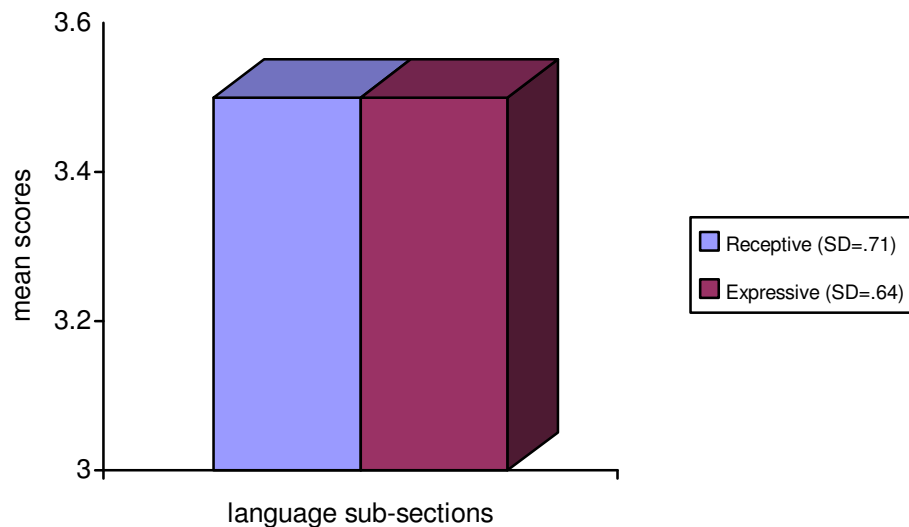
Secondly, interventionists often alter mothers' orientation towards interacting with a child with a disability. Parents of typically developing children are more likely to structure the environment and provide opportunities for development rather than engage in direct teaching or reinforcement of skills. According to Booth (1997), parents of children without disabilities regard learning as a developmental progress that is formed by a balance between what the child is ready to learn and the environmental supports. Interventionists may pressurize parents into using more directive strategies whilst in interaction. These strategies may be utilized in an attempt to minimize problematic interaction patterns, as a result of the fact that children with disabilities may be less responsive to environmental and other support. If this is the case, then these teaching strategies may negatively impact on interaction, as communication is then used as an educational tool and interferes with good learning opportunities for the child as Smith (2003) points out.

Parents may therefore employ these direct strategies because these are the strategies that are taught to and expected from them. Although these strategies may help them to communicate with their child with a disability (who may be less responsive and therefore more difficult to teach), they are not intuitive and therefore parents feel less competent in utilizing these strategies. This lack of competence may negatively impact on maternal self-efficacy beliefs. Conclusions from this discussion imply that not only could the lack of competence in this area be a result of the child's inherent characteristics or disability, but also as a result of professional involvement with the families through intervention, whereby the emphasis of intervention is on teaching and instruction (rather than on facilitating opportunities for development and discovery in a more developmentally congruent fashion). This may negatively affect maternal competence and therefore self-efficacy within the given parental domain.

#### 4.3.2 Ratings of child language ability

The second subaim of this study requires a description of the mothers' ratings of their child's language ability. The mean for both the receptive and expressive subscales is 3.5 with a SD of .71 and .64 respectively, as can be seen from Figure 4. 2. From the figure it

is clear that there are no differences in the means obtained for the expressive and receptive language subscale.



Scores: 1 = never 2 = seldom 3 = sometimes 4 = often 5 = always

Figure 4.2. Means of the two subsections of the language subscale of the questionnaire

Although the mean is the most stable measure of central tendency, it is influenced by the magnitude of the measurements as well as by the number in the data set. In addition, the ordinal data obtained from the questionnaires are composed of ordered categories and therefore the middle case of an arrangement of the categories has great potential as a summary of the distribution. The median value captures the central point rather than either extreme, “so that half of the measurements are above the median and half below it” (De Vos, 1998, p.215). The median is therefore used as a measure of central tendency in the analysis in Tables 4.3 and 4.4. The median values for individual questions within the expressive and receptive language scale will be discussed below.

#### 4.3.2.1 Expressive language ability

The questions on the expressive subscale were divided into expression of various different communication functions. Three of the questions (16, 17 and 19) pertain to number of intelligible words spoken by the child and are not examples of communication functions and are therefore not included in the table below. In Table 4.3 the median values of the remaining questions are grouped according to the following communication

functions (adapted from Light et al., 1985b):

- Requests for objects and actions (questions 18, 22 and 24)
- Provision of information (questions 11, 25 and 26)
- Expression of self (questions 13, 14 and 23)
- Structured/elicited imitations (questions 12, 15, 20 and 21)

The exact wording of the individual questions is stated in Appendix B.

This information given in Table 4.3 indicates that the mothers of these children perceived their child's expressive ability as lowest in the communication functions primarily involved with exchanging and providing information. For the two questions with the lowest median values (question 25, giving the child's gender when asked; and question 26, talking about events in the recent past) 36% and 40% of the mothers respectively stated that their child never displayed the abilities in question. This is in agreement with Light et al., (1985a) who found that children with severe communication disabilities seldom provide unessential information or clarification.

From the research conducted by Light et al., (1985b), it is apparent that children with communication disabilities engage in a greater variety of communicative functions during structured eliciting contexts than in free play interaction. The same tendency can be seen in Table 4.3. The high median scores in the structured/elicited imitations category imply that these mothers feel that they often get a response in a structured setting or when they elicit imitations. In addition, Pennington and McConachie (1999) state that children with communication disabilities often forfeited a turn if not obliged to answer. Elicited imitations may be a strategy used by these mothers to force turn-taking in interaction, or as stated previously, used as this strategy is one that parents believe is most likely to achieve the communicative goals set in intervention.

Table 4.3 Median scores and percentages for the expressive language subscale

Questions	Median values	Responses to questions (in percentages)					Total
		1 (never)	2 seldom	3 (sometimes)	4 (often)	5 (always)	
Request for objects and actions							
Q18. Request using gestures/pointing.	4	4 (n=1)	0 (n=0)	16 (n=4)	44 (n=11)	36 (n=9)	100 (n=25)
Q22. Combine words in sentences to make requests.	4	8 (n=2)	8 (n=2)	24 (n=6)	32 (n=8)	28 (n=7)	100 (n=25)
Q24. Ask and gesture for help.	4	8 (n=2)	0 (n=0)	20 (n=5)	44 (n=11)	28 (n=7)	100 (n=25)
Provision of information							
Q 11. Using gestures or words to name things.	3	8 (n=2)	20 (n=5)	24 (n=6)	36 (n=9)	12 (n=3)	100 (n=25)
Q 25. Giving the child's gender when asked.	2	36 (n=9)	24 (n=6)	0 (n=0)	8 (n=2)	32 (n=8)	100 (n=25)
Q 26. Talks about events in the recent past.	2	40 (n=10)	12 (n=3)	28 (n=7)	8 (n=2)	12 (n=3)	100 (n=25)
Expression of self							
Q 13. Uses gestures or to indicate "No" etc.	4	0 (n=0)	12 (n=3)	12 (n=3)	40 (n=10)	36 (n=9)	100 (n=25)
Q 14. Uses exclamations i.e. "o-o".	3	24 (n=6)	20 (n=5)	24 (n=6)	24 (n=6)	8 (n=2)	100 (n=25)
Q 23. Child refers to himself/herself by name or approximation.	4	16 (n=1)	12 (n=1)	16 (n=1)	28 (n=1)	28 (n=1)	100 (n=25)
Structured/ Elicited imitations							
Q 12. Child sings or gestures along with familiar music.	4	4 (n=1)	4 (n=1)	20 (n=5)	24 (n=6)	48 (n=12)	100 (n=25)
Q 15. Imitation of new words.	4	0 (n=0)	8 (n=2)	20 (n=5)	44 (n=11)	28 (n=7)	100 (n=25)
Q 20. Child repeats words he/she hears in conversation.	4	8 (n=2)	12 (n=3)	28 (n=7)	28 (n=7)	24 (n=6)	100 (n=25)
Q 21. Child imitates sounds around him/her.	4	4 (n=1)	8 (n=2)	28 (n=7)	36 (n=9)	24 (n=6)	100 (n=25)

#### 4.3.2.2 *Receptive communication/language abilities*

The questions on the receptive subscales were divided into the following categories: joint attention, functional object use and language comprehension. The median values of the questions are grouped according to the categories, and reported in Table 4.4.

The medians range from 3 (sometimes) to 5 (always) for this subsection of the questionnaire. This is positive in the sense that receptive language abilities form an important building block for the acquisition of an alternative form of communication (Sevcik, Ronski & Wilkinson, 1991). From the maternal reports, it is evident that the average child demonstrates the ability to share joint attention and to manipulate objects in a functional way. In terms of symbolic language development, Mundy and Gomes (1997) report that responding and initiating joint attention was significantly correlated with expressive language estimates in typically developing toddlers 14–24 months old. In this study, the maternal reports of high levels of joint attention and language comprehension would, therefore, not only imply that the children possess the basic building blocks that would enable them to successfully use symbolic communication, but that these skills may also positively influence their language development.

Literature indicates that parents are accurate predictors of their child's relative patterns of strength and weaknesses (Dale, 1991; Hauerwas & Addison-Stone, 2000). Results from these mothers indicate that they describe similar trends, when rating their child's language ability, as professionals have reported (Conti-Ramsden, 1994; Light et al, 1985a; Light et al, 1985b; Mirenda & Donnellan, 1986). These include that children have difficulty providing information, as well as acknowledging that the children respond well to structured contexts where imitation or elicitation is expected. With reference to receptive language, maternal perception of the child's receptive language is on average more positive than expressive language with the median ranges falling between 3 (sometimes) to 5 (always) compared to median ranges of 2 (seldom) to 4 (often). Therefore the information obtained from the maternal self-reports appears to corroborate results from studies by Dale (1991), Dinnebeil and Rule (1994) and Hauerwas and Addison-Stone (2000).

Table 4.4 Median scores and percentages for the receptive language subscale.

Questions	Median values	Responses to questions					Total
		1 (never)	2 (seldom)	3 (sometimes)	4 (often)	5 (always)	
Joint attention							
Q 1. Interested when looking at pictures with mother.	3	4 (n=1)	20 (n=5)	44 (n=11)	24 (n=6)	8 (n=2)	100 (n=25)
Q 2. Recognizes objects/pictures when named by mother.	4	8 (n=2)	4 (n=1)	16 (n=4)	60 (n=15)	12 (n=3)	100 (n=25)
Q 3. Identifies objects in room when mother requests so.	4	0 (n=0)	4 (n=1)	16 (n=4)	52 (n=13)	28 (n=7)	100 (n=25)
Functional use of objects							
Q 5. Recognizes common objects when shown.	3	4 (n=1)	16 (n=4)	28 (n=7)	28 (n=7)	24 (n=6)	100 (n=25)
Q 8. Recall names of items when given their uses.	4	8 (n=2)	16 (n=4)	24 (n=6)	32 (n=8)	20 (n=5)	100 (n=25)
Language comprehension							
Q 4. Understands words such as, her, me and you.	3	8 (n=2)	16 (n=4)	28 (n=7)	20 (n=5)	28 (n=7)	100 (n=25)
Q 6. Responds to the meaning of what people say.	4	4 (n=1)	4 (n=1)	28 (n=7)	44 (n=11)	20 (n=5)	100 (n=25)
Q 7. Recognizes family names i.e. baby, brother.	5	0 (n=0)	0n (n=0)	12 (n=3)	32 (n=8)	56 (n=14)	100 (n=25)
Q 9. Understands words that describe things i.e. pretty.	3	24 (n=6)	32 (n=8)	8 (n=2)	20 (n=5)	16 (n=4)	100 (n=25)
Q 10. Understands words that tell where things are.	4	4 (n=1)	12 (n=3)	28 (n=7)	44 (n=11)	12 (n=3)	100 (n=25)



#### 4.3.3 Relationship between child characteristics and self-efficacy and language ratings

Kruskal-Wallis One-Way Analysis of Variance test was used to determine if there was a statistically significant difference between the self-efficacy subsections of the questionnaire when the children were grouped according to the diagnosis provided on the demographic questionnaire. The children were grouped in three broad categories for the analysis: Ten children in the first group were the children that were diagnosed as having a form of cerebral palsy. The second group, consisting of six children, were diagnosed as having a form of autism, and the third group were the group with a general developmental delay e.g. Down syndrome. There were nine children in the third group. Where differences were found multiple comparison follow-up tests were employed to determine which means differed significantly. Results of the Kruskal Wallis test can be viewed in Table 4.5. It is interesting to note that one significant correlation was found for child diagnosis and parental levels of self-efficacy as well as perception of child's language abilities. This implies that self-efficacy appears to be influenced by multiple factors and not limited to perception of the child's ability, or to child diagnosis.

Follow-up multiple comparison tests indicated that there was a statistical difference [ $F(2,22) = 1.71, p=0.479$ ] on the maternal ratings of self-efficacy within the domain of discipline. The mother of the children who fell into group 1 (children with cerebral palsy) had statistically higher scores on the discipline subscale compared to those mothers of children in group 3 (general developmental delay). Possible reasons for this include that the children with general developmental delay are likely to be more mobile, and able to test limits set for them, than those diagnosed with cerebral palsy. This may make them more difficult to control.

The association between birth order of the child in the family, as well as the gender of the children was also explored, however, these child characteristics had no significant impact on the questionnaire ratings. Previous studies in the literature have reported similar results. Studies by Hastings and Brown (2002) as well as Johnston and Mash (1989) also indicated that gender of the child did not have a significant effect on either maternal or paternal self-efficacy ratings.

Table 4.5 Results of the Kruskal Wallis One-Way Analysis of Variance for the efficacy and language subscales

Group	Zstat	SE	Test statistic (F)	Degrees of freedom (D.F.)	p-value
Nurture					
1 (cerebral palsy) and 2 (autism)	0.64	3.77	1.71	2	0.4259
1 (cerebral palsy) and 3 (general delay)	0.77	3.36			
2 (autism) and 3 (general delay)	1.29	3.85			
Discipline					
1 (cerebral palsy) and 2 (autism)	1.92	3.76	6.08	2	0.0479**
1 (cerebral palsy) and 3 (general delay)	2.21*	3.35			
2 (autism) and 3 (general delay)	0.04	3.84			
Play					
1 (cerebral palsy) and 2 (autism)	2.04	3.78	4.41	2	0.1101
1 (cerebral palsy) and 3 (general delay)	1.32	3.36			
2 (autism) and 3 (general delay)	0.84	3.86			
Teaching					
1 (cerebral palsy) and 2 (autism)	1.96	3.77	3.97	2	0.1371
1 (cerebral palsy) and 3 (general delay)	1.14	3.35			
2 (autism) and 3 (general delay)	0.93	3.85			
Emotional availability					
1 (cerebral palsy) and 2 (autism)	0.28	3.78	1.94	2	0.3787
1 (cerebral palsy) and 3 (general delay)	1.12	3.37			
2 (autism) and 3 (general delay)	1.25	3.86			
Receptive					
1 (cerebral palsy) and 2 (autism)	0.98	3.79	1.43	2	0.4888
1 (cerebral palsy) and 3 (general delay)	1.03	3.38			
2 (autism) and 3 (general delay)	0.06	3.87			
Expressive					
1 (cerebral palsy) and 2 (autism)	0.14	3.80	0.84	2	0.6562
1 (cerebral palsy) and 3 (general delay)	0.76	3.38			
2 (autism) and 3 (general delay)	0.80	3.87			

Note: \*Critical z values are 2.13 for alpha of 0.1; Critical z values are 2.39 for alpha of 0.05

Note: \*\* (p=<0.05) implies significance at the 5% level

#### 4.4 Correlation statistics

To meet the third sub-aim correlation statistics were used to determine if a correlation exists between maternal self-efficacy ratings and maternal perception of child language abilities and their subscales.

##### 4.4.1 The association between self-efficacy and perception of child language abilities

The scatterplot in Figure 4.3 graphically represents the relationship between the two variables: self-efficacy and perception of child language ability. As can be seen from the figure a positive but weak correlation exists between the overall scores obtained on the efficacy and language subscales of the questionnaire. The Pearson Correlation coefficients for the entire efficacy subscale and the expressive ( $r= 0.2$ ) and receptive ( $r= 0.07$ ) subsections of the language subscales respectively are also positive but weak. The efficacy subsection appears to have a greater correlation to the mothers rating of their child's expressive language abilities as opposed to the receptive language abilities as can be seen in Table 4.6.

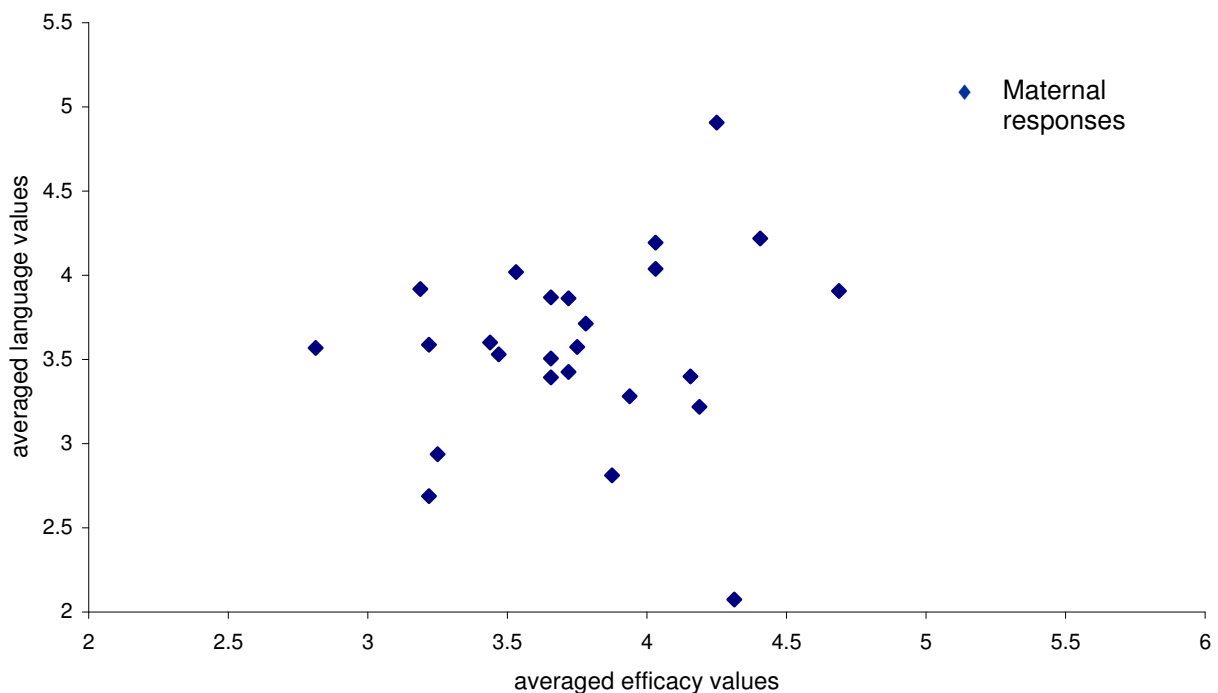


Figure 4.3 Correlation between maternal self-efficacy ratings and ratings of child language abilities.

With regard to the correlations between the individual subsections, the majority of the correlations between the expressive and receptive language subscales and the self-efficacy subscales for this group of participants are positive but weak. None of the correlations were statistically significant. From Table 4.6 it is clear that the strongest correlation value is a moderate positive correlation between the receptive and discipline subscales ( $r= 0.38$ ). The teaching domain appears to be the parenting self-efficacy domain that correlates the least with the language subscales for this group of participants.

Table 4.6 Spearman correlation co-efficients for the self-efficacy subscales of the adapted measure

		Parenting self-efficacy subscales				
		Nurture	Discipline	Play	Teaching	Emotional availability
Language subscales	Receptive	.06	.38	.18	.01	-.06
	Expressive	.22	-.10	.17	.05	.20

The strongest correlation value found in this study is between maternal perception of receptive language abilities and maternal ratings of self-efficacy. Coleman and Karraker (1998) suggest that difficulties in behaviour regulation or compliance with routines as well as the presence of behavioural problems may impact on parental self-efficacy in the discipline domain. An additional explanation would be that it might be more difficult to discipline a child if a parent was unsure whether the child understands the reason for discipline as well as the context within which the disciplining took place. Furthermore, if a child has difficulty providing information and clarification this may impact on parental self-efficacy as parents may find it difficult to correctly assess the situations and provide the correct discipline measures (Coleman, 1998). Finally, as mentioned earlier, this area is an area of parenting that even parents of typically developing children express difficulty with. Therefore this result is expected, as there are valid explanations for the low correlations for both parents of typically developing children and those with a communication disability.

#### 4.4.1 Possible explanations for the associations between the self-efficacy and language ability subscales

From the literature it appears as if there is a strong link between perception of child behaviour and parental competence beliefs (Johnston and Mash, 1989; Teti and Gelfand, 1991). However data from this study does not support these findings. Referring to Table 4.5 the data indicates that the correlation between self-efficacy and perceived child language ability is not strong for this group of mothers. Two possible explanations for these findings are explored below. The fact that the two constructs investigated in the study measure parental skills on very different levels is discussed first. The second argument brought forward is that the presence of an acknowledged disability as a chronic stressor has unique impact on parental self-efficacy.

An analysis of the definitions of self-efficacy and perception brings us closer to understanding why the correlations reported in this study are weak. Sternberg (1995) defines perception as the process whereby we recognize and make sense of what we perceive from the environment. If we refer to the maternal reports of language in this study, we see that the questionnaire required mothers to rate observable behaviour in their child. Results from this study would appear to confirm the literature that indicates that parents are accurate predictors of their child's relative patterns of strengths and weaknesses (Dale, 1991; Hauerwas & Addison-Stone, 2000). However, in spite of maternal accuracy in perceiving child ability, the correlations between self-efficacy and perception of child ability are weak. This implies that although mothers are able to objectively report on child ability, this does not necessarily influence their own competency beliefs.

Self-efficacy, on the other hand, is a more subjective self-regulatory process that involves the ability to co-ordinate and orchestrate skills and abilities, in order to attain a particular outcome (Maddux, 2002). Perception of the environmental stimuli only sets the stage for self-regulation. Self-regulation implies, in addition to self-observation, the ability to develop courses of action through the prediction of outcomes, and evaluation of behaviours, thoughts and emotions. This is achieved by synthesizing past knowledge and experiences to form beliefs about future event and behaviours. According to Bandura (1977), self-efficacy is also determined by emotional arousal, verbal persuasion and visualization of success scenarios. The fact that in this study weak correlations do

exist between self-efficacy ratings and ratings of child ability, does indeed suggest that accurate perception plays a small part in the process of developing self-efficacy beliefs, but that other factors may also contribute towards this development. Other possible contributing factors were not investigated in the current study.

A second reason for the weak correlations may have been the presence of an acknowledged disability. In chronic stress situations, a person's accurate perception of the stressor is not directly indicative of their self-efficacy ratings, as with the perception of the stressor comes the realization that there is no short-term resolution. According to Wheaton (1997), chronic stress is typically open-ended and uses up our resources in coping but does not promise resolution. This is likely to be the case with the presence of a disability - complete resolution of the stressor is unlikely. This implies that in this situation, self-efficacy is not strongly linked to perception of a stressor and the ability to avoid or diminish the stress, but rather linked to the ability to experience positive experiences and outcomes, in spite of the stressor. According to Gottlieb (1997, p. 31) the "ability to create positive events and experience even transient positive emotions may be particularly important basis for judging efficacy in the context of chronic stress". In addition, literature has shown self-efficacy beliefs to be related to the implementation of coping strategies (Donovan, 1991, Wells-Parker et al, 1990; Zautra, Hoffman, & Reich, 1997). In other words, for mothers of children with communication difficulties, orientation towards coping with this stress, and coping strategies implemented, would be more indicative of self-efficacy levels than mothers' ability to rate their child's (dis)ability. This would be because parents realize they are unable to change the situation and self-efficacy would therefore be determined on the basis of the ability to experience positive emotions or experiences rather than on the ability to resolve the stressor.

Results from Wilder and Granlund (2003) seem to corroborate this assumption within the context of parent child interaction. They report that no matter how severe the child's communication disability is, mothers believe that they are able to sustain positive interaction with their child. They state that mothers of children with disabilities and mothers of children without disabilities appear to agree on criteria for healthy interaction as well as their role in interaction. Wilder and Granlund (2003, p. 565) conclude that parents "read the children's signals and lead the interaction according to what the children's capabilities are at that moment". This implies that successful interaction is not exclusively related to parental perceptions (of their child's competence) in interactions,

but rather that maternal perception of their child's abilities allows the mothers to adjust their interaction strategies so that *successful* interaction takes place irrespective of the level of child's ability.

In conclusion, perhaps the variable of perception of child ability (which was investigated in the current study) does not impact on maternal self-efficacy beliefs as strongly as would constructs which investigate firstly, the parents ability to make positive events happen in spite of the chronic stress and secondly, parental ability to cope with adversity of negative experiences. Zautra, Hoffman, and Reich (1997) refer to these types of efficacy as positive event efficacy and coping efficacy respectively. They investigated positive event efficacy and coping efficacy with a group of carers in a chronic stress context (caring for individuals with dementia). Results from their study indicate that certain appraisals of efficacy are associated with specific ways of coping i.e. help seeking and behavioural management were frequently associated with efficacious coping appraisals. In addition, efficacy beliefs shaped the types of coping behaviours that were reported five months later. If this is applied to the development and maintenance of parental self-efficacy beliefs, in the presence of a disability, it may imply that determining competence levels based on maternal perception of ability to engage in successful interaction (positive experiences), as well as coping with the differences inherent in interaction, (the ability to choose and implement successful accommodations) may provide more definitive information on how disability, parental perception and parental beliefs influence interaction.

#### **4.5 Summary of results**

This chapter described and discussed the results of this study. Parents reported highest levels of self-efficacy within the nurturing and emotional availability subsections of the questionnaire, with weaker scores reported in the discipline and teaching domains. In addition, a significant correlation between the self-efficacy construct of discipline and child diagnosis was reported. The results of maternal ratings of child language abilities were integrated into the self-efficacy findings. The results revealed that generally there were weak positive relationships between the language subsections and self-efficacy subsections of the questionnaire. The implications of these findings were discussed in relation to the development and maintenance of maternal self-efficacy and optimal parent child interaction.

## Chapter 5: Conclusion and clinical implications

### 5.1 Introduction

This chapter provides a summary and integrated discussion of the results of this study. The implications of the results are followed by a critical evaluation of the study. Finally, recommendations are made for further research.

### 5.2 Summary and integration of results

The purpose of this study was to determine if an association exists between maternal self-efficacy beliefs, within various parental domains, and maternal perception of child language abilities where the child has a communication disability. The data was obtained from participants through the completion of a questionnaire.

The important influence that self-efficacy beliefs have on behaviour has been highlighted in the literature. Self-efficacy is known to affect performance levels, goals chosen, perseverance in the face of challenges and the initiation of coping responses if deemed necessary (Bandura, 1977; Lipton and Worthington, 1984; Locke, Frederick, Lee & Bobko, 1984; Schwarzer, 1992). It is important to take cognizance of these beliefs within the parenting domain, as parental belief systems impact on the child in direct and indirect ways. Beliefs impact directly on a child's outcome by influencing parent-child interaction and indirectly through the provision of opportunities and stimuli to promote optimal development. Self-efficacy beliefs also have an important role to play within parenting domain as they mediate between maternal feelings of competence in the parenting role, perceived child behaviour and temperament and other stressors such as maternal depression.

Parental perception of child ability has important implications or intervention. Literature has shown that parents are able to predict their child's general language abilities even when a communication delay or disability is present (Dale, 1991; Hauerwas & Addison-Stone, 2000). It is postulated that parents modify the language patterns and content they



use when in interaction with a child according to the level of language competence they perceive the child to possess.

As maternal perception as well as self-efficacy beliefs can impact on mother-child interaction the relationship between these two variables was investigated. The result of the current study indicates that a weak correlation exists between these two concepts. These results can be explained by the fact that although accurate perception of child ability is an important step in determining self-efficacy beliefs, it is not the only factor contributing to the development and maintenance of these beliefs. Other factors such as previous experience, verbal persuasion, and emotional arousal (Bandura, 1977) all contribute toward formation of self-efficacy beliefs. It is clear that parental self-efficacy is a multi-faceted construct, and perception of child ability does have an influence on self-efficacy beliefs, however, this influence alone is insufficient, in isolation, to manipulate self-efficacy beliefs. In spite of the presence of disability in the children, this group of mothers still had relatively high self-efficacy beliefs regarding their parenting ability.

The presence of an acknowledged disability places additional strain on interaction, as well as self-efficacy beliefs. Conclusions drawn from the data of this study tentatively imply that accurate perception of ability, as well as the severity of the disability, are not crucial factors that determine parental self-efficacy when the child has a disability. As disability is not likely to be resolved, it can be considered a chronic stressor. Self-efficacy beliefs appear to be constructed differently under such circumstances. In the presence of chronic stress, perception of the stressor is not as important, as it cannot be resolved. Therefore, factors such as the ability to be able to create positive interaction experiences, as well as the ability to choose adaptive coping strategies and accommodations appear to have a greater influence on self-efficacy beliefs than perception of child (dis)ability.

Another factor that is clear from the results of mothers' self-efficacy rating is that the lowest ratings were for discipline and teaching. For discipline both parents of typically developing children and those of children with communication difficulties appeared to have difficulty with this aspect of parenting. However, for teaching, parents of typically developing children do not report difficulties in fulfilling this role. However, this group of parents has low self-efficacy beliefs in this domain. Possible reasons were proposed for this and included the use of directive strategies, which may not be intuitive for parents, in order to achieve communication interaction. This is in contrast to the naturalistic

approach usually utilized by parents of typically children where scaffolding is used to increase the child's repertoire of skills. Therefore, parents of children with disabilities may have lower self-efficacy beliefs within the teaching domain, not only as a result of the fact that their children are less responsive and harder to teach, but also because the strategies they may resort to, in order to communicate with their child, are often counter-intuitive. They may therefore feel less competent in using these strategies. Finally, the very nature of professional parent relationship may lead to parents' lower sense of competence in this domain (Turnbull et al., 1997).

An unexpected finding of the study was that the maternal reports of children language highlighted many of the same strengths and weaknesses previously identified by professionals working with children with communication difficulties. This is positive in the sense that it implies that professionals may rely on data obtained from parental reports or questionnaires such as the one adapted for use in this study.

### **5.3 Critical evaluation of the study**

Both the positive and negative aspects of the study are discussed below.

- The adapted SEPTI provides a scale that is valid for measuring self-efficacy beliefs within the parenting domain. This instrument is potentially able to assist researchers, interventionists and parents in identifying areas of parenting within which parents may feel less competent.
- Analysis of maternal reports of child language using the adapted language questionnaire indicates that parents can be accurate predictors of their child's language abilities both receptive and expressive. In addition, results indicate that maternal report in questionnaire format is sufficient to gather basic information from parents regarding these skills.
- The participants were from a limited urban geographical area and for this reason the results can only be generalized to this group.
- A methodological constraint of this study is the small sample size. The number of research participants was limited to 25 (n=25). This may have influenced the magnitude of the correlations found in this study. In addition, the relatively high means and small standard deviation evident in the results implies that the group of mothers participating in this study forms a homogenous group, despite the

variation in maternal age and child diagnosis. This again may have impacted on the correlation values.

- The use of a questionnaire as a method of data collection has limitations and no conclusive deductions can be made from this data in terms of how beliefs and perceptions may overtly affect behaviour. In addition, survey type research does not allow for in-depth understanding of individual viewpoints, which may be necessary to fully explore such complex relationships as researched in this study.

#### **5.4 Implications of the study**

- The most important finding of this study is that parents of children with a communication disability generally have high self-efficacy beliefs in nurturing, emotional availability and play domains of parenting.
- Whilst these domains were high, competencies for the teaching domain were lower. This has implication for interventions as it must be ensured that parent feel able to teach children, as they are primarily responsible for the child development. A decrease in these competencies may need to be addressed in intervention efforts whereby parents need to be allowed to experience success, which will build confidence within this domain.
- Acknowledging the presence of other factors that contribute to development and maintenance of self-efficacy is of paramount importance and the weak correlations in this study indicate that difference in perception of ability alone does not account for variation in self-efficacy beliefs and visa versa.
- Results from this study indicate that maternal reports could be reliably used as a method to collect data on children with communication disabilities, as mothers appear to be accurate predictors of general ability of their child.

#### **5.5 Future research**

Directions for future research include the following:

- The SEPTI questionnaire could be further refined to include a section on beliefs of competence in initiating coping strategies or accommodations by mothers of children with disabilities. This would be useful in order to obtain a more

comprehensive understanding of parental self-efficacy where childhood disability is present.

- A future study could investigate the link between maternal ability to engage in positive communication interaction, with children with severe disability, and parental self-efficacy.
- A future qualitative study could provide important in-depth information regarding the self-efficacy beliefs of parents of children with severe disability. This would strengthen the available body of literature regarding with the understanding professionals have as to how the presence of a child with a disability impacts on parental competence.
- A study to obtain the self-efficacy beliefs of a group of South African parents of typically developing pre-school children could be conducted as to date limited research of parental self-efficacy beliefs is available to be used as a baseline comparison for parents of children with disabilities.
- Replication of this study with a larger group of participants would further add to the validity of the measuring instrument.

## **5.6 Summary**

The conclusions of the research with respect to the aims of this study were presented at the beginning of this chapter. The clinical implications of these conclusions were then discussed, followed by a critical evaluation of the study. Finally, recommendations for additional research are stated.

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Appendices:

**Appendix A: Demographic information required from the participants**

**DEMOGRAPHIC INFORMATION**

Respondent number:

**Please answer the following questions.**

1. What is your current age?

---

2. What is the highest education qualification you hold?

Grade 7	<input type="checkbox"/>
Grade 9	<input type="checkbox"/>
Grade 12	<input type="checkbox"/>
Diploma	<input type="checkbox"/>
Degree	<input type="checkbox"/>
Other (please specify)	<input type="checkbox"/>

3. Please indicate your ethnicity below:

Black	<input type="checkbox"/>
White	<input type="checkbox"/>
Indian	<input type="checkbox"/>
Asian	<input type="checkbox"/>
Other	<input type="checkbox"/>

4. Please describe you current employment status:

Unemployed	<input type="checkbox"/>
Home Executive	<input type="checkbox"/>
Employed Part Time	<input type="checkbox"/>
Employed Full Time	<input type="checkbox"/>

For office use

V1   1-2

V2   3-4

V3  5

V4  6

V5  7

5. How many children do you have?

1	
2	
3	
4	
5	
More than 5	

V6   8-9

6. Birth position of your child with a communication difficulty in the family?

1	
2	
3	
4	
5	
5+	

V7   10-11

7. What is the abovementioned child's age in years?

3,1 – 3,6 years	
3,7 – 4,0 years	
4,1 – 4,6 years	
4,7 – 5,0 years	
5,1 – 5,6 years	
5,7 - 6,0 years	
6,1 - 6,5 years	
6,6 - 7,0 years	

V8  12

8. Please indicate your child's gender:

Male	
Female	

V9  13

9. Please provide your child's diagnosis / describe your child's problem.

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V10   14-15

10. Have you ever received any parent guidance before?

Yes	
No	

V11  16

**DEMOGRAFIESE INLIGTING**

Vir kantoor gebruik

Respondent nommer:

V1   1-2

**Antwoord asseblief die volgende vrae.**

1. Wat is u ouderdom op die huidige oomblik?

---

V2   3-4

2. Wat is die hoogste opvoedkundige kwalifikasie wat u tot dusver behaal het?

Graad 7	<input type="text"/>
Graad 9	<input type="text"/>
Graad 12	<input type="text"/>
Diploma	<input type="text"/>
Graad	<input type="text"/>
Ander (verduidelik asseblief)	<input type="text"/>

V3  5

3. Dui asseblief u ras aan:

Swarte	<input type="text"/>
Blanke	<input type="text"/>
Indiër	<input type="text"/>
Asiër	<input type="text"/>
Ander	<input type="text"/>

V4  6

4. Dui asseblief u huidige werksomstandighede aan:

Werkloos	<input type="text"/>
Tuisteskepper	<input type="text"/>
Deeltydse werk	<input type="text"/>
Voltydse werk	<input type="text"/>

V5  7

5. Hoeveel kinders het u?

1	<input type="text"/>
2	<input type="text"/>
3	<input type="text"/>
4	<input type="text"/>
5	<input type="text"/>
Meer as 5	<input type="text"/>

V6   8-9

6. Dui die posisie van u kind (wat kommunikasieprobleme vertoon) in die familie aan:

1	
2	
3	
4	
5	
5+	

V7   10-11

7. Wat is die bogenoemde kind se ouderdom?

3,1 – 3,6 jaar	
3,7 – 4,0 jaar	
4,1 – 4,6 jaar	
4,7 – 5,0 jaar	
5,1 – 5,6 jaar	
5,7 - 6,0 jaar	
6,1 - 6,5 jaar	
6,6 - 7,0 jaar	

V8  12

8. Dui asseblief u kind se geslag aan:

Manlik	
Vroulik	

V9  13

9. Kan u asseblief u kind se diagnose verskaf / probleem beskryf.

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V10   14-15

10. Het u ooit van tevore enige ouerleiding ontvang?

Ja	
Nee	

V11  16

## Appendix B: Finalized English questionnaire

### PARENTING SECTION:

INSTRUCTIONS: Please respond the following statements by ticking the block that is closest to how you feel about the sentence.

1= never      2= seldom      3= sometimes      4= often      5= always

Order number

No.	Statement	1	2	3	4	5
1.	<b>I am able to sense when my child is starting to become distressed.</b>					
2.	<b>My child knows that I understand when his/her feelings are hurt.</b>					
3.	<b>I think my child knows by my behaviour how much I really love him/her.</b>					
4.	<b>My child feels very loved by me.</b>					
5.	<b>I think I am tolerant and understanding when my child displays negative emotions.</b>					
6.	<b>I find it very distressing when my child is not in a good mood.</b>					
7.	<b>I definitely fulfil my parental duties when it comes to providing emotional support for my child.</b>					
8.	<b>When my child has a problem, he/she knows I will want to help.</b>					
9.	<b>Disciplining my child is not as natural for me as other parts of parenting.</b>					
10.	<b>I have trouble getting my child to listen to me.</b>					

For office use		
V12	<input type="checkbox"/>	17
P1	<input type="checkbox"/>	18
P2	<input type="checkbox"/>	19
P3	<input type="checkbox"/>	20
P4	<input type="checkbox"/>	21
P5	<input type="checkbox"/>	22
P6	<input type="checkbox"/>	23
P7	<input type="checkbox"/>	24
P8	<input type="checkbox"/>	25
P9	<input type="checkbox"/>	26
P10	<input type="checkbox"/>	27

No.	Statement	1	2	3	4	5
11.	I feel other parents seem to have more success with setting limits for their children than I do with my child.					
12.	Setting limits for my child is easy for me.					
13.	When my child tests the limits that I have set up, I find myself becoming extremely discouraged.					
14.	Telling my child “no” when safety is not the issue is hard for me.					
15.	I allow my child enough freedom to actively explore the environment.					
16.	I can easily think of something to play with my child.					
17.	I am a fun playmate for my child.					
18.	I find it hard to relax and just play with my child.					
19.	I am able to get actively involved in playing with my child.					
20.	I feel that playing is a part of my relationship with my child that I have very little difficulty with.					
21.	I think I really need to learn how to just have fun with my child.					
22.	I think I spend an appropriate amount of time just playing with my child.					
23.	I believe my child learns a great deal from my efforts to show him/her things.					
24.	Assisting my child with learning to talk is a part of parenting that I leave to others.					

P11  28

P12  29

P13  30

P14  31

P15  32

P16  33

P17  34

P18  35

P19  36

P20  37

P21  38

P22  39

P23  40

P24  41

No.	Statement	1	2	3	4	5
25.	<b>Sitting down regularly with my child to read or do some other one-on- one activity is not difficult for me.</b>					
26.	<b>I feel I am probably not that great at teaching my child about the world.</b>					
27.	<b>I have difficulty figuring out the appropriate level of instruction when I am trying to explain something to my child.</b>					
28.	<b>I feel that helping my child learn colours, names of objects, etc. is not one of my strongest points.</b>					
29.	<b>I think my child learns more from me than anyone else in his/her life.</b>					
30.	<b>I easily find opportunities to discuss things in my environment during my daily interactions with my child.</b>					
31.	<b>Although I would like to help my child learn more about his/her surroundings, this is an area of parenting that I do not feel well equipped for.</b>					
32.	<b>Even when I have had an unusually distressing day, I think my child knows I am available to meet his or her emotional needs.</b>					
33.	<b>I believe that I adequately meet my child's needs to feel secure and accepted.</b>					
34.	<b>When my child needs me, I am able to put aside whatever else I may be doing.</b>					

P25  42

P26  43

P27  44

P28  45

P29  46

P30  47

P31  48

P32  49

P33  50

P34  51



No.	Statement	1	2	3	4	5	
35.	<b>I find it difficult to be available to provide my child with the comfort he/she seems to need in dealing with the frustrations and fears that children face each day.</b>						P35 <input type="checkbox"/> 52
36.	<b>Providing physical comfort for my child is easy for me.</b>						P36 <input type="checkbox"/> 53
37.	<b>I am usually willing to stop what I am doing and cuddle my child when he/she seems to need it.</b>						P37 <input type="checkbox"/> 54
38.	<b>I am too preoccupied with my own problems to keep up with my child's changing emotions.</b>						P38 <input type="checkbox"/> 55

CHILD LANGUAGE SECTION:

INSTRUCTIONS: Please respond the following statements by ticking the block that is closest to how you feel about the sentence. Think about your child’s language abilities as they are now.

1= never      2= seldom      3= sometimes      4= often      5= always

Order number

For office use

V13  56

C1  57

C2  58

C3  59

C4  60

C5  61

C6  62

C7  63

No	Statement	1	2	3	4	5
1.	<b>My child remains interested for 2 or more minutes when looking at pictures that I describe.</b>					
2.	<b>My child can recognize and identify objects or pictures of objects when I name them.</b>					
3.	<b>In a room where there are four or more familiar objects my child can identify 2 or more of them when I give a single request.</b>					
4.	<b>My child understands words like HER, YOU and ME.</b>					
5.	<b>My child recognizes and identifies almost any common object that I show him/her.</b>					
6.	<b>My child seems to respond to the meaning and intention of what people say rather than just to the words or sounds.</b>					
7.	<b>My child recognizes general family kinds of names, e.g. BABY, GRANDMA, or BROTHER.</b>					

No	Statement	1	2	3	4	5
8.	<b>My child is able to recall names of common items when given their uses, e.g. “What do you eat with”, or “What do you wear?”</b>					
9.	<b>My child shows that he/she understands words that describe things, e.g. the PRETTY girl, or the TALL boy.</b>					
10.	<b>My child understands words that tell where things are, such as ON the table or IN FRONT OF the mirror.</b>					
11.	<b>My child uses some word-like expressions or gestures when naming things.</b>					
12.	<b>My child will try to sing along or use gestures with some familiar songs or music.</b>					
13.	<b>My child uses gestures such as shaking his head to mean “No” or pointing towards something in order to get his/her message across.</b>					
14.	<b>My child uses exclamations such as OH-OH.</b>					
15.	<b>My child will try to imitate new words after I say them.</b>					
16.	<b>My child uses 3-5 real words such as BYE-BYE, MAMA or DADA so that I am able to understand him/her.</b>					
17.	<b>My child uses 3-5 real words such as BYE-BYE, MAMA or DADA so that OTHER people are able to understand him/her.</b>					
18.	<b>When my child wants something he/she will attempt to get it by using his/her voice along with pointing or gesturing.</b>					

C8  64

C9  65

C10  66

C11  67

C12  68

C13  69

C14  70

C15  71

C16  72

C17  73

C18  74

No	Statement	1	2	3	4	5		
19.	<b>My child uses 7 or more real words such as 'CAR', 'MOMMY', 'DOG' etc so that OTHERS are able to understand them.</b>						C19	<input type="checkbox"/> 75
20.	<b>My child tries to repeat words he/she overheard in a conversation.</b>						C20	<input type="checkbox"/> 76
21.	<b>My child imitates sounds around him/her during play, e.g. sounds of cars or animals.</b>						C21	<input type="checkbox"/> 77
22.	<b>My child is beginning to combine words together to form sentences, e.g. "Billy come."</b>						C22	<input type="checkbox"/> 78
23.	<b>My child refers to himself/herself by using his/her real name or an approximation for it.</b>						C23	<input type="checkbox"/> 79
24.	<b>My child is able to ask or gesture for help, e.g. with washing hands or going to the toilet.</b>						C24	<input type="checkbox"/> 80
25.	<b>My child is able to give his/her gender when asked, "Are you a boy or a girl?"</b>						C25	<input type="checkbox"/> 81
26.	<b>My child talks about events that have happened in the recent past.</b>						C26	<input type="checkbox"/> 82

## Appendix C: Finalized Afrikaans version of the questionnaire

### OUER AFDELING:

INSTRUKSIES: Reageer asb. op die volgende stellings deur die blokkie te merk wat u gevoel oor die stelling die beste beskryf.

1= nooit      2= selde      3= soms      4= dikwels      5= altyd

Volgorde nommer

No.	Stelling	1	2	3	4	5
1.	Ek kan agterkom as my kind ongelukkig of ontsteld is.					
2.	My kind weet dat ek verstaan as sy/haar gevoelens seergemaak is.					
3.	Ek dink my kind kan uit my gedrag agterkom hoe lief ek vir hom/haar is.					
4.	My kind voel dat ek hom/haar baie liefhet.					
5.	Ek dink ek is geduldig en begripvol as my kind negatiewe emosies toon.					
6.	Ek vind dit baie ontstellend as my kind nie in 'n goeie bui is nie.					
7.	Ek vervul beslis my ouerlike pligte wanneer dit kom by emosionele ondersteuning van my kind.					
8.	As my kind 'n probleem het, sal hy/sy weet dat ek wil help.					
9.	Om my kind te dissiplineer is vir my nie so natuurlik soos ander pligte van ouerskap nie.					

Vir kantoor gebruik

V12  17

P1  18

P2  19

P3  20

P4  22

P5  23

P6  24

P7  25

P8  24

P9  26

No.	Stelling	1	2	3	4	5
10.	Ek vind dit moeilik om my kind sover te kry om na my te luister.					
11.	Ek voel dat ander ouers meer sukses het as ek om grense vir hulle kinders te stel.					
12.	Dit is maklik vir my om grense vir my kind te stel.					
13.	Ek vind dat ek baie ontmoedig voel as my kind die grense toets wat ek aan hom/haar gestel het.					
14.	Dit is moeilik om vir my kind nee te sê vir 'n ander rede as sy veiligheid.					
15.	Ek gun my kind genoeg vryheid om sy omgewing aktief te verken.					
16.	Ek kan maklik dink aan iets om met my kind te speel.					
17.	Ek is 'n lekker speelmaat vir my kind.					
18.	Ek vind dit moeilik om te ontspan en net met my kind te speel.					
19.	Ek kan aktief betrokke raak wanneer ek met my kind speel.					
20.	Ek voel dat speel deel is van my verhouding met my kind en ek het min probleme daarmee.					
21.	Ek dink ek moet leer hoe om net pret saam met my kind te hê.					
22.	Ek dink ek spandeer 'n toepaslike hoeveelheid tyd deur net met my kind te speel.					
23.	Ek glo my kind leer baie van my pogings om vir hom/haar dinge te wys.					

P10  27

P11  28

P12  29

P13  30

P14  31

P15  32

P16  33

P17  34

P18  35

P19  36

P20  37

P21  38

P22  39

P23  40

No.	Stelling	1	2	3	4	5
24.	Om my kind te help om te leer praat is 'n deel van ouerskap wat ek aan ander mense oorlaat.					
25.	Om gereeld by my kind te sit om te lees of 'n ander 1-tot-1 aktiwiteit te doen is nie vir my moeilik nie.					
26.	Ek voel dat ek nie eintlik so goed is om my kind oor die wêreld te leer nie.					
27.	Ek vind dit moeilik om te bepaal wat die toepaslike vlak van instruksies moet wees wanner ek probeer om iets aan my kind te verduidelik.					
28.	Ek voel om my kind kleure, name van voorwerpe ens. te leer is nie een van my sterkste punte nie.					
29.	Ek dink my kind leer meer van my as van enige iemand anders in sy/haar lewe.					
30.	Ek vind maklik geleenthede gedurende my daaglikse interaksie met my kind om oor dinge in die omgewing te gesels.					
31.	Hoewel ek my kind wil help om meer oor sy/haar omgewing te leer, is dit 'n deel van ouerskap waarvoor ek nie goed toegerus voel nie.					
32.	Ek dink my kind weet dat ek beskikbaar is vir sy/haar emosionele behoeftes, selfs wanneer ek 'n buitengewoon ontstellende dag gehad het.					
33.	Ek dink dat ek voldoen aan my kind se behoeftes om veilig en aanvaar te voel.					
34.	As my kind my nodig het, kan ek alles opsy skuif waarmee ek besig is.					

P24  41

P25  42

P26  43

P27  44

P28  45

P29  46

P30  47

P31  48

P32  49

P33  50

P34  51

No.	Stelling	1	2	3	4	5	
35.	<b>Ek vind dit moeilik om beskikbaar te wees om my kind met die vertroosting te voorsien wat hy/sy nodig het om die frustrasies en vrese wat kinders elke dag teëkom te hanteer.</b>						P35 <input type="checkbox"/> 52
36.	<b>Dit is vir my maklik om fisiese vertroosting aan my kind te gee.</b>						P36 <input type="checkbox"/> 53
37.	<b>Ek is gewoonlik gewillig om te stop waarmee ek besig is en my kind te vertroetel wanneer hy/sy liefde en vertroeteling nodig het.</b>						P37 <input type="checkbox"/> 54
38.	<b>Ek is te besig met my eie probleme om op hoogte te bly met my kind se veranderende emosies.</b>						P38 <input type="checkbox"/> 55



KINDERTAAL AFDELING:

INSTRUKSIES: Reageer asb. op die volgende stellings deur die blokkie te merk wat u gevoel oor die stelling die beste beskryf. Dink aan hoe u kind se taalvaardighede op die oomblik is.

1= nooit      2= selde      3= soms      4= dikwels      5= altyd

Volgorder nommer

No	Stelling	1	2	3	4	5
1.	<b>My kind bly vir 2 of meer minute geïnteresseerd wanneer ons na prente kyk wat ek beskryf.</b>					
2.	<b>My kind kan voorwerpe of prente van voorwerpe herken en identifiseer wanneer ek die naam daarvan sê.</b>					
3.	<b>In 'n kamer met 4 of meer bekende voorwerpe kan my kind 2 of meer herken met 'n enkele versoek.</b>					
4.	<b>My kind verstaan woorde soos SY, JY, en EK.</b>					
5.	<b>My kind kan byna enige alledaagse voorwerp herken wat ek vir hom/haar wys.</b>					
6.	<b>My kind reageer op die betekenis en bedoeling van wat mense sê eerder as net die woorde of klanke.</b>					
7.	<b>My kind herken algemene familienaam, bv. BABA, OUMA of BOETIE.</b>					
8.	<b>My kind kan die name van alledaagse voorwerpe herroep wanneer ek die gebruik daarvan gee, bv. "Waarmee eet jy?", of "Wat trek jy aan?"</b>					

Vir kantoor gebruik

V13  56

C1  57

C2  58

C3  59

C4  60

C5  61

C6  62

C7  63

C8  64

No	Stelling	1	2	3	4	5
9.	My kind wys dat hy woorde verstaan wat dinge beskryf, bv. Die MOOI meisie, of die LANG seun.					
10.	My kind verstaan woorde wat verduidelik waar dinge is, bv. OP die tafel of VOOR die spieël.					
11.	My kind gebruik wordbenaderings of gebare wanneer hy voorwerpe benoem.					
12.	My kind sal probeer saamsing of gebare gebruik wanneer hy bekende liedjies of musiek hoor.					
13.	My kind gebruik gebare soos om sy kop te skud as hy “NEE” bedoel of om na iets te wys om sy/haar boodskap oor te dra.					
14.	My kind gebruik uitroepe soos Ô-Ô.					
15.	My kind sal nuwe woorde wat ek sê probeer naboots.					
16.	My kind gebruik 3-5 regte woorde soos TA-TA, MAMMA of PAPPA sodat ek hom/haar kan verstaan.					
17.	My kind gebruik 3-5 regte woorde soos TA-TA, MAMMA of PAPPA sodat ANDER mense hom/haar kan verstaan.					
18.	Wanneer my kind iets wil hê sal hy/sy probeer om dit te kry deur sy/haar stem saam met gebare te gebruik.					
19.	My kind gebruik 7 of meer regte woorde soos KAR, MAMMA, HOND ens. sodat ANDER mense hom/haar kan verstaan.					

C9  65

C10  66

C11  67

C12  68

C13  69

C14  70

C15  71

C16  72

C17  73

C18  74

C19  75

No	Stelling	1	2	3	4	5	
20.	My kind probeer om woorde te herhaal wat hy/sy in 'n gesprek gehoor het.						C20 <input type="checkbox"/> 76
21.	Tydens spel boots my kind omgewingsklanke na wat hy/sy gehoor het, bv. die geluide van karre of diere.						C21 <input type="checkbox"/> 77
22.	My kind begin om woorde te kombineer om sinne te vorm, bv. "Willie kom."						C22 <input type="checkbox"/> 78
23.	My kind verwys na hom/haarself deur sy/haar regte naam of 'n benadering daarvan te gebruik.						C23 <input type="checkbox"/> 79
24.	My kind is in staat om vir hulp te vra of met gebare aan te dui, bv. as hy wil hande was of toilet toe te gaan.						C24 <input type="checkbox"/> 80
25.	My kind kan sy/haar geslag aandui wanneer hy/sy gevra word "Is jy 'n seun of 'n meisie?"						C25 <input type="checkbox"/> 81
26.	My kind praat oor gebeure wat in die onlangse verlede plaasgevind het.						C26 <input type="checkbox"/> 82

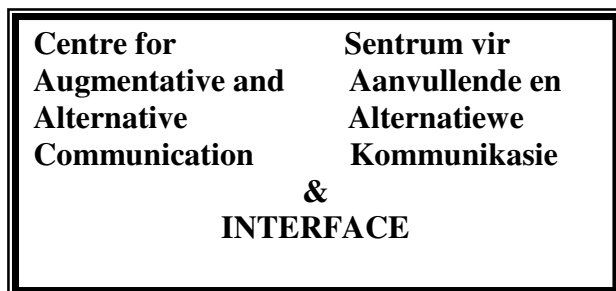
**Appendix D: Examples of the REEL-2 modifications for maternal administration**

Number in modified questionnaire	Original wording in REEL-2 (Bzoch & League, 1991)	Modified wording used for this study
Receptive subsection of REEL-2		
1	Will the child remain interested for 2 or more minutes in looking at pictures you name	My child remains interested for 2 or more minutes when looking at pictures that I describe.
8	Is the child able to recall names of common items when given their uses (e.g. "What do you eat with" or "What do you wear")?	My child is able to recall names of common items when given their uses, e.g. "What do you eat with", or "What do you wear?"
Expressive subsection of REEL-2		
18	When the child wants something, does she or he attempt to get it by using her or his voice along with pointing or gesturing? Can you give an example?	When my child wants something he/she will attempt to get it by using his/her voice along with pointing or gesturing.
24	Does the child ask for help with some personal needs, such as washing hands, or going to the toilet?	My child is able to ask or gesture for help, e.g. with washing hands or going to the toilet.

**Appendix E: Modifications made during the translation process**

Question number	Original wording	Translated wording in blind-back translation	Modified wording in finalized Afrikaans Questionnaire
Minor modifications			
Child language Q5	Common objects	Known objects	<i>alledaagse</i>
Child language Q8	Common objects	General objects	<i>alledaagse</i>
Self efficacy Q3	How much I love him/her	How much I care for him/her	<i>Hoe lîfe ek vir hom/haar is</i>
Self efficacy Q8	Knows I will want to help	Knows that I dearly want to help	<i>Hy/sy weet dat ek wil help</i>
Self efficacy Q17	Fun playmate	Pleasant playmate	<i>Lekker</i>
Self efficacy Q30	Discuss things in the environment	Point out things in the environment	<i>Oor dinge in die omgewing te gesels</i>
Re-wording			
Child language Q18	Along with pointing or gesturing	Together with gestures	<i>Saam met gebare te gebruik</i>
Child language Q24	Ask or gesture for help	Asking or indicating help	<i>Om vir hulp te vra of met gebare aan te dui</i>
Self efficacy Q9	Is not as natural for me	Is not as easy for me	<i>Is vir my nie so natuurlik</i>
Self efficacy Q26	Teaching my child about the world	Teaching my child things about the world	<i>Om my kind oor die wêreld te leer nie</i>
Self efficacy Q37	Cuddle my child when he needs affection	Pamper my child when he needs attention	<i>My kind te vertroetel waneer hy liefde en vertroeteling nodig het.</i>

## Appendix F: Letter to the principals requesting permission to conduct the study



Fax/Faks: (012) 420 – 4389  
Tel: (012) 420 – 2001

Centre for Augmentative and Alternative Communication  
Sentrum vir Aanvullende en Alternatiewe Kommunikasie  
University of Pretoria  
PRETORIA, 0002  
SOUTH AFRICA

*2002: Shirley McNaughton Award for exemplary communication received from the International Society for Augmentative and Alternative Communication*  
*1998: Rolex Award for Enterprise: Associate Laureate*  
*1995: Education Africa Presidential Award for Special Needs*

9 September 2003

To Whom It May Concern:

Re: Request for permission to conduct a research project

I am presently completing a Masters Degree in Augmentative and Alternative Communication at the University of Pretoria. In order to fulfill the requirements for the degree I have to conduct a research project. I would like to request permission to send out questionnaires to the mothers of children who are currently in your pre-school classes. I am interested in exploring the relationship between maternal rating of self-efficacy and mothers' perception of their child's language abilities.

Self-efficacy can be defined as a belief that a person holds about the level of success they will achieve when performing an activity/task. This self-evaluation process is based on their previous experience, a person's perception of their own abilities and the emotions that the activity or task arouses. Previous research states that self-efficacy beliefs can affect behaviour. Mothers' efficacy beliefs about their parenting abilities may influence the way they view the parent-child relationship as well as their child's behaviour and abilities. Mothers with higher self-efficacy beliefs may perceive their child's behaviour and abilities in a more positive light, compared to mothers with lower self-efficacy ratings. I envisage that this project will provide preliminary information regarding the association between mothers' feelings of efficacy and the way they perceive their child's language ability.

I would like mothers with children between the ages of 3-6 to participate in the research project. The mothers that consent to take part in the project will be requested to complete a questionnaire. The questionnaire should not take longer the 30-40 minutes to complete and will be sent home with the child. This information obtained from the questionnaires will be treated with the strictest confidence. I am prepared to share the results of the project as soon as they are available, should you be interested.

In appreciation.

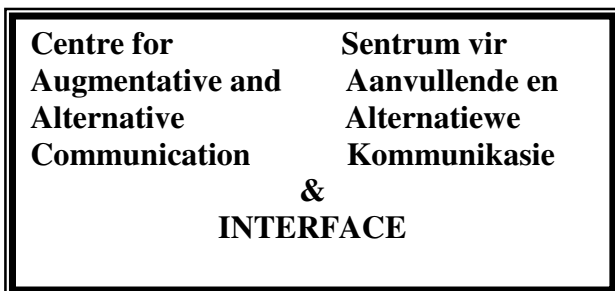
**Michal Harty**  
**B.Comm. Pathology (UP)**  
Email [michal\\_harty@hotmail.com](mailto:michal_harty@hotmail.com)  
Cell: 084 731 4633

Please sign below if you are willing to grant permission.

.....

**Date:**

## Appendix G: Letter to the participants requesting them to participate in the study



Fax/Faks: (012) 420 – 4389  
Tel: (012) 420 – 2001

Centre for Augmentative and Alternative Communication  
Sentrum vir Aanvullende en Alternatiewe Kommunikasie  
University of Pretoria  
PRETORIA, 0002  
SOUTH AFRICA

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*1995: Education Africa Presidential Award for Special Needs*

12 September 2003

Dear Mrs

### **REQUEST FOR YOU TO PARTICIPATE IN A RESEARCH PROJECT**

I am a student at the University of Pretoria and I need to do a research project in order to finish my studies. Parents are important members of their child's therapy team. In this project we would like find out how you feel about being a parent and how you feel about your child's way of talking.

If you are prepared to take part in this study, you will need to fill in a questionnaire that has 2 sections. The first section asks questions about how you feel about being a parent and the second asks questions about your child's language skills. The questionnaire should take you no longer than 30 minutes to fill in. There is no identifying information on the questionnaires. The University also ensures that all information is kept confidential. If you have any questions regarding the project I can be contacted at 084 731 4633.

If you would like to take part in the project and fill in a questionnaire please complete the tear-off slip on the following page and return it to your child's schoolteacher. I will then send the questionnaire home with your child after the school holidays. I will share my results with you when I have completed the project, if you would like me to.

**MICHAL HARTY (MISS)**  
**B. Comm. Pathology (U.P.)**



TEAR-OFF SLIP (delete whichever option is not applicable)

I \_\_\_\_\_  
(name and surname)

am willing/am not willing to participate in this research study conducted under the auspices of the University of Pretoria.

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

Contact telephone numbers (landline)

office hours: \_\_\_\_\_

after hours: \_\_\_\_\_

cellphone number: \_\_\_\_\_