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Home-based Literacy Experiences of Preschool Children with Cerebral Palsy and Their Peers Without Disabilities in KwaZulu-Natal

by

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ABSTRACT

Children with cerebral palsy in South Africa may face various challenges in their acquisition of literacy. In order to address these, an understanding of the nature of these challenges can be seen as the first step. Successful acquisition of literacy is not only determined by formal instruction. Studies have found that the development of literacy skills appear to be related to supportive home literacy environments and experiences. Specific aspects of home literacy experiences have been found to predict later literacy and language skills. The aim of this research is to describe the home literacy experiences of Zulu children with cerebral palsy aged four to six years and their peers without disabilities living in KwaZulu-Natal. Caregivers of 10 children with cerebral palsy and caregivers of 10 children without disabilities, matched for age and gender, were selected from various preschools and schools within KwaZulu-Natal to complete a questionnaire. The questionnaire was developed based on a previous study and is based on five domains of home literacy experiences which include: (1) the child's literacy experiences and interest, (2) materials and caregiver activities for child literacy development, (3) shared storybook reading, (4) caregiver's own literacy materials and activities, and, (5) caregiver's expectations of their child's literacy development. The results obtained indicated that, in general, the home literacy experiences of the two groups did not differ for most of the home literacy experience aspects. Both groups of caregivers engaged in literacy mediating activities with their children. There were similar trends in the frequency that the child and the caregivers in both groups engaged in literacy practices, which shows that both groups of children had literate role models to demonstrate literacy experiences. Both groups had relatively high expectations of their children's literacy development. Statistically significant differences were found between the two groups regarding the reported level of active involved in some of the activities engaged in during shared storybook reading and in children's interest in literacy activities. Children with cerebral palsy were reportedly less actively involved during certain shared storybook reading activities and less interested in literacy activities. The study highlights the nature of the home literacy experiences and some of the areas that need consideration in the literacy development of children with cerebral palsy. Suggestions for future research are provided.

Keywords: Cerebral palsy, child literacy development, child literacy interest, home-based literacy experiences, KwaZulu-Natal.

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1.1 Introduction

Literacy is the learnt ability to read and write and its acquisition requires active engagement with print (Indrisano & Chall, 1995).

Literacy can be seen as a product of psycho-socio-linguistic factors and is linked to language, cognitive development and socio-cultural influences (Perry, 2012). Literacy, including reading and spelling skills, are developmental processes and develop over time (Sandberg, Smith & Larsson, 2010). The level of literacy development is influenced by the child's skills and the internal resources that they bring to the learning process, as well as the environmental demands, barriers, opportunities and scaffolds that support instruction and learning (Adams, 1990; Sandberg, Smith & Larsson, 2010). These environmental factors include formal literacy instruction (typically conducted in primary school) as well as the home literacy experiences (Smith, 2005). Literacy abilities are vital as they allow an individual to have access to educational and vocational opportunities and also to engage in various activities of daily life (Light & Kelford Smith, 1993).

For individuals with cerebral palsy (CP), literacy skills may take on additional significance. Individuals with CP and little or no functional speech (LNFS) may use literacy as an augmentative or alternative mode of communication (Hetzroni, 2004; Light & Kelford Smith, 1993). Since written language (like spoken language) is generative (i.e. an unlimited number of meanings can be expressed; Smith, 2006), literacy skills may enable persons with CP and LNFS to communicate extensively with their family, friends and community, while also allowing for independent acquisition of information and knowledge and ultimately active participation in society (Ferreira, Ronnberg, Gustafson, & Wengelin, 2007; Hetzroni, 2004). Literacy skills provide a means to engage in conversation, and to have unlimited vocabulary to create messages, therefore maximising the individual's capability and competency for communication (Hetzroni, 2004). Many individuals with CP do not develop functional literacy skills and, considering the importance of literacy, this is a matter of concern (Light & Kelford Smith, 1993).

This study aims to describe the home literacy experiences of Zulu children with CP aged four to six years, living in KwaZulu-Natal (KZN). As one predictor of later literacy abilities,

home literacy experiences need to be better understood in order to understand the risk and opportunity factors inherent in these contexts. In order to provide a background to the study, the following areas will be briefly discussed: (1) factors influencing children's acquisition of literacy skills in South Africa, with particular focus on the province of KwaZulu-Natal and on children with disabilities; (2) literacy acquisition in children with CP; (3) home literacy experiences, the conceptual and empirical base of this, and its relation to later literacy skills; and (4) a review of measuring tools that measure aspects of home literacy experiences. A rationale for the current study and for the selection of a specific measuring tool to be used in this study will complete the section.

1.2 Acquiring literacy skills: the SA context

Literacy is the cornerstone of modern society. Its importance has become apparent since the United Nations declared it a basic human right 50 years ago, along with the right to food, healthcare and housing. Literacy education provides a tool to help address pressing needs for food, healthcare and housing (Howie, Venter & van Staden, 2008). Studies have found that literacy rate has a significant positive relationship with per capita Gross Domestic Product (GDP) (Rahman, 2013). Literacy provides a means to function effectively in education as well as to develop as an individual within and outside of school, during childhood and in later life, in further education, at work and in leisure activities (Howie et al, 2008).

It is therefore concerning that many South African schoolchildren are underachieving in their literacy levels – this is leading towards what has been termed a 'literacy crisis' (Fleisch, 2008). In 2006, South Africa participated in the "Progress in International Reading Literacy" study (PIRLS), an international study conducted with groups of Grade 4 and Grade 5 learners from 25 countries worldwide (Howie et al., 2008). The results showed that only 13% of the Grade 4 learners and 22% of the Grade 5 learners in South Africa reached the 'Low International Benchmark'. The South African learners achieved the lowest scores of all participating countries, including other low and middle-income countries such as Iran, Indonesia, Morocco and Trinidad (Howie et al., 2008). South Africa took part in the PIRLS study again in 2011, however, a large proportion of the Grade 4 learners completed the prePIRLS assessment which is a shorter, easier version presented at a lower level of cognitive demand. South African Grade 4 learners still performed at a low level overall on this version of the assessment (Zimmerman & Smit, 2014). These results demonstrate the poor state of

literacy development in South African schools and the failure to provide adequate instruction to foster the development of literacy skills to these children without disabilities.

There are many challenges related to literacy instruction in South Africa. Some of these challenges are closely associated with language and literacy, while others are macro level factors (Pretorius & Klapwijk, 2016). South Africa has 11 official languages and the Language of Learning and Teaching (LoLT) is not necessarily the language which the child is exposed to or speaks at home (Pretorius & Klapwijk, 2016). This means that a large proportion of children will be taught and learn in a language which is not their own. This can and often does have a negative impact on their language comprehension and learning success (Pretorius & Klapwijk, 2016). Other reasons for poor levels of literacy in South Africa include macro level factors such as high levels of poverty, poor parental literacy rates, poor governance in many schools, poorly qualified teachers and poorly resourced schools (Pretorius & Klapwijk, 2016). The availability of resources and reading material for many of the languages in South Africa is limited; for example, Grade 1 learners in KwaZulu-Natal had very limited access to books or additional pieces of writing in their home language which could be used for extended literacy instruction (Mudzielwana, Joubert, Phatudi & Hartell, 2012; Verbeek, 2010). Home literacy experiences may also play a role in poor literacy development, however, little is known about the home literacy experiences of South African children. Based on a survey of the literacy practices in African and coloured[1] communities in South Africa, Banda (2003) reported that African children tended to start reading and writing at a later age than coloured children, and children in rural areas tended to start reading and writing at a later age than children in urban areas.

For learners with disabilities, the situation is even more complex. Access to formal education for learners with disabilities is one challenge. UNICEF (2013) states that only 10% of all children with disabilities globally attend school and only 5% of these children go on to complete their primary education. Learners with disabilities experience great difficulty in gaining access to education and for many across South Africa, the quality of education is poor (Spaull, 2013). In response to this fact, the South African Department of Education (DoE), created a policy in 2001 known as Education White Paper 6: Special Needs Education – Building an Inclusive Education and Training System (DoE, 2001). In 2015, in a report on

[1] The term ‘coloured’ is used in official South African documents to denote people of African-Caucasian heritage. It does not carry the same derogatory connotations as in the USA.

the implementation of this policy, the DoE admitted to facing significant challenges in making progress in implementing an inclusive education system (DoE, 2015).

Over the period 2012 to 2013, there was an increase of 4,932 in the number of enrolments in special schools (from 111,598 in 2012 to 116,530 in 2013) in one year, however, there was no increase in the number of special schools. It was reported that although this is a sign of an increase in access, it does not necessarily imply an improvement in the quality of education (DoE, 2015). The findings of a KwaZulu-Natal study on the progress of inclusive education indicated that this policy and other previous policies had no effect on the schools and those that work in them as far as implementing inclusive education was concerned (Ntombela, 2011). In order to improve the quality of education, factors such as the need to build adequate school infrastructure and invest in teaching resources and teacher training have been identified (Human Rights Watch report – Complicit in exclusion). Conditions such as high rates of violence in schools, lack of appropriate resources, poor teacher knowledge, training, skills, lack of motivation, and a lack of individualised teaching and learning are all challenges that affect learners with disabilities and their quality of education (Human Rights Watch, 2015). The limited parental and teacher expectations and priorities for academic success of children with disabilities compared to their peers without disabilities is also a contributing factor to their learning outcomes and quality of education (Peeters, Verhoeven, van Balkom and de Moor, 2009; Pugach & Warger, 2001, Stobbart & Alant, 2008).

Stobbart and Alant (2008) conducted a study on the home-based literacy experiences of severely to profoundly deaf South African preschoolers and their hearing parents from middle-income families. Results emphasised positive as well as concerning aspects regarding the literacy contexts within the home environments that these preschoolers were exposed to (Stobbart & Alant, 2008). The positive aspects included the active involvement of families in their own literacy activities, which provided good literacy models for their deaf children. Families also reported having a range of literacy materials available in their homes, thus creating a literacy-rich environment for their children (Stobbart & Alant, 2008). The concerning aspects included the lack of priority and expectations for literacy described by the parents, where they indicated that speech, spoken language development and interaction with friends is a higher priority than literacy development (Stobbart & Alant, 2008). Parents appeared to view reading and writing as a set of skills which should be taught in an educational setting rather than a socio-interactive process (Stobbart & Alant, 2008), therefore

not acknowledging their own role in their child's literacy development. Another concerning aspect indicated that the hearing parents defined their role in literacy activities and the communication interaction with a high level of directive interaction, and storytelling activities involved more adult control over turn-taking and topics of conversation, which has a significant impact on the child's reading responses and taking of initiatives during these activities (Stobbart & Alant, 2008). Another study was conducted by Johnson (2010) on home reading experiences of South African Grade 1 children from middle-income families with and without learning disabilities, as perceived by their parents. This study found that, although both groups of children's home reading environments were similar, their responses during storybook reading and their engagement in independent reading differed (Johnson, 2010). There are no studies to date focusing on the home literacy experiences of South African children with CP.

1.3 Literacy skills in children with CP

Cerebral palsy (CP) describes a group of permanent disorders of the development of movement and posture which causes activity limitation. It is attributed to non-progressive disturbances that occurred in the foetal or infant brain (Rosenbaum, Paneth, Leviton, Goldstein, Damiano, Dan, & Jacobsson, 2006). Some may have LNFS and may need to rely on augmentative and alternative communication (AAC). Since the use of fully fledged sign language is difficult for many individuals with CP due to physical limitations, these individuals would typically make use of aided systems, such as communication boards and speech generating devices (SGDs). Unless one is literate, it is difficult to provide an aided system with true linguistic qualities; in other words, a system that allows for the generation of novel messages. This is one reason why literacy skills are especially important to those individuals who have CP and LNFS.

Potential influences and risk factors for literacy development for children with CP may be both intrinsic to the individual, and extrinsic, in their home and learning environments (Smith, 2005). Intrinsic factors to consider include physical impairments, sensory/perceptual impairments, communication difficulties and cognitive impairments (Smith, 2005).

Children with CP who have physical impairments have limited opportunities to interact with their environment. This includes not being able to independently seek out a book, turn the pages, hold a crayon and scribble or directly interact with early literacy experiences

(Smith, 2005). Increased time demands for more pressing activities of daily living often mean that the literacy experiences and development of children with CP is less of a priority (Light & Kelford-Smith, 1993). Sensory/perceptual impairment such as visual and hearing impairments significantly affect the systems for visual and auditory processing which are of vital importance to learning to read and write (Smith, 2005). Without vision the child will not be able to access the standard print information available to a beginning reader, and without auditory language the basics of reading development are unavailable to the child (Smith, 2005). Communication difficulties, which include both language impairments and speech limitations, put the child at a disadvantage in terms of literacy development (McNaughton & Lindsay, 1995; Smith, 2005). Children with CP are vulnerable to language difficulties, especially vocabulary and/or morphological deficits, which creates additional challenges to learning literacy (Smith, 2005; Sutton, Soto, & Blockberger, 2002). Impairments within the speech processing system impact the development of phonological awareness, and analysis and segmentation skills, which further places the child at risk for literacy learning difficulties (Smith, 2005). Lastly, cognitive impairment may cause developmental delays which will affect all other intrinsic factors. Literacy learning requires cognitive application (Smith, 2005). Attention regulation and working memory are basic requirements for reading, however, these are often areas of difficulty for children with CP (Van Balkom & Verhoeven, 2010).

Extrinsic factors which need to be considered are the home and the school environment – these may also contribute to be risk factors for poor literacy development of children with CP (Smith, 2005). In the home environment, the child with CP may have less time available to participate in literacy activities due to the increased time it typically takes them to participate in other daily tasks and activities (Light & Lindsay, 1991). Parental priorities for children with CP may focus more on other areas of development before literacy (Smith, 2005). Explicit teaching and practice in reading is essential for learning to read and write, however, within the school environment, children with CP often receive less teaching time than their peers (Smith, 2005). Generally, there is also minimal financial allocation for teacher training, assistive devices and classroom materials to assist these leaners (Smith, 2005). Therefore, it is apparent that children with CP are often faced with many factors which make literacy learning difficult and put them at risk of poor literacy development (Smith, 2005).

1.4 Home literacy experiences

Successful acquisition of literacy is not only determined by formal instruction. Studies have found that the development of literacy skills appear to be related to supportive home literacy environments and experiences (Light & Kelford Smith, 1993; Peeters, Verhoeven, van Balkom & de Moor, 2009). There is a large body of research on individuals without disabilities that shows positive correlations between home environments that are rich in literacy experiences and materials and children's emerging literacy and language skills (e.g. Burgess, Hecht & Lonigan, 2002; Snow, Burns & Griffin, 1998; Weikle & Hadadian, 2003).

Over the years, home literacy environments and experiences have been conceptualised and operationalised in various ways, and different terms have been coined to describe these, including terms such as Home Literacy Environment, Home Literacy Experiences, Home Literacy Practices or Home Literacy (Light & Kelford Smith, 1993; Martini & Sénéchal, 2012; Peeters et al., 2009; Rodriguez, Tamis-LeMonda, Spellmann, Pan, Raikes, Lugo-Gil & Luze, 2009; Sénéchal, LeFevre, Thomas & Daley, 1998; Stephenson, Parrila, Georgiou & Kirby, 2008). In this study, the term home literacy experiences (HLEs) will be used.

In order to gain a better understanding of the way in which the HLEs have been conceptualised, operationalised and measured, some of the literature in the field will be briefly reviewed.

In earlier studies, it was assumed that social status measures such as parental education and family income were indicators of HLEs (Burgess et al., 2002). In other words, it was accepted that higher family income and higher parental education would imply richer HLEs. However, more recent studies have attempted to identify the specific HLEs aspects which are related to literacy and language development. These aspects, especially shared reading activities, rather than the social status measures, explain the relationship between HLEs and educational and developmental outcomes more effectively (Burgess et al., 2002). Research suggests that in order to gain a better understanding of the relationships between HLEs and development of literacy and language skills, HLEs must be conceptualised as complex and multifaceted (Burgess et al., 2002; Leseman & de Jong, 1998; Scarborough & Dobrich, 1994).

One of the earliest models of the HLE is the one by Teale and Sulzby (1986), who describe HLE as comprising three types of experiences, namely: (1) experiences where

children interact with adults in literacy activities or situations, (2) experiences in which children explore print on their own, and (3) experiences where children see adults modelling literacy behaviours or activities such as reading a book, typing out an SMS[2]/text message, etc. These early HLEs are generally where language and literacy is first encountered and where most children become familiar with the nature and function of written language through observation and participation in these literacy activities in their home environments (Light & Kelford Smith, 1993; Van Steensel, 2006).

Various studies have attempted to measure these and additional variables as indicators of HLEs, and have also attempted to determine whether these variables are related to and/or predictive of children's literacy skills and outcomes.

Sénéchal, LeFevre, Thomas and Daley (1998) examined whether storybook exposure and the amount of teaching in reading and writing skills are related to language and literacy skills. It was found that for preschool children, both storybook exposure and parent teaching on literacy were positively associated with the children's oral language and written language skills. However, for the Grade 1 children, storybook exposure was only associated with oral language skills, while parent teaching was only associated with written language skills (Sénéchal et al., 1998). This difference could be interpreted as an indication that storybook reading and parent teaching have different relations with child outcomes depending on their age and school level (Sénéchal et al., 1998).

Results from a study by Burgess et al (2002) indicate that active HLEs, such as shared book reading, literacy instruction and rhyming games, rather than passive HLEs, such as parent modelling literacy activities and TV watching habits are more likely to have a significant positive association with children's literacy and language learning.

In a study done by Weigel, Martin and Bennet (2006) on the contributions of HLEs to preschool children's literacy and language learning, results showed that parental literacy habits were positively associated with parental reading beliefs, which were positively associated with quantity of parent-child literacy and language activities in the home. Furthermore, it showed that these parent-child literacy and language activities were positively

[2] SMS stands for short message service and is commonly used in South African to refer to text messages sent via cellular (mobile) telephones.

associated with children's print knowledge, their interest in reading and the exploration of print on their own.

A study by Sénéchal (2006) aimed to test the Home Literacy Model developed by Sénéchal & LeFevre (2002). According to this model, storybook exposure and parent teaching about literacy are distinct types of activities in most homes (Sénéchal & LeFevre, 2002). The model predicts that storybook exposure promotes language skill development while parent teaching about literacy (e.g. teaching the child how to name the letters of the alphabet, teaching the child how to read words and teaching how to print words) promotes early literacy skills acquisition. As predicted by the Home Literacy Model, Sénéchal (2006) found that parent book reading and teaching on literacy are two separate aspects of HLEs. This study also found that book reading is directly related to a child's language skills and that literacy teaching by parents is directly related to a child's early literacy skills (Sénéchal, 2006).

In a comparative study of 25 countries, Park (2008) found that three measures of HLEs (frequency of early home literacy activities and experiences, parental attitudes toward reading, and number of books at home) positively affected children's reading performance in almost all of the 25 countries. In this study, it was found that HLEs have a positive influence on children's reading skills in most countries, however, significant cross-national variations were found in the effect of each of these home literacy measures (Park, 2008).

In a study by Justice, Logan, Isitan and Sackes (2016), HLEs were measured by three factors, namely frequency of storybook reading, literacy teaching during book reading, and children's print interest. It was found that children's print interest was positively associated with early literacy skills.

From the above brief overview of models and studies, it is clear that the construct 'home literacy' is a complex and multifaceted one, and that different authors and researchers have included different variables with varying operational definitions into their models, and also measured different outcome variables. A more comprehensive conceptualisation of HLEs recognises that various, different aspects of HLEs could have an influence on the different educational and developmental outcomes (Burgess et al., 2002).

At a very basic level, the variables and factors that make up HLEs can be classified into four groups of interrelated factors:

1: Caregiver variables (attitudes and beliefs about literacy, literacy habits, modelling of literacy activities);

2: Child variables (skills and capabilities, interest in literacy experiences, independent exploration of print and engagement in solitary literacy activities);

3: Interactive literacy activities (between caregiver and child – e.g. storybook reading, caregiver teaching about literacy etc.); and

4: Resources (books, writing artefacts).

1.5 The home literacy experiences of children with CP

Light and Kelford Smith (1993) investigated the HLEs of preschoolers who use AAC systems and of their peers without disabilities in the United States of America (USA). Of the 15 children using AAC included in the study, 14 had CP. They administered a questionnaire which was based on three primary contexts, namely the physical and functional context, the language context, and the cultural context. Their choice of these three contexts was informed by a thorough review of the literature available at the time. The physical and functional context was defined as the physical environment surrounding the child and the structure and function of their daily activities (Light & Kelford Smith, 1993). The physical aspect included the literacy materials available in the home, while the functional aspect included the functions assigned to literacy activities in the home, the time given for such activities, and the individual's own interest in the literacy activities (Stobbart & Alant, 2008). The language context referred to the interaction within literacy activities between the adult and the child, and the language used within these interactions (Light & Kelford Smith, 1993). The cultural context referred to values and beliefs of the parents and community about literacy, as well as their expectations for literacy development (Light & Kelford Smith, 1993).

This questionnaire was reviewed by an expert panel and was reviewed and field tested by two parents to ensure that significant issues were sufficiently addressed and that the questions were clear. The questionnaire was revised and edited after each review (Light & Kelford Smith, 1993). The questionnaires were mailed to 20 parents of children using AAC and 24 parents of children without disabilities. The authors found that the HLEs of children using AAC differed in some fundamental aspects when compared to their peers without disabilities (Light & Kelford Smith, 1993). These aspects included having less opportunities to use

printed materials and to participate in writing activities, as well as less involvement in actively engaging in literacy activities such as storybook reading (Light & Kelford Smith, 1993). Furthermore, the daily routine of caring for a child using AAC was found to limit the amount of time available in the routine for literacy activities. Parents of children using AAC were often found to prioritise other aspects of development above literacy (Light & Kelford Smith, 1993; Smith, 2005).

The results of this study allow for a better understanding of the differences between the HLEs of children using AAC compared to their peers without disabilities and suggest that children who use AAC may be beginning school with literacy backgrounds and experiences which are qualitatively and quantitatively different from that of their peers without disabilities (Light & Kelford Smith, 1993). The results of the study by Light and Kelford Smith therefore suggest that children with CP may be at a disadvantage when starting formal literacy learning in school.

Dahlgren Sandberg (1998) investigated reading and spelling among children with CP and the influence of the home and school literacy environment. Participants included parents and teachers of 35 children with LNFS and CP who used Bliss. There were two comparison groups, one matched for mental age and gender (the group without disabilities) and the other for IQ and gender (the group with intellectual impairment). The parents and teachers responded to questionnaires regarding the children's home and school literacy experiences. The parents' home literacy questionnaire questions were grouped into seven main areas, including communicative abilities, availability of printed material, parents' habits, values and expectations, children's interest in literacy activities, children's activities during reading, parents' activities when reading aloud, and other language-related activities (Dahlgren Sandberg, 1998). The answers from the group with LNFS were compared with the answers of the two comparison groups. The results indicated a few differences in the HLEs between the three groups. The children in all three groups had access to various printed materials and no differences were found in parents' reading habits or in their values and priorities given to literacy. The children in the group with LNFS took a passive role in story reading with minimal verbal interaction, while the parents took on the active role (Dahlgren Sandberg, 1998). The author suggested that, since HLEs among the groups were so similar, HLEs in the groups studied only had a marginal influence on the development of literacy skills (Dahlgren Sandberg, 1998). The author proposed that the individual differences in speech and language

abilities may better explain the poor literacy skills often found among children with LNFS (Dahlgren Sandberg, 1998).

Peeters, Verhoeven, van Balkom and de Moor (2009) conducted a study on the characteristics of HLEs of children with CP, aged five, compared to their peers without disabilities in the Netherlands. There was a total of 102 participants in the study: 40 children with CP and 62 children without disabilities. They administered questionnaires regarding HLEs, standardised tasks for speech intelligibility, intelligence and language, as well as a questionnaire regarding fine motor skills (Peeters et al., 2009). The questionnaires were sent to the contact person at the schools, who then handed the questionnaires to the parents of the participating children (Peeters et al., 2009). The HLE questionnaire was constructed based on earlier research (Dahlgren-Sandberg, 1998; Light & Kelford Smith, 1993; Marvin, 1994; Stoep et al., 2002), and asked questions about five home literacy variables, including: (1) child literacy interest, (2) child's activities during storybook reading, (3) materials and parental activities for child literacy development, (4) parents' literacy materials and activities, and (5) parents' expectations for their child's literacy development. The internal consistency of the questionnaire was reported to be sufficient (Peeters et al., 2009). The main finding was that, although children with CP scored lower on all aspects of HLEs, indicating less stimulating HLEs than their peers without disabilities, very few of these factors were found to be significantly lower (Peeters et al., 2009). Similar to findings by Light and Kelford Smith (1993), this study found that these individuals often had less opportunity to engage with printed materials and to participate in literacy activities. Children with speech or fine motor impairments were found to be disadvantaged in specific literacy activities, as their speech impairments seemed to limit their interactions during literacy activities, while their physical impairments seemed to limit their ability to handle literacy materials (Peeters et al., 2009). The authors also found that parents of children with CP were uncertain as to what expectations to have for their child's literacy levels (Peeters et al., 2009).

Peeters, Verhoeven, de Moor, van Balkom and van Leeuwe (2009) also conducted a longitudinal study on the home literacy predictors of early reading development in children with CP. Of the 40 children with CP included in the study by Peeters et al. (2009), 35 were followed up one year later and their early reading development was evaluated (Peeters et al., 2009), in order to determine if any home literacy factors predicted their skills in this regard. It was found that three specific variables of HLEs including parent literacy mediation, word

orientation and story orientation activities during shared book reading have a significant impact on the early literacy development of children with CP (Peeters et al., 2009). In contrast, the other variables, including child's literacy interest, literacy materials and parental literacy habits, that form part of HLEs were not found predictive of early literacy development. The results of this research show that the activities that parents engage in with their children have an impact on the reading precursors of these children and so, the importance of more directed stimulation at home as well as providing supportive HLEs is highlighted (Peeters et al., 2009).

The studies conducted by Light and Kelford-Smith (1993), Dahlgren Sandberg (1998) and Peeters, Verhoeven, van Balkom and de Moor (2009) were conducted in developed countries. Less is known about the HLEs of children with CP in developing contexts. The World Report on Disability (WHO, 2011) reported the global prevalence of disability to be 15.6%, ranging from 11.8% in high income, developed countries to 18% in low income, developing countries. In addition to a higher prevalence of disability in developing contexts, environmental factors may pose additional barriers. Regarding HLEs, such environmental factors may include lower socio-economic status of the family, limited availability and use of printed materials, and lower parental literacy levels and literacy habits (Weigel, Martin & Bennet, 2006).

1.6 Rationale for the current study

From the above discussion, it is clear that children with CP in South Africa may face various challenges in their acquisition of literacy. In order to address these, an understanding of the nature of these challenges can be seen as the first step. Specific aspects of HLEs (child's engagement in literacy activities, child's literacy interest, caregivers' active involvement in literacy activities, literacy teaching and caregiver literacy mediation, exposure and availability of literacy materials in the home, caregivers' own literacy habits and caregiver beliefs and expectations about their child's reading) have been found to predict later literacy and language skills in children without disabilities. Similarly, three factors (caregiver literacy mediation, word orientation and story orientation activities during shared book reading) related to HLEs in children with CP in the Netherlands have been found predictive of later literacy skills, in particular phonological awareness. It is also clear that there are different definitions and conceptual models as to what HLEs entail and there a plethora of variables that have been operationally defined and measured in various studies

exists. In order to identify possible instruments for measuring the HLEs in children with CP from Zulu-speaking backgrounds, a systematic search was undertaken to identify possible measuring instruments that could be adapted for the current study.

1.7 Measuring home literacy experiences

Three studies were found that described HLEs of children with CP (Dahlgren Sandberg, 1998; Light & Kelford-Smith, 1993; Peeters, Verhoeven, van Balkom & de Moor, 2009). Two of these studies (Light & Kelford-Smith, 1993; Peeters, Verhoeven, van Balkom & de Moor, 2009) had an instrument which was available. The instrument used by Light and Kelford-Smith (1993) was able to be sourced, however, this instrument is 24 years old. The more recent instrument used in a study by Peeters, Verhoeven, van Balkom and de Moor (2009) was able to be reconstructed using the information provided in their article. It is important to understand where the field has moved to since this study and the other variables which may now be known to be important and play a role in HLEs.

A systematic search was therefore conducted in November 2016 in order to obtain an overview of recent measuring tools (2006 onwards) used to describe HLEs/environments in children with CP and/or without disabilities. The search terms are provided in Figure 1.1.

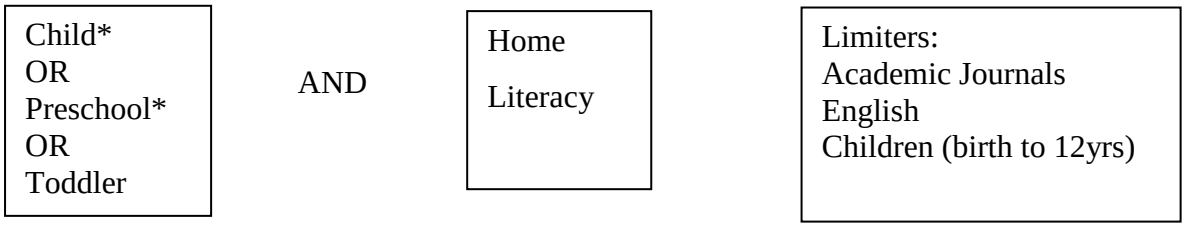

Figure 1.1. *Search Parameters.*

These search terms and limiters were entered into 12 databases (see Figure 1.2), resulting in 85 hits. The records were screened for relevance on a title/abstract level according to the inclusion and exclusion criteria (see Table 1.1). Records were retained when it was not clear whether inclusion criteria were met. Following screening on a title and abstract level, 31 records remained. These were then screened on a full text level, using the inclusion and exclusion criteria (see Table 1.1). Of the 31 records, 27 were excluded. Four records were included in the overview table (Table 1.2).

The PRISMA diagram (Figure 1.2) depicts the systematic search process.

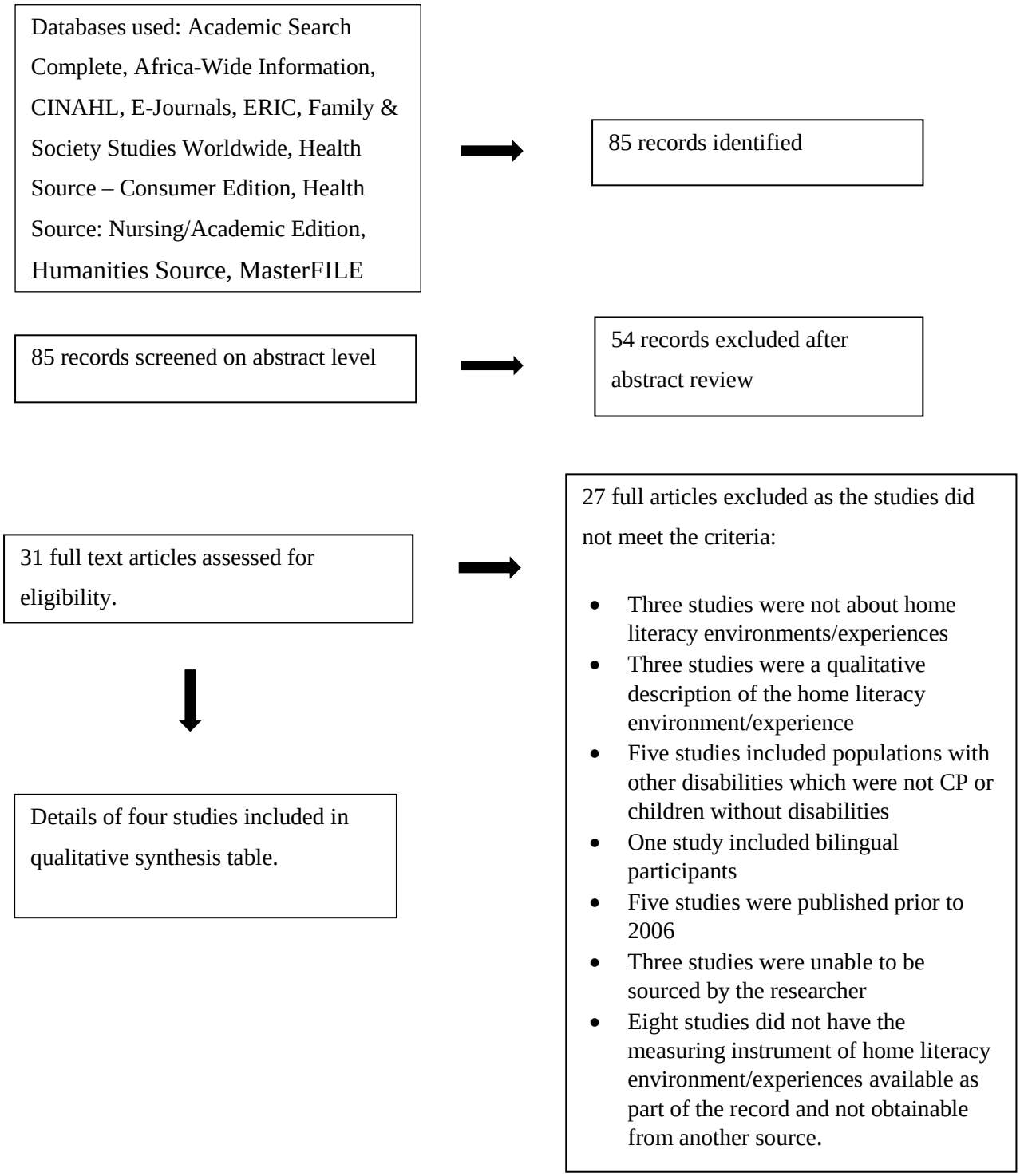

Figure 1.2. *Selection process for studies included in the systematic literature search.*

Table 1.1

Inclusion and Exclusion Criteria for Records Screened

Aspect	Inclusion criterion	Exclusion criterion
Population	Children with CP or without disabilities	Children with any other type of disability Bilingual children
Issue	HLEs/environment, defined as three general categories which include; experiences where children interact with adults in literacy activities or situations, experiences in which children explore print on their own, and experiences where children see adults modelling literacy behaviours or activities (Teale & Sulzby, 1986)	Any other aspect of literacy, such as phonological awareness, alphabet knowledge, etc
Outcome	Quantitative measure of HLEs	Qualitative descriptions of HLEs
Date of publication	2006-2016	Records published prior to 2006
Other	Quantitative measuring instrument of home literacy environment/experiences available as part of the record or obtainable from another source	Quantitative measuring instrument of home literacy environment/experiences not available as part of the record and not obtainable from another source.

A total of 4 studies were included in the review. These studies are summarised in Table 1.2.

Table 1.2

Summary of the Four Studies with Available Instruments Found in the Systematic Literature Search

	Author	Title	Year	Participants	Design	Construct Measured	Theoretical Definition/ Domains Included	Measurement Instrument	Findings
1.	Burgess	Home literacy environments (HLEs) provided to very young children.	2011	262 parents with a child 18 months old or younger	Descriptive cross sectional	Home literacy environment	The HLE consists of; Resources (e.g. books, magnetic letters, TV) Opportunities (e.g. Frequency of child library visits, rhyming games) Parental skills, abilities and dispositions (e.g. Parents' reading skills, parents' reading habits, frequency of parent library visits) Based on HLE model (Burgess et al., 2002).	Survey and checklist	In general, children were exposed to a wide range of literacy activities and experiences, but many had relatively little literacy exposure. Shared reading was the most common literacy activity. Activities specifically intended to teach literacy knowledge or skill were in place for many children. Children were much more likely to see mothers engaged in literacy activities than fathers.
2.	Martini & Sénéchal	Learning literacy skills at home: Parent teaching, expectations, and child interest.	2012	108 children between the ages of 57 and 71 months and one parent for each child.	Descriptive Quantitative	Literacy practices	The Home Literacy Model. The HLE consists of: Informal literacy activities Formal literacy activities Key prediction of the Home Literacy Model is that informal (e.g. shared storybook reading)	Home literacy questionnaire Alphabet knowledge: Letter Identification Subtest of the Woodcock Reading Mastery Tests–Revised (Woodcock & Johnson, 1989) Emergent reading	Many parents reported that they adopted a very active didactic role in their young child's early literacy. Parents tended to have high expectations about their child's acquisition of literacy skills prior to Grade 1. It is important to note that parent teaching as well as parent expectations and child interest each explained unique variance in early literacy after controlling for

							and formal (e.g. parent teaching) literacy activities hold different relations to early literacy (i.e. alphabetic code-related skills) and oral language (e.g. vocabulary).	Children's interest in literacy activities: Pictorial scale (Interest in Literacy Scale; Frijters et al.,2001)	socioeconomic status and child nonverbal intelligence. Hence, the explanatory power of the Home Literacy Model would be increased if it included parent expectations and child interest.
3.	Hood, Conlon & Andrews	Preschool home literacy practices and children's literacy development: A longitudinal analysis.	2008	143 preschool children with no serious developmental or intellectual impairments.	Longitudinal Quantitative	Home literacy practices	Frequency of reading to the child The number of children's books The frequency of parental teaching of literacy skills The frequency of library visits	Home Literacy Environment Questionnaire A children's Title Recognition Test	Parent-child reading and parent literacy teaching were both relevant home literacy practices but effected different aspects of language and literacy development.
4.	Peeters, Verhoeven, van Balkom & de Moor	Home literacy environment: Characteristics of children with CP.	2009	40 parents of children with CP and 62 parents of children without disabilities who were comparable on chronological age, socio-economic status and gender.	Descriptive cross sectional. Participants from a longitudinal study.	Home literacy environment	Child's literacy interest Child's activities during storybook reading Materials and parental activities for child literacy development. Parents' own literacy materials and activities Parents' expectations of their child's literacy development	Five self-administrated parent questionnaires regarding each of the domains of the HLE	Only a few group differences were significant (children with CP were less interested in participating in writing activities, and less involved in word-orientation activities during shared storybook reading). However, parents of children with CP were doing more leisure activities with their child.

The instruments identified were qualitatively evaluated based on the following loose criteria:

1) Reliability and validity data;
2) Comprehensiveness with which the construct HLE was addressed, including caregiver variables, child variables, interactive literacy activities and resources as described in section 1.4; and
3) Similarity of the population for which the instrument was developed with the target population of this study (Zulu children with CP aged 5-6).

The results are described in Table 1.3.

Table 1.3

Summary of the Qualitative Evaluation of the Four Instruments Found in the Systematic Literature Search

Instrument	Study	Reliability/Validity	Comprehensiveness	Applicability
Home Literacy Environment Survey	Burgess, S.R. (2011). Home literacy environments (HLEs) provided to very young children.	Reliability estimates of HLE surveys are moderate.	**Demographics details:** income, child and parental education. **Parent variables**: parental modelling of leisure reading, number of magazines the family subscribed to or read regularly, how often the parents visit the library. **Interactive literacy activities**: frequency of shared reading, library visits. **Resources**: provision of literacy resources in the home (number of children's books owned, magnetic letters). TV viewing habits of child and parents. This study includes aspects of three of the four identified groups of variables/factors.	Developed context (USA); children 18 months old or younger without disability; predominantly Caucasian.
Parent Home Literacy Questionnaire	Martini, F. & Sénéchal, M. (2012). Learning literacy skills at home: Parent teaching, expectations, and child interest.	**Formal Literacy Teaching Activities:** Cronbach's alpha =.91, 95% confidence interval [CI] = 0.88 to 0.93 **Parents' expectations for their child's early literacy skills:** Cronbach's alpha = 0.87, 95% CI = 0.83 to 0.91 **Teaching contexts:** Cronbach's alpha = 0.87, 95% CI = 0.83 to 0.90	**Parent variables**: Parents' expectations for their child's early literacy skills, parents' confidence in own teaching skills, parent time availability for literacy activities. **Child variables**: Alphabet knowledge, emergent reading, child interest in literacy. **Interactive literacy activities**: Formal Literacy Teaching Activities (teaching about literacy – names, sounds and writing of alphabet letters/words); Teaching contexts/Shared literacy activities (Name pictures, nursery rhymes and songs, point out words in magazines/newspaper) **Resources:** Frequency of use of alphabet books, workbooks, storybooks, newspaper, shopping lists, etc.	Developed Context (Canada); five-year-old children without disability; attending their second year of kindergarten; English home language.

			This study includes aspects of four of the four identified groups of variables/factors.	
Home Literacy Environment Questionnaire	Hood, M., Conlon, E. & Andrews, G. (2008). Preschool home literacy practices and children's literacy development: A longitudinal analysis.	Based on those previously used by Sénéchal et al. (1998) and Foy and Mann (2003) Parental familiarity checklists – In Sénéchal et al.'s (1998) study, the Spearman-Brown reliability coefficients for the checklists were 0.88 and 0.90 for the CTC and CAC, respectively.	**Demographic details:** (age, gender, and medical and developmental history). **Child variables**: interest in literacy activities. **Interactive literacy activities**: frequency of shared reading, frequency of parental teaching of literacy skills (letters, words, and name writing), frequency of library visits. **Resources:** number of children's books at home. This study includes aspects of three of the four identified groups of variables/factors.	Developed context (Australia); preschool children (mean age= 5.36 years) without disability; English home language; majority Caucasian.
Parent Questionnaire	Peeters, M., Verhoeven, L., van Balkom, H. & de Moor, J. (2009). Home literacy environment: characteristics of children with cerebral palsy	Good internal consistency (0.69 – 0,78) **Child's literacy interest:** Cronbach's alpha = 0.69 **Child's activities during storybook reading:** Cronbach's alpha = 0.69 **Materials and parental activities for child literacy development:** Cronbach's alpha = 0.78 **Parents' own literacy materials and activities:** Cronbach's alpha = 0.73	**Demographic details:** gender, age, mode of communication, birth order, family constellation, age of parent, SES, parental level of education. **Parent variables:** Parents' own literacy activities, parents' expectations of their child's literacy development. **Child variables**: Child's literacy interest, child's activities during storybook reading. **Interactive literacy activities**: Parental activities with child for literacy development. **Resources:** Materials for child literacy development, parents' own literacy materials. This study includes aspects of four of the four identified groups of variables/factors.	Developed context (Netherlands); preschool children (mean age = 6 years) with CP, Dutch home language.

In this study, the instrument by Peeters et al. (2009) will be used due to its applicability to the target population. The instrument by Peeters et al. (2009) was found most applicable due to it being used on a population of children with CP of similar age to the current study (six years old). The instrument has good internal consistency and is comprehensive of HLEs.

1.8 Summary

This chapter proposed that the home literacy experiences (HLEs) of children are considered to be an important factor in their literacy development. An overview of the literature on HLEs of children with CP and how the HLEs are measured is presented as a theoretical background to this study. An appropriate instrument was identified to use in this study, and the factors relevant to HLEs and literacy development were identified and discussed with reference to the literature. Five factors were identified: (1) child literacy interest, (2) child's activities during storybook reading, (3) materials and caregiver activities for child literacy development, (4) caregivers' literacy materials and activities, and (5) caregivers' expectations for their child's literacy development. These form the foundation of the research questions and caregiver HLEs questionnaire presented in the next chapter.

2. METHODOLOGY

2.1 Aims

2.1.1 Main aim

The main aim of the study was to describe the home literacy experiences (HLEs) of four-year-old to six-year-old children with CP and their peers without disabilities from isiZulu-speaking homes in KwaZulu-Natal.

2.1.2 Sub-aims

In order to address the main aim, five sub-aims were formulated. The sub-aims of the study were:

i. To describe the literacy experiences and interest of children with CP and peers without disability.
ii. To describe the material and caregiver-mediated activities for child literacy development of children with CP and peers without disability.
iii. To describe various aspects related to shared storybook reading for children with CP and peers without disability.
iv. To describe the literacy materials and activities of caregivers of children with CP and peers without disability.
v. To describe the expectations that caregivers of children with CP and caregivers of peers without disability have regarding their children's literacy development.

2.2 Research design and phases

A descriptive cross-sectional survey design was used to describe the nature of home-based literacy experiences for four-year-old to six-year-old children with CP and peers without disabilities in KwaZulu-Natal (McMillan & Schumacher, 2014). No studies have described home-based literacy experiences in this specific population before and this design allows for a

description of a new area of enquiry (Grimes & Schultz, 2002). A survey mode of enquiry was used as it is efficient and cost effective (McMillan & Schumacher, 2014). Some limitations of this design are a poor response rate and participants answering questions in a socially desirable way. Since this was a small-scale exploratory investigation, participant numbers were limited. Due to the small sample size, drawing conclusions about the various factors' influence on the home-based literacy experiences was beyond the scope of the study (Grimes & Schultz, 2002; Kelley, Clark, Brown & Sitzia, 2003).

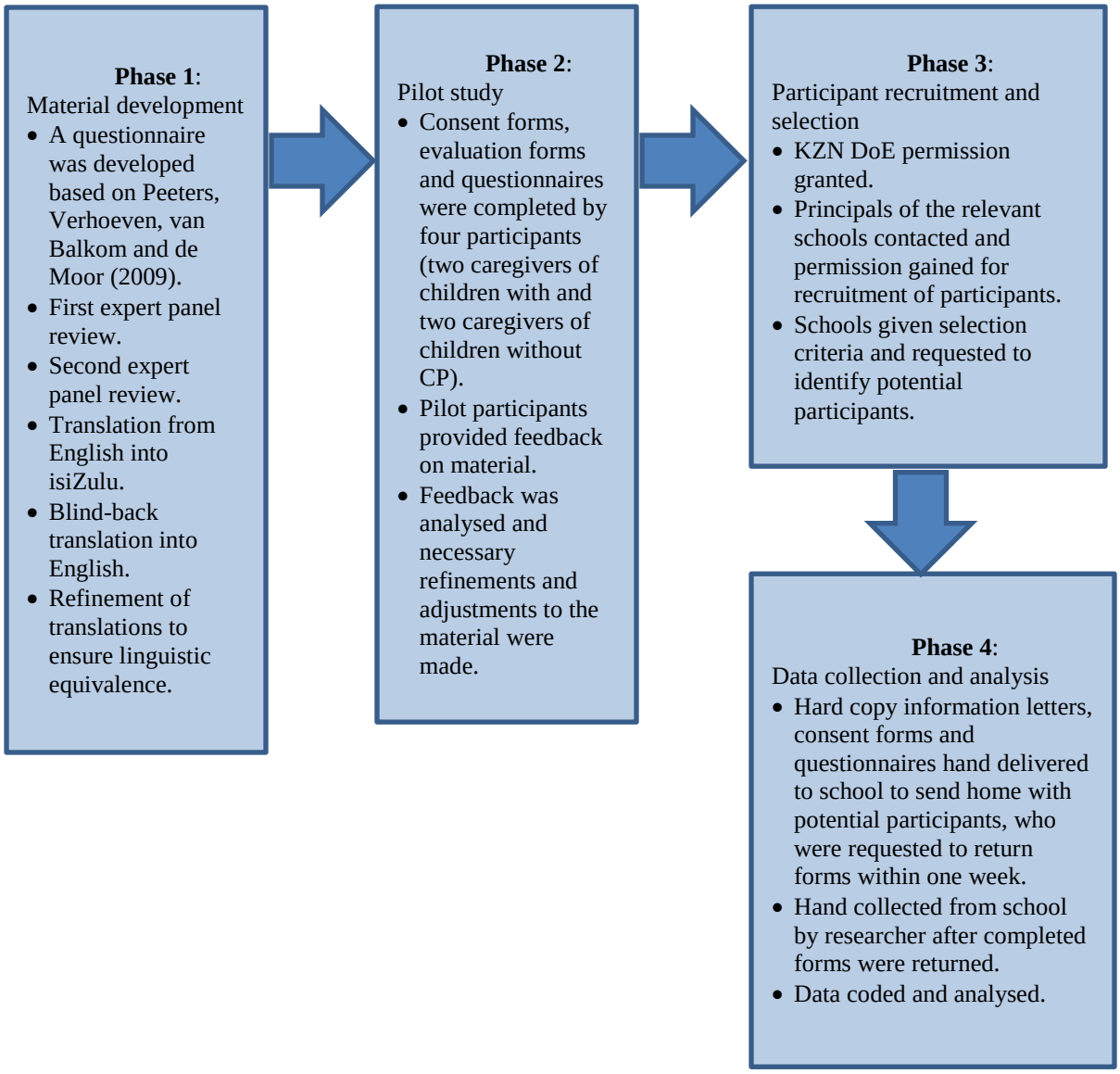

Figure 2.1. *Phases of the study.*

2.3 Pilot study

A pilot study was conducted to ensure that the procedures and materials proposed for the main study were appropriate. The aims of the pilot study were to ensure that the selection criteria were appropriate, to evaluate the clarity of the instructions and items in the questionnaire, to ensure that the items were culturally acceptable, to ensure that the translation was accurate, to evaluate the appropriateness of the visual layout of the questionnaire, to evaluate the effectiveness of the data capturing process, to ensure the coding of the questions was appropriate, and to evaluate the data analysis process.

2.3.1 Participants

The pilot study was conducted with four participants. Participants met the same selection criteria as those used for the main study (see Tables 2.2, 2.3 & 2.4), except that the children with CP were slightly older. This concession was made to be able to include all children meeting the selection criteria in the main study. Since the selection criteria were very specific, it was difficult to find enough participants in the group of children with CP. Two participants were caregivers of children with CP and two participants were caregivers of children without disabilities.

2.3.2 Aims, materials, procedures, results and recommendations

The following table gives an overview of the aims of the pilot study, the materials and procedures used, the results and the subsequent recommendations.

Table 2.1

Pilot Study Aims, Materials, Procedures, Results and Recommendations

Aim	Materials	Procedures	Results	Recommendations
To determine whether teachers were able to identify participants who meet the selection criteria for the participant selection procedure.	Caregiver and teacher background questionnaire	The same participant selection procedure as the main study was used.	Teachers were able to identify participants who met the selection criteria appropriately.	No changes needed
To evaluate the clarity of the instructions and items in the questionnaire.	Evaluation form for questionnaire (see Appendix A)	The participant will be requested to fill in the evaluation form after completing the survey and to meet the researcher to give brief feedback.	The participants were confused when asked to skip questions based on previous answers (Q26 and Q35). Q3, Q17, Q18, Q40 needed additional options to improve clarity.	The options to skip questions were eliminated, and the questions were reworded in order that all questions could be reasonably answered by all participants. Additional options were added to the questions mentioned as follows: Q3 (Highest qualification) The option ‘certificate’ was added Q17 and Q 18 (educational placement of target child) The option of ‘school’ was added Q40 (frequency of caregiver engaging in literacy activities) the first scale

Aim	Materials	Procedures	Results	Recommendations
				point was changed from 'almost never' to 'never/almost never'
To identify any problems with the translation of the items in the questionnaire.	Evaluation form for questionnaire	The participant completed an evaluation form (after completing the survey) to review any problems with the translation of the items. They met the researcher to give brief feedback.	No problems with the translation were found	No changes needed
To evaluate the cultural acceptability of the questionnaire.	Evaluation form for questionnaire	The participant completed an evaluation form to review the cultural acceptability of the items. They met with the researcher to give brief feedback.	Q14. Participants did not feel confident answering this question, as their income tended to vary and stem from different sources (informal employment, grants, etc.).	Rather than asking about the estimated yearly income, the question was changed to request an estimate of the monthly income.
To evaluate the appropriateness of the visual layout of the questionnaire.	Evaluation form for questionnaire	The participant completed an evaluation form to review the visual layout of the items. They met with the researcher to give brief feedback.	Participants reported it was easy to follow/look at.	No changes needed
To evaluate the return rate and frequency that participants will need reminding to return the questionnaire.		The researcher noted the return rate and frequency which each participant was reminded to return the questionnaire.	All four participants returned the questionnaires. Two participants needed reminding via telephonic communication to return the questionnaire.	When caregivers are initially invited to participate via the information letter, those interested will be asked to communicate their telephone numbers to the researcher in order to facilitate telephonic follow up.

Aim	Materials	Procedures	Results	Recommendations
To evaluate the effectiveness of the data capturing process.	Data capturing Excel sheet	The researcher captured the data and evaluated the effectiveness of the process.	The data capturing process was effective.	No changes needed
To ensure the coding of the questions is appropriate.	Pre-determined codes	The researcher coded and evaluated the appropriateness of the codes during the data capturing process.	The codes were appropriate and effective to use.	No changes needed
To evaluate the data analysis process.	Raw data	The researcher evaluated the effectiveness of the data analysis process.	Descriptive and inferential statistics were decided upon for the main study.	No changes needed

2.4 Participants

2.4.1 Description of the context

KwaZulu-Natal is home to about 21% of the South African population and is one of the poorest provinces in South Africa (Stats SA, 2011). According to Stats SA (2013) 5.9% of persons aged five years and older in KwaZulu-Natal are living with a disability. Although this is one of the highest incidences reported across South African provinces, this percentage seems low compared to the statistics by the World Health Organisation (2011). Impairment-based self-report questions are typically used to gather disability statistics in developing nations, and fear of stigma as well as misunderstood terminology typically leads to under reporting (Fujiura, Park & Rutkowski-Kmitta, 2005). KwaZulu-Natal's adult literacy rate is found to be 90.9% (Stats SA, 2013). The main language in KwaZulu-Natal is isiZulu – the home language of 80.9% of the province's population (Stats SA, 2013). The availability of literacy resources in isiZulu is very limited (Mbatha, 2012). The caregivers participating in this study all came from the larger Umgungundlovu, Ethekwini and Harry Gwala districts.

2.4.2 Selection criteria

The participant selection criteria that both groups of caregivers needed to meet are presented in Table 2.2 below.

Table 2.2

Participant Selection Criteria for Caregivers of Children with CP and Caregivers of Peers Without Disabilities

Criterion	Justification	Measure used
Language spoken in the home is primarily isiZulu	This is the predominant language (80.9%) of the population in KZN (Stats SA, 2013), and the language group targeted in this study.	Self-reported via biographical questionnaire.
Caregiver speaks isiZulu to the target child	This is the language group targeted in this study.	Self-reported via biographical questionnaire.
Literate in English and/or isiZulu	This is to ensure that the participant is able to independently complete the questionnaire.	Self-reported via biographical questionnaire.

The additional selection criteria for caregivers of children with CP are given in Table 2.3 below.

Table 2.3

Additional Participant Selection Criteria for Caregivers of Children with CP

Criterion	Justification	Measure used
Primarily responsible for the care of a child who:		
is diagnosed with CP	The main aim of this study is to describe home-based literacy experiences of children with CP compared to children without CP. These experiences have been found to be significantly different from those of peers without disabilities (Light & Kelford Smith, 1993).	Caregiver report via biographical questionnaire, which includes Ten Questions Questionnaire (Durkin, Hasan & Hasan, 1995).
is between four and six years old	At this age, children are typically in preschools or have just began formal Grade 1 schooling. They are typically not yet exposed to, or have just begun to become exposed to, formal literacy instruction. Therefore, school literacy experiences and expectations have not yet had a significant influence on their home-based literacy experiences.	Reported by preschool/school principal. Confirmed through self-report via biographical questionnaire.

Criterion	Justification	Measure used
has isiZulu as their L1	Predominant language (80.9%) of the population in KZN (Stats SA, 2013). No previous research focused on this population.	Reported by preschool/school principal. Confirmed though self-report via biographical questionnaire.
is living with this primary caregiver	Primary caregiver must share the home environment with the child in order to know about the child's home-based literacy experiences and provide accurate information.	Reported by preschool/school principal. Confirmed through self-report via biographical questionnaire.

The additional selection criteria for caregivers of children without disabilities are given in Table 2.4 below.

Table 2.4

Additional Participant Selection Criteria for Caregivers of Children Without Disabilities

Criterion	Justification	Measure used
Primarily responsible for the care of a child who:		
is between four and six years old	At this age, children are typically in preschools or have just began formal Grade 1 schooling. They are typically not yet exposed to, or have just begun to become exposed to, formal literacy instruction. Therefore, school literacy experiences and expectations have not yet had a significant influence on their home-based literacy experiences.	Reported by preschool/school principal. Confirmed through self-report via biographical questionnaire.
has isiZulu as their first language	Predominant language (80.9%) of the population in KZN (Stats SA, 2013). No previous research focused on this population.	Reported by preschool/school principal. Confirmed though self-report via biographical questionnaire.
is living with this primary caregiver	Primary caregiver must share the home environment with the child in order to know about the child's home-based literacy experiences and provide accurate information.	Reported by preschool/school principal. Confirmed through self-report via biographical questionnaire.

2.4.3 Recruitment

Clearance from the ethics committee of the Faculty of Humanities, University of Pretoria (Appendix B), and written permission from the KwaZulu-Natal Department of Education (see Appendix C) were obtained before recruitment commenced. Non-probability convenience sampling was used to first recruit 10 primary caregivers of children with CP aged four to six. Ten caregivers of children without disabilities were then recruited, matched to the group of caregivers of children with CP on certain variables as described in Section 2.4.3.2.

2.4.3.1 Recruitment of caregivers of children with CP

Non-probability convenience sampling was used to recruit participants from special needs preschools and early childhood development (ECD) centres run by non-government organisations (NGOs) within the Umgungundlovu, Ethekwini and Harry Gwala regions in KwaZulu-Natal.

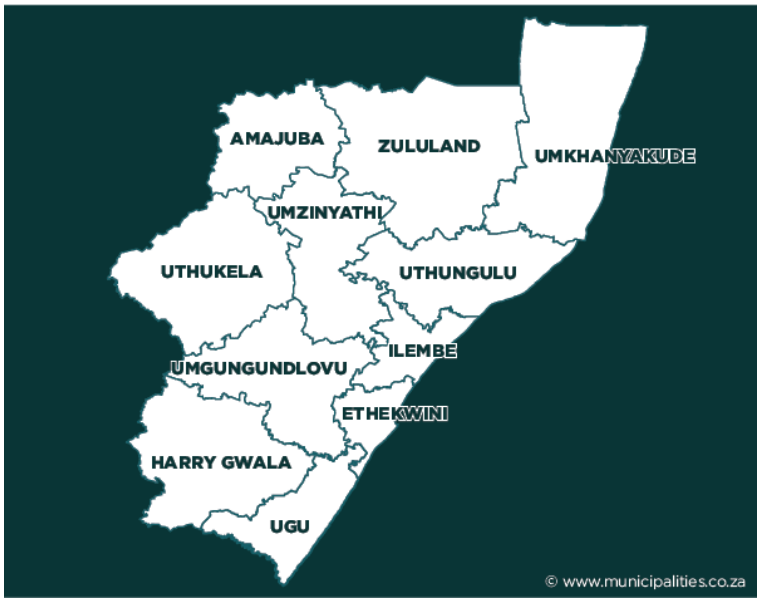

Figure 2.2. *Map of the regions of KwaZulu-Natal.*

Special needs preschools, NGOs and ECD centres within this geographical area were identified as sites for recruitment, as they were accessible to the researcher. Six entities were approached and permission was sought from principals or directors to recruit participants from their institution. Six principal/directors gave permission. Teachers at the institutions were then requested to identify potential participants who met the selection criteria (see Table 2.2, 2.3 & 2.4) and to send information letters and consent forms (see Appendix D), as well

as the questionnaire (see Appendix E) to these potential participants, who could then consent or decline to participate in the study. A total of 12 information letters and consent forms were sent out. A total of 11 were returned, with all 11 caregivers consenting to take part. One caregiver consequently had to be excluded as she did not have isiZulu as her first language and therefore did not meet the selection criteria.

2.4.3.2 Recruitment of caregivers of children without disabilities

After the 10 caregivers of children with CP were identified, a matching sample of 10 caregivers of children without disabilities were recruited. Particularly, participants in this group were matched on their child's age (age did not differ by more than six months) and their child's gender. Similarity in SES was assumed by recruiting participants from similar areas as well as from similar types of educational facilities as the caregivers of children with CP.

The principals/directors of five preschools attached to public and private schools as well as preschools run by NGOs within the Umgungundlovu and Harry Gwala regions in KwaZulu-Natal were approached and permission was sought from principals/directors to recruit participants from their institution. Five principals/directors gave permission. Teachers at the institutions were then requested to identify potential participants who met the selection criteria (see Table 2.2, 2.3 & 2.4) and to send information letters and consent forms (see Appendix D), as well as the questionnaire (see Appendix E), to these potential participants, who could then consent or decline to participate in the study. A total of 17 information letters and consent forms were sent out. A total of 13 were returned, with only 12 caregivers consenting to take part. Two caregivers subsequently had to be excluded due to them not being matched to any of the participants in the group of caregivers of children without disabilities.

2.4.4 Participant description

A description of both groups of participants is provided in Tables 2.5 and 2.6.

Table 2.5

Description of Participants in Group of Caregivers of Children with CP

Partici-pant ID	Age (yrs)	Gender	Relation-ship to the child	Level of education	Number of indicators that suggest higher SES[a]	Number of people in the house	Number of children in the house	Other languages spoken at home	Profile of child with CP				
									Gender	Age months)	Difficulty walking	Cognitive concerns	Expressive communi-cation
A1	31	Female	Mother	Grade 9	1	3	1	English	Male	75	No	Yes	Gesture and vocalisations
A2	41	Female	Mother	Grade 9	1	7	0	None	Female	60	No	Yes	Gesture and vocalisations
A3	23	Female	Mother	Certificate	4	5	2	English	Male	48	Yes	Yes	Gesture and vocalisations
A4	27	Female	Mother	Matric	2	4	2	Shona	Male	78	Yes	No	Speech
A5	30	Female	Mother	Certificate	6	3	0	None	Female	74	Yes	Yes	Facial expressions and vocalisations
A6	31	Female	Mother	Grade 9	5	2	0	English	Female	79	Yes	No	Speech
A7	28	Female	Mother	Matric	5	3	0	English	Female	66	Yes	No	Gesture and vocalisations
A8	26	Female	Mother	Degree	2	9	4	English	Female	75	Yes	Yes	Speech
A9	29	Female	Mother	Matric	6	3	0	English	Female	77	Yes	Yes	Speech
A10	37	Female	Mother	Degree	6	2	0	English and Sesotho	Female	68	Yes	No	Speech

[a] This was a score out of 6, with a higher number suggesting higher SES. The following factors were scored (yes = 1; no = 0): access to clean water, inside tap, electricity in the home, indoor toilet, tiled roof (as opposed to corrugated iron or thatch), monthly earning above minimum tax bracket.

Table 2.6

Description of Participants in Group of Caregivers of Children Without Disabilities

Partici-pant ID	Age (yrs)	Gender	Relation-ship to the child	Level of education	Number of indicators that suggest higher SES[a]	Number of people in the house	Number of children in the house	Other languages spoken at home	Profile of child without disabilities				
									Gender	Age (months)	Difficulty walking	Cognitive concerns	Expressive communi-cation
B1	37	Female	Mother	Matric	2	2	0	English	Male	76	No	No	Speech
B2	37	Male	Father	Diploma	0	4	1	English	Female	59	No	No	Speech
B3	42	Male	Father	Matric	2	1	0	English	Male	48	No	No	Speech
B4	35	Female	Mother	Certificate	0	3	1	English	Male	80	No	No	Speech
B5	40	Female	Mother	Diploma	1	4	1	English	Female	75	No	No	Speech
B6	42	Female	Mother	Degree	0	3	1	English and Xhosa	Female	83	No	No	Speech
B7	43	Female	Aunt	Certificate	4	4	3	None	Female	64	No	No	Speech
B8	35	Female	Mother	Degree	0	7	2	Xhosa	Female	80	No	No	Speech
B9	47	Female	Grand-mother	Grade 9	4	4	2	None	Female	83	No	No	Speech
B10	39	Female	Mother	Primary school	3	5	4	None	Female	73	No	No	Speech

[a] This was a score out of 6, with a higher number suggesting higher SES. The following factors were scored (yes = 1; no = 0): access to clean water, inside tap, electricity in the home, indoor toilet, tiled roof (as opposed to corrugated iron or thatch), monthly earning above minimum tax bracket.

2.4.5 Group equivalence

The equivalence of the two groups on specific variables was considered and, where possible, compared by Fisher's Exact Test or the Mann Whitney U-test. Results are given in Table 2.7 below.

Table 2.7

Equivalence of Groups

Variable		**Group of caregivers of children with CP**	**Group of caregivers of children without disabilities**	**p-value**
Child's gender	*Male*	*n = 3*	*n = 3*	1.00[a]
	Female	*n = 7*	*n = 7*	
Child's age in months		*M* = 70	*M* = 72.1	0.436[b]
		SD = 9.8	*SD* = 11.57	
No of other children in the home		*M* = 0.9	*M* = 1.5	0.218[b]
		SD =1.37	*SD* = 1.27	
No of people in the home		*M* = 4.1	*M* = 3.8	0.912[b]
		SD = 2.28	*SD* = 1.69	
No of indicators that suggest higher SES		*M* = 3.8	*M* = 4.4	0.529[b]
		SD = 2.10	*SD* = 1.65	
Caregiver age in years		*M* = 30.3	*M* = 39.7	0.001**[b]
		SD =5.27	*SD* = 3.86	
		Range = 26-41	*Range* = 35 – 47	
Caregiver level of education	*Primary school*	*n* = 0	*n* = 1	
	Grade 9	*n* = 3	*n* = 1	
	Matric	*n* = 3	*n* = 2	
	Certificate	*n* = 2	*n* = 2	
	Diploma	*n* = 0	*n* = 2	
	Degree	*n* = 2	*n* = 2	
Age (in years) at which child started attending preschool/crèche		*M* = 3.5	*M* = 3.9	0.001**[b]
		SD = 1.51	*SD* = 1.66	
		Range = 2 - 6	*Range* = 1- 6	

[a] The p-value was determined using the Fisher's Exact test. [b] The p-value was determined using the Mann Whitney U-test

** $p < 0.01$.

The two groups were equivalent in terms of the child's age and gender, number of other children in the home, number of people in the home, and the number of indicators that suggest higher SES. There was a significant difference between the two groups regarding caregiver age (caregivers of children without disabilities were significantly older than caregivers of children with CP) and the age at which children started preschool (with children without disabilities starting preschool at a significantly older age). Due to the small sample size, it was not possible to conduct inferential statistics to compare the caregiver level of education.

2.5 Materials and equipment

The materials used in this study comprised information letters, permission and consent forms, and a self-administered questionnaire.

2.5.1 Information letters, permission and consent forms

An information letter was sent to the relevant school and preschool principals in English (Appendix F), describing the aims and importance of the research, as well as the participant selection criteria, and requesting permission to recruit participants from their preschool/school. A permission form was included where principals could give or decline this permission.

An information letter was also sent to potential participants in English and isiZulu, as English is the most-frequently spoken second language (Appendix D). It described the rationale for the study, what would be expected of caregivers should they choose to participate, the rights of participants, the risks and benefits of participation, and the intended use of the data collected. A consent form was included where potential participants could either give or decline consent to participate. When participants gave consent, they were asked to provide their contact details with permission for the researcher to use these details to contact them telephonically. These details were used for telephonic follow-up if the questionnaires were not returned to school within one week of distribution.

2.5.2 Self-administered questionnaire

The self-administered questionnaire (Appendix E) was based on an existing questionnaire by Peeters, Verhoeven, van Balkom and de Moor (2009). The authors reported good internal consistency for the original questionnaire, with the Cronbach's alpha score ranging from 0.69 to 0.73 for each of the five domains measured (Peeters et al., 2009). These five domains of home-literacy experiences included: (1) child literacy interest, (2) child's activities during storybook reading, (3) materials and caregiver activities for child literacy development, (4) caregivers' literacy materials and activities, and (5) caregivers' expectations for their child's literacy development.

The original questionnaire was reconstructed based on the information available in the article by Peeters et al. (2009). It should be noted that, although the article provides comprehensive information on items and sub-items, the specific wording for the questionnaire had to be inferred. Also, the original questionnaire was drafted in Dutch and then reported on in an article written in English.

The reconstructed questionnaire was adapted to the population and context targeted in this study based on:

a. Expert Panel 1 review (for content),
b. Expert Panel 2 review (for context),
c. Translation and blind-back translation, with equivalence checks and feedback from translators, and
d. Pilot study (as reported in Section 2.3).

2.5.2.1 Expert panels

The expert panel, as mentioned above, formed part of an adapted Delphi technique. According to Hicks (2009), the Delphi technique allows one to distribute questionnaires and obtain controlled feedback from a group of experts in order to gain reliable agreement within the group of experts. The Delphi technique is a tool that assists in the process of deciding which items to include and exclude in the screening tool (Terre Blanche et al., 2006). The expert panel assisted in minimising any discrepancies by clarifying the inclusion or exclusion of particular items. The expert panel was given the first draft of the questionnaire where they were requested to:

1. Indicate if anything needed to be added on an item,
2. Indicate if any items should be excluded (not appropriate),
3. Indicate if any items were unclear,
4. Suggest changes to items in order for all items to be appropriate to the context and participants, and
5. Comment in general on the length and formatting of the questionnaire.

The first expert panel consisted of seven female panel members. Five expert panel members were speech language therapists, one expert panel member was an occupational therapist and one expert panel member was a teacher. All members of the expert panel had at least three years of clinical experience (the range of experience was three years to 25 years) working with children aged five to six, with CP, in low-income contexts in South Africa. The panel members represented various clinical contexts within South Africa, namely the public and private health sectors, as well as lecturers/clinical educators within tertiary education settings. The feedback provided by Panel 1, as well as subsequent changes to the wording, is provided in Appendix G. After changes had been made as indicated in the appendix, the second draft of the questionnaire was presented to the second expert panel, consisting of two female speech language therapists working within the KwaZulu-Natal low-income context. Both members had at least 14 years of clinical experience (a range of 14 years to 24 years of experience) working with children aged five to six, with CP, in low-income contexts in KwaZulu-Natal. The feedback provided by Panel 2, as well as subsequent changes to the wording, is provided in Appendix H.

Overall, 52 changes were made. These included 13 omissions (items not culturally and/or contextually appropriate), nine additions (to ensure comprehensive description of domain), 25 adaptations to wording (to increase clarity and make it easier to read/understand the question) and five changes to formatting (to ensure that the questionnaire was more user-friendly).

2.5.2.2 Translation

Two translators were used in this study. The translators were proficient in English and isiZulu. Both translators were educators with over 20 years of work experience.

The process began with a forward translation by Translator 1 of the Caregiver Questionnaire from English into isiZulu. This was followed by a blind-back translation of the Caregiver Questionnaire by Translator 2 back into English. The researcher then compared the English version of the back translation with the original English version to identify any discrepancies. The differences were then discussed with Translator 1 and 2 and a consensus was reached to produce the final translation. Only one discrepancy was noted in the title of the Questionnaire and some spelling mistakes were noted and corrected.

This version of the questionnaire was then pilot tested with four participants. Among others, these participants were requested to comment on the cultural acceptability of the questionnaire by meeting with the researcher to give brief feedback. They were also requested to review the clarity of questionnaires and the format of the questionnaire. Further changes were made as reported in Table 2.1.

Figure 2.3 shows the procedure of ensuring linguistic equivalence and cultural acceptability.

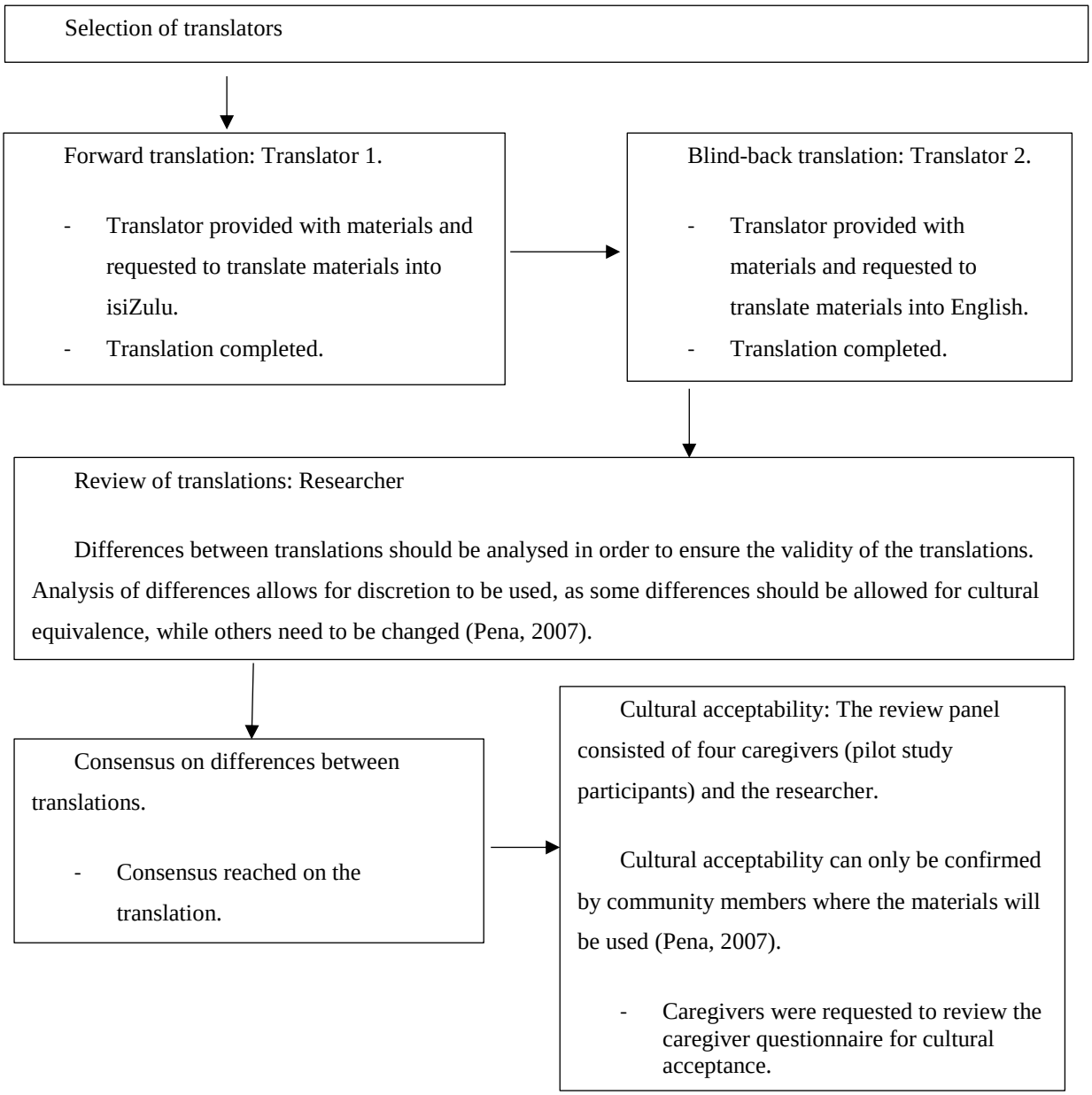

Figure 2.3. *Procedures followed to ensure linguistic equivalence and cultural acceptability of the translated Caregiver Questionnaire.*

The final questionnaire (see Appendix E) commenced with instructions regarding how to complete it. It also contained a section seeking biographical data from the participants (29 questions), followed by a section devoted to HLEs. All five domains targeted in the study by Peeters et al. (2009) were targeted by these questions. Three items targeted child literacy interests, one item targeted child activities during storybook reading, five items targeted materials and caregiver-led literacy activities for child literacy development, two items targeted caregivers' own literacy materials and activities, and two items targeted caregivers' expectations of their child's literacy development. Item formats included nine open-ended questions, 17 dichotomous questions, nine multiple-choice questions, two checklist questions, and five Likert-type questions.

2.6 Procedures

2.6.1 Data collection

The paper-based information letters and consent forms (Appendix D & F) and questionnaires (Appendix E) were hand delivered to those schools which gave permission to recruit participants. The principal/director was given the selection criteria and asked to select caregivers who met the selection criteria. Information letters and consent forms (Appendix D) and questionnaires (Appendix E) were sent home with children whose caregivers met the selection criteria. An introductory note was placed in the children's homework books explaining that a questionnaire had been sent home with their child and requesting the caregivers to, where appropriate, return it within one week. This note also asked the caregivers, if consenting, to leave their contact numbers for the researcher to contact them to remind them about the questionnaire, as well as any follow-up questions about the questionnaire. The information letter also contained a request that consent forms and, where appropriate, questionnaires, were returned within one week. Follow-up efforts via notes in children's homework books (for those recruited via preschools and ECD centres), as well as via telephone, were made for those who had not returned the consent letter or questionnaire within one week. The questionnaire was checked for completeness when returned. Of all the returned questionnaires, five were found to be incomplete and follow-up calls were made to arrange for incomplete questionnaires to be sent back to the participants in order for them to complete them. In two cases, the caregivers could not be reached. Since only one question was not completed, the data from this questionnaire was still included.

2.6.2 Data analysis

Data from the questionnaires was coded and entered into an Excel spreadsheet in preparation for statistical analysis.

Descriptive statistics were used to analyse and describe the data acquired through the questionnaire with the specific objective to answer the research question. For closed-ended questions, dichotomous questions and multiple-choice questions, the responses were coded according to pre-arranged codes based on measures of central tendency. The checklist and Likert scale questions were coded according to the categories presented in the questionnaire, and the open-ended questions were coded according to the categories determined by the nature of the information provided by the caregivers. Data was presented using bar graphs and tables (McMillan & Schumacher, 2014).

To determine whether statistically significant difference existed between the results from both groups, a statistician used the SPSS programme to run non-parametric inferential statistics (Mann Whitney U-Test) to compare the results.

2.6.3 Reliability and validity

The questionnaire by Peeters et al. (2009) was chosen after careful consideration of its construct and content validity (see Table 1.3), as well as its application to the population of children with and without CP. Good internal consistency was also reported for their questionnaire. The questionnaire was then adapted following expert panel reviews. This ensured face validity of the items of the adapted questionnaire and also enhanced cultural appropriateness. Blind-back translation occurred to ensure linguistic equivalence. Finally, a pilot study was conducted (where further amendments were made) to enhance the face and content validity and ensure that the questionnaire was understandable and easy to complete.

A research assistant checked the reliability of capturing the data in Excel by comparing the original questionnaire answers to the data captured. Reliability of data entries was calculated by:

$$\frac{\text{Number of agreements}}{\text{Number of agreements + disagreements}} \text{ X } 100$$

The reliability of data entries was found to be 99.5%. Discrepancies were checked against the original questionnaires and corrected.

2.7 Ethical issues

The Belmont Report on Ethical Principles and Guidelines for the Protection of Human Subjects of Research (United States, 1978) was consulted to guide the procedures used in this study. The following ethical principles were adhered to:

Autonomy recognises that each individual is entitled to the right to make informed decisions (Beauchamp, 2007). Thus, informed consent was obtained prior to caregiver participation (Appendix D). Participants were informed that their participation was entirely voluntary and that they could withdraw from the study at any point without penalty.

To ensure confidentiality, all participants were allocated a participant code and no identifying information was required to be recorded on the questionnaires. No identifying information (e.g. school addresses) was included in any publications of the study. Data collected will be securely stored at the University of Pretoria for 15 years.

Justice requires that each participant be allowed equal and fair opportunities during the research (Beauchamp, 2007). Since this is not an intervention study, participation or non-participation did not advantage or disadvantage caregivers in any way. Therefore, although only a limited number of caregivers participated, they were not advantaged above those that did not participate.

Beneficence and non-maleficence requires that the benefits of the research outweigh the risks so that participants are not exploited (Terre Blanche, Durrheim & Painter, 2006). This specific study did not contain any overt risks to the participants involved, as it involved a questionnaire which the caregivers completed independently. The questionnaire was sent home with the child from school and therefore no additional costs or inconvenience occurred.

There were no direct benefits to participants, however, a better insight into the home-based literacy experiences of children with CP in KwaZulu-Natal may lead to more appropriate and more specific home-based literacy programmes which may benefit children with CP in the future.

3. RESULTS AND DISCUSSION

The results from the questionnaire are presented and discussed in this section in order of the sub-aims. I will discuss (1) the child's literacy experiences and interest, (2) materials and caregiver activities for child literacy development, (3) shared storybook reading, (4) caregivers' own literacy materials and activities, and, (5) caregivers' expectations for their child's literacy development. The results for children with CP and peers without disabilities are presented for each sub-aim. Similarities and differences between the groups are discussed, and results are related to previous findings and contextual factors. This section ends with a summary and overall broader discussion of the results.

3.1 Child's literacy experiences and interest

3.1.1 Child use of literacy materials

Caregivers were asked to rank the frequency of their child's use of different literacy-related artefacts on a scale of 1 (*never*), 2 (*almost never*), 3 (*once a week*), 4 (*few times a week*), 5 (*everyday*) or 6 (*few times a day*) (see Question 29 in Appendix E). The average rating and standard deviation given to each item per group was calculated. Average ratings given to the frequency of use of literacy-related artefacts are displayed in Figure 3.1.

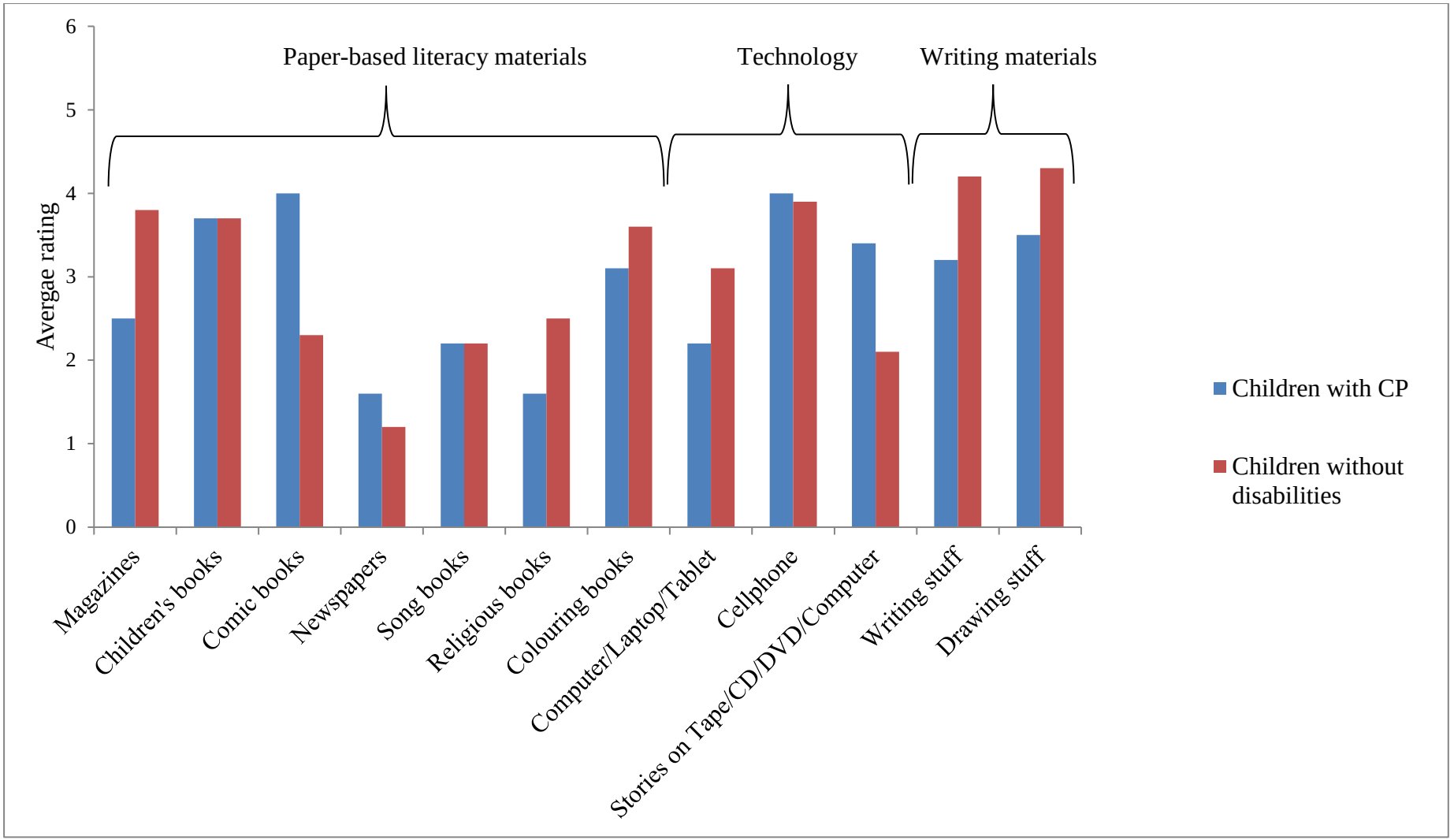

Figure 3.1. *Frequency with which children use literacy materials.*

From the graph it is clear that children with CP used comic books most frequently (*M* = 4.0; *SD* = 1.94). They also used cell phones[3] relatively frequently (*M* =4.9; *SD* = 1.49). Children without disabilities, in turn, used drawing stuff most frequently (*M* = 4.3; *SD* = 0.95). Both groups used newspapers with the lowest frequency; children with CP received a mean rating of 1.6 (*SD* = 1.35), while children without disabilities received an average rating of 1.2 (*SD* = 0.42*)*. Children with CP also used religious books with a very low frequency (*M*= 1.6; *SD* = 0.84).

The Mann Whitney U-Test was used to determine whether differences between the two groups were significant. The test indicated that only the use of magazines was significantly different between the two groups on a 5% level of significance with a *p*-value of 0.043. Children without disabilities used magazines with a frequency of 3.8 (*SD* = 0.92), while children with CP received a frequency of 2.5 (*SD* = 1.43). No other significant differences in the frequency of use of literacy materials was found between the two groups.

Literacy materials were categorised into paper-based literacy materials, technology and writing/drawing materials. The Mann Whitney U-Test was used to determine whether the two groups differed significantly in frequency of use of these three types of literacy materials. A summary of the mean and median ratings for frequency of use of paper-based literacy materials, technology and writing/drawing materials, as well as the results of the Mann Whitney U-Test, are provided in Table 3.1.

[3] Portable telephones that use wireless cellular technology

Table 3.1

Mean and Median Ratings for Frequency of Use of Different Types of Literacy Materials for the two Groups

Types of literacy materials	**Children with CP** (*n* = 10)		**Children without disabilities** (*n* = 10)		**P-value**
	M (*SD*)	Median	*M* (*SD*)	Median	
Paper-based literacy materials	2.7 (0.96)	2	2.8 (0.97)	3	0.579
Technology	3.2 (0.92)	4	3.0 (0.90)	3	0.739
Writing /drawing materials	3.4 (0.21)	4	4.3 (0.07)	4	0.218
Total	2.9 (0.81)	3	3.0 (0.92)	3	

The *p*-values presented in Table 3.1 indicate no statistical significance between the results of the two groups.

Overall, although children with CP had a slightly lower overall mean score regarding frequency of using literacy materials, ratings were quite similar. Peeters et al. (2009) also found that experiences with paper-based and technology-based literacy materials were not significantly different for children with CP and children without disabilities. However, Light and Kelford Smith (1993) found that children with physical disabilities who used AAC had less opportunity to engage with printed materials and to participate in literacy activities compared to their peers without disabilities. In a recent study by Justice, Logan, Isitan and Sackes (2016) it was found that children without disabilities engage with literacy materials significantly more than their peers with disabilities, including CP, autism spectrum disorder, Down syndrome and general, non-specific disabilities.

It is interesting to note that, on average, all three types of materials were used about once a week (*M*= ~3) by both groups, with the exception that children without disabilities used writing materials more frequently (a few times a week). This bears some similarities and some differences to other studies completed within other South African contexts. In a study by Stobbart (2005), it was found that most deaf children engaged with reading materials once a day and with writing materials two to three times a week. A study by Banda (2003) on the

literacy practices in black and coloured communities in South Africa found that, apart from the writing of SMS messages, in general there is little engagement with reading or writing materials within the home environment. It was reported that most of the learners would read a newspaper or magazine and write a letter or use writing materials about once a week (Banda, 2003). Results suggest that urban learners write SMS messages as well as write letters more frequently than rural learners. This may be due to access and affordability of a handset and airtime, as well as other literacy materials, which is a factor to consider in the influences of home literacy practices (Banda, 2003).

3.1.2 Child interest in literacy activities

Children's interest in different literacy activities was rated on a 3-point scale by their caregivers (1 = *no interest*; 2 = *a little interest*, and 3 = *a lot of interest*). The average rating given to each item per group was calculated. Average ratings given to the child's interest in literacy materials are displayed in Figure 3.2.

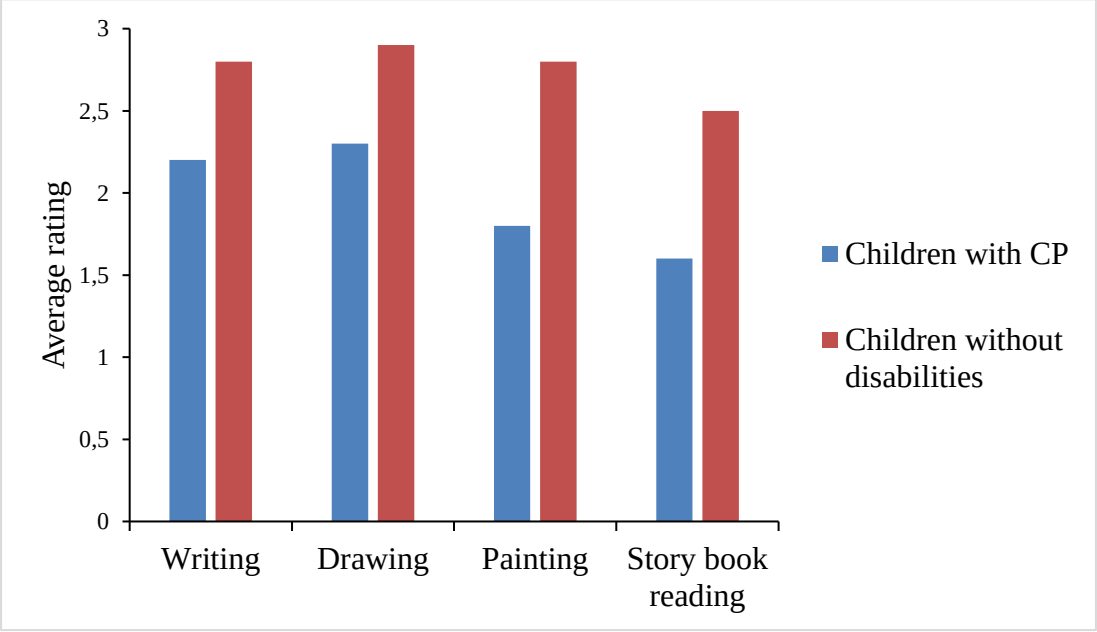

Figure 3.2 *Child interest in literacy activities.*

Children's interest in literacy activities differed between the two groups. On average, children with CP showed less interest in all literacy activities, with an overall mean rating of 2.0 (*SD* = 0.8), while children without disabilities received an overall mean rating of 2.8 (*SD* = 0.4) in writing experiences. The Mann Whitney U-Test indicated that statistically significant differences existed between the two groups on a 5% level of significance for the

children's interest in painting (p = 0.009) and storybook reading (p = 0.023). The Mann Whitney U-Test also indicated a statistically significant difference (on a 5% level of significance) in the overall interest in literacy activities between children with CP and children without disabilities, with a p-value of 0.011.

Caregivers were also asked to rate the frequency with which their children asked to be read to on a 6-point scale (see Question 36, Appendix E), ranging from 0 (*never*) to 5 (*few times a day*). Results for children with CP and for children without disabilities were very similar, with mean ratings of 2.1 and 2.4 respectively (with respective *SDs* of 1.6 and 1.35). This suggests that, on average, both groups asked to be read to about once a week. The Mann Whitney U-Test indicated no significant difference between the two groups and the frequency with which their children asked to be read to (p = 0.579).

This supports other studies which have found that children with disabilities (CP, autism spectrum disorder, Down syndrome and general, non-specific disabilities) exhibit less print interest than their peers without disabilities, and that children's print interest was a feature of the HLEs that differentiate the literacy experiences of children with and without disabilities (Fritjers, Barron & Brunello, 2000; Justice et al., 2016; Kaderavek & Justice, 2002). This may be due to the fact that often, interaction with written materials is a challenge for children with CP, which may make these children reluctant to seek out experiences with such materials, which would then lead to the observed lower levels of interest within the home environment (Justice et al., 2016).

3.2 Materials and caregiver activities for child literacy development

3.2.1 Provision of literacy materials

Caregivers were asked to indicate the number of literacy materials their child had available for use at home (Question 31, see Appendix E). One caregiver in the group of caregivers of children without disabilities did not answer these questions. One child in the group of children with CP was identified as an outlier (using a box plot) as she had a total of 85 different literacy materials available (25 of her own books, 10 magazines, 25 children's books, five comic books, seven stories on tape/CD/DVD, three songbooks and 10 activity/colouring books). So as not to skew the total, the data from this participant was removed from the analysis. A summary of the average number of literacy materials available to the child in his/her home is provided in Table 3.2.

Table 3.2

Average Amount of Different Types of Literacy Materials Available for Child's use at Home for the two Groups

Type of literacy material	**Children with CP** (*n*=9)			**Children without disabilities** (*n* = 9)[a]			**P-value**
	M (SD)	Median	Range	*M (SD)*	Median	Range	
Child's own books	1.3 (1.41)	2	0 - 4	1.3 (1.58)	1	0 - 4	0.888
Magazines	1.1 (1.83)	0	0 - 5	1.2 (1.39)	1	0 - 4	0.370
Children's books	1.6 (1.74)	2	0 - 5	1.0 (1.32)	0	0 - 3	0.743
Comic/cartoon books	0.7 (1.32)	0	0 - 4	0.2 (0.44)	0	0 - 1	0.963
Stories on tape/CD/ DVD/Computer	4.4 (8.72)	0	0 - 26	1.4 (2.07)	1	0 - 5	0.673
Song books	1.4 (3.36)	0	0 - 10	0 (0)	0	0	0.423
Activity/colouring books	1.2 (1.48)	1	0 - 4	1.7 (1.66)	2	0 - 5	0.370
Religious books	0.4 (0.73)	0	0 - 2	0.6 (0.73)	0	0 - 2	0.606
Total number of literacy materials	12.2 (20.6)	7	0 - 43	7.4 (9.19)	7	0 – 13	0.815

[a] One caregiver in the group of caregivers of children without disabilities did not answer this question.

There was more variability in the number of literacy materials available for children with CP, even with the outlier removed. The total number of materials ranged from 0 to 43. While six children were estimated to have less than 10 items available in their home, one had 17, one had 24, and one had 43 items available. In the group of children without disabilities, less variability was seen.

The *p*-values presented in Table 3.2 indicate no statistical significance between the results of the two groups. Peeters et al. (2009) also found that the provision of literacy materials in the home did not differ between children with CP and children without disabilities.

It is noteworthy that some children in both groups had none of the literacy materials which were asked about available for use in their homes. This could be a related to SES and therefore the accessibility and affordability of such literacy materials (Van Steensel, 2006). It is also possible that they had different materials (e.g. the TV guide or paper-based advertisements) in their homes, which were not included in the questionnaire. These findings corroborate the finding that literacy materials were engaged with on a relatively infrequent basis.

3.2.2 Frequency of caregiver-child activities: literacy mediating activities versus other leisure activities

Caregivers were asked to indicate the frequency of caregiver-child literacy activities on a scale of 1 (*never*) to 5 (*every day*) (see Question 33 in Appendix E). The average rating given to each item per group was calculated. Average ratings given to the frequency of caregiver-child literacy mediating activities are displayed in Figure 3.3.

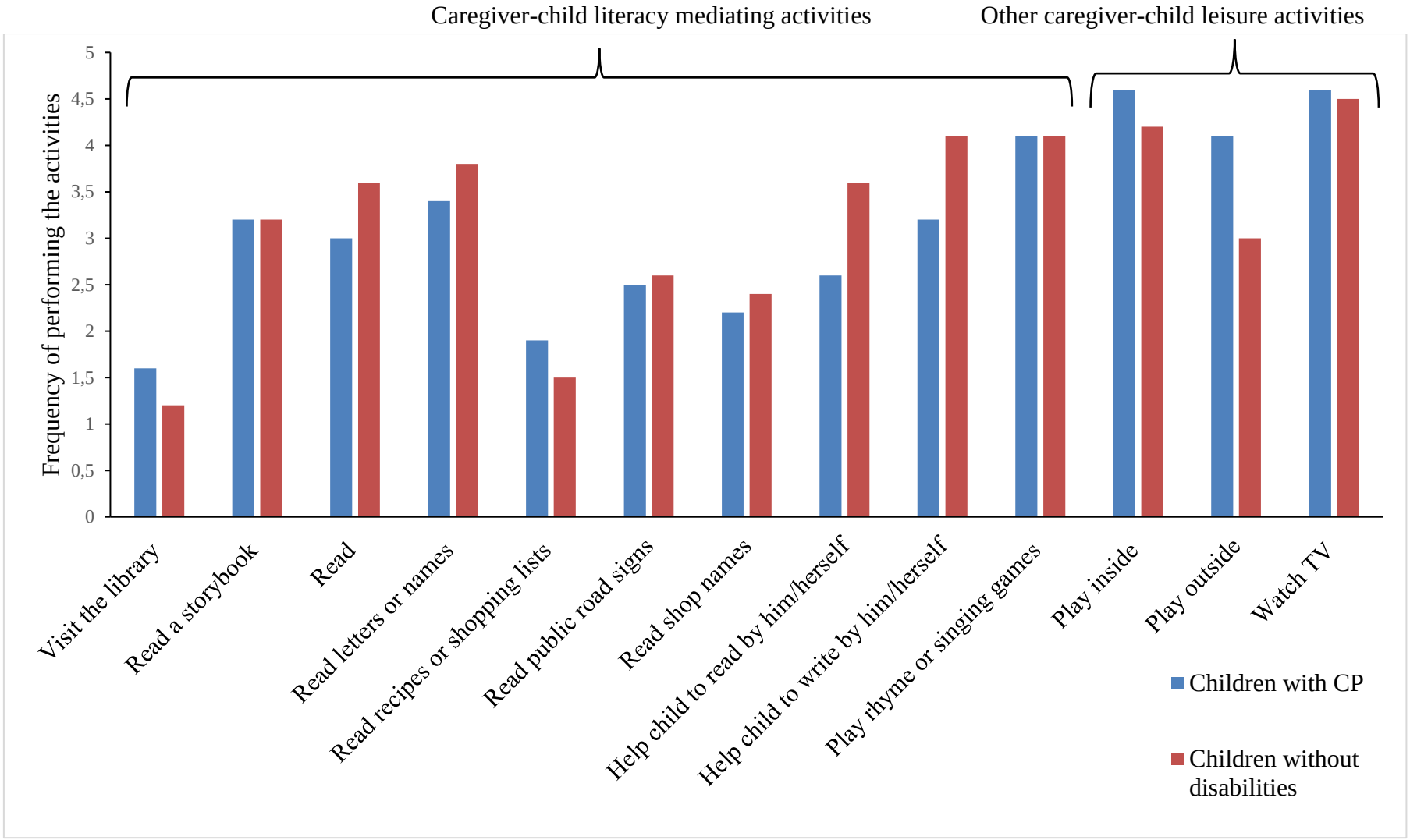

Figure 3.3. *Frequency of caregiver-child literacy mediating activities and other caregiver-child leisure activities.*

The results show similar trends in the frequency with which caregivers engaged in literacy mediating activities with their children in both groups. Regarding literacy-mediating activities, caregivers of children with CP reported engaging most frequently in playing rhyming or singing games with their children (M = 4.1, SD = 0.88), while library visits were engaged in least frequently (M = 1.6, SD = 1.07). This was similar to the responses received by caregivers of children without disabilities, where caregivers reported engaging most frequently in playing rhyming or singing games with their children (M = 4.1, SD = 0.88), while library visits were engaged in least frequently (M = 1.2, SD = 0.63). Caregivers of children without disabilities also reported engaging in helping their child to write by him/herself as another frequent activity (M = 4.1, SD = 0.74).

Rhyming and singing have also been described as activities frequently engaged in in Zulu culture and form a daily part of the routine in many Zulu preschools (Higham, Tönsing & Alant, 2010; Prinsloo & Stein, 2004). This is supported in this study where this activity was reported to be engaged in frequently by both groups.

There are roughly 170 public libraries in KwaZulu-Natal (KZN Department of Arts and Culture, 2014a). Access to public libraries, especially in the semi- rural and rural areas of KwaZulu-Natal, is limited. Due to some of the participants being part of more rural settings within KwaZulu-Natal they may not have had libraries which are available within reasonable distance or may only have had limited access to libraries, which would explain the reason that libraries were not frequently visited.

Overall, caregivers of children without disabilities mediated literacy activities as much (on average) as caregivers of children with CP – the average frequency across all literacy activities being 3.2 for caregivers of children with CP (SD = 1.49) and 3.2 for caregivers of children without disabilities (SD = 1.44).

The Mann Whitney U-Test showed no statistically significant difference between any of the individual caregiver-child mediating activities or between the overall caregiver-child mediating activities (p = 0.529) of the two groups. It can be noted, however, that the group means differed regarding the frequency with which caregivers from the respective groups helped their child to read by him/herself and helped their child to write by him/herself.

Results are similar to other studies which have also found that caregivers of children with CP try to teach and mediate literacy activities with their children as much as caregivers of children without disabilities (Justice et al., 2016; Peeters et al., 2009). Light et al. (1994) also found that children with disabilities using AAC do have access to storybook and literacy mediation by their parents or caregivers.

Regarding other caregiver-child leisure activities, indoor play and watching TV were engaged in more frequently on average than most literacy-related activities for both groups. Both caregivers of children with CP and caregivers of children without disabilities watch television with their children every week to every day. Research indicates that more young children are watching television than ever in the past (Anderson & Pempek, 2005). Although some studies have found positive associations between exposure to television and language learning, other studies have negative associations between exposure to television and cognitive, language and attentional development (Anderson & Pempek, 2005).

Caregivers of children with CP reportedly played inside with the child between every week to every day (M = 4.6, SD = 0.7) and played outside with their child every week (M = 4.1, SD = 1.37). Caregivers of children without disabilities reported playing inside with the child every week (M = 4.2, SD = 0.92), and playing outside with the child a few times a month (M = 3.0, SD = 1.56). Adult-mediated play can foster various developmental skills (Moyle, 2011). It is interesting to note its relatively high frequency in this study, since previous literature reports on its absence in a rural African community in Botswana – there, play reportedly took place only between children (Geiger & Alant, 2005). However, the sample in the current study differed in culture and context from this agrarian Botswana community, and these contrasting findings emphasise that stereotypes of 'African' culture must be avoided.

The Mann Whitney U-Test showed no statistically significant difference between any of the individual other caregiver-child leisure activities or between the overall other caregiver-child leisure activities (p = 0.143) of both groups.

In a study by Peeters et al., (2009), it was found that caregivers of children with CP reported to participate more frequently in leisure activities such as playing inside and outside or watching TV programmes with their children in comparison with the caregivers of

children without disabilities. They suggested that this could be because many children with CP, due to their disabilities, spend more time at home instead of playing outside with their peers and therefore rely more on their caregivers for engaging in these activities (Peeters et al., 2009).

3.3 Shared storybook reading

This section reports and discusses the results specifically related to shared storybook reading. Frequency of caregiver-child shared storybook reading was already reported in Section 3.3.2, and found to be an activity that caregivers in both groups engaged in a few times a month, on average.

As reported in Section 3.2.2, the interest of children with CP in storybook reading was reported to be significantly less than the interest reported for children without disabilities.

Participants were also asked to indicate whether they liked reading storybooks to their child. They could respond by ticking one of three options, namely: '*No, I don't like to read to my child', 'Sometimes I like to read to my child'*, and *'Yes, I like to read to my child'*. The results are displayed in Figure 3.4.

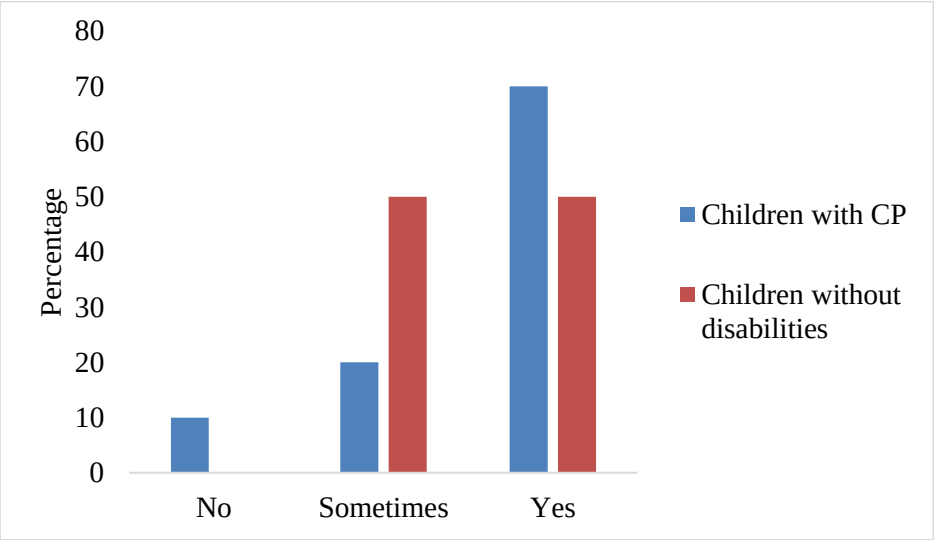

Figure 3.4. *Percentage of participants choosing the response options, No, Sometimes, or Yes in response to Question 37 ("Do you like to read storybooks to your child?").*

Most caregivers of children with CP (70%) reported that they enjoyed reading to their child, while 20% indicated that they sometimes enjoyed reading to their child and 10% did not enjoy reading to their child. Caregivers of children without disabilities enjoyed reading storybooks to their child 50% of the time, while the other 50% only enjoyed reading to their child sometimes. The Mann Whitney U-Test indicated no significant differences between the caregiver's enjoyment of reading to their child within the two groups ($p = 0.579$).

Participants who did read stories to their children were asked to report how old their child was when they first started reading to him/her. On average, children with CP were starting to be read to at an average age of 38.25 months ($SD = 1.85$, Range = 6 – 72 months), while children without disabilities were starting to be read to at an average age of 50 months ($SD = 14.03$; Range 24 to 60 months). No statistically significant differences were found between the two groups ($p = 0.282$).

Finally, caregivers were asked to rate the degree to which their child engaged in certain activities during book reading on a 4-point scale (1 = *only I do this*; 2 = *I usually do this and my child sometimes does this*; 3 = *my child usually does this and I sometimes do it*; and 4 = *only my child does this*). A fifth option was added to indicate that no one did this particular activity – either because the caregiver did not engage in book reading at all or because this activity was not part of the book-reading interaction. When caregivers chose this option (for convenience it was labelled as 0 on the rating scale), their results were not considered in the calculation of the mean. Two caregivers of children with CP and one caregiver of a child without disabilities indicated that no one did any of the activities during book reading – suggesting that this was not an activity engaged in. This was corroborated by their response to Question 34, where these caregivers indicated that they did not read books to their children.

The remaining eight caregivers of children with CP and nine caregivers of children without disabilities indicated that they and/or their children engaged in most of the storybook activities, although one caregiver of a child with CP indicated that no one engaged in guessing how the story would end, giving comments about the story or relating the story to experiences in daily life. Another caregiver from this group indicated that no one engaged in indicating the tempo during storybook reading. One caregiver of a child without disabilities also indicated that no one engaged in guessing how the story will end, and giving comments

about the story, while a second caregiver from this group also indicated that no one engaged in guessing how the story will end. A third caregiver indicated that no one engaged in the activities of giving comments about the story or relating the story to experiences in daily life. Results are depicted in Figure 3.5.

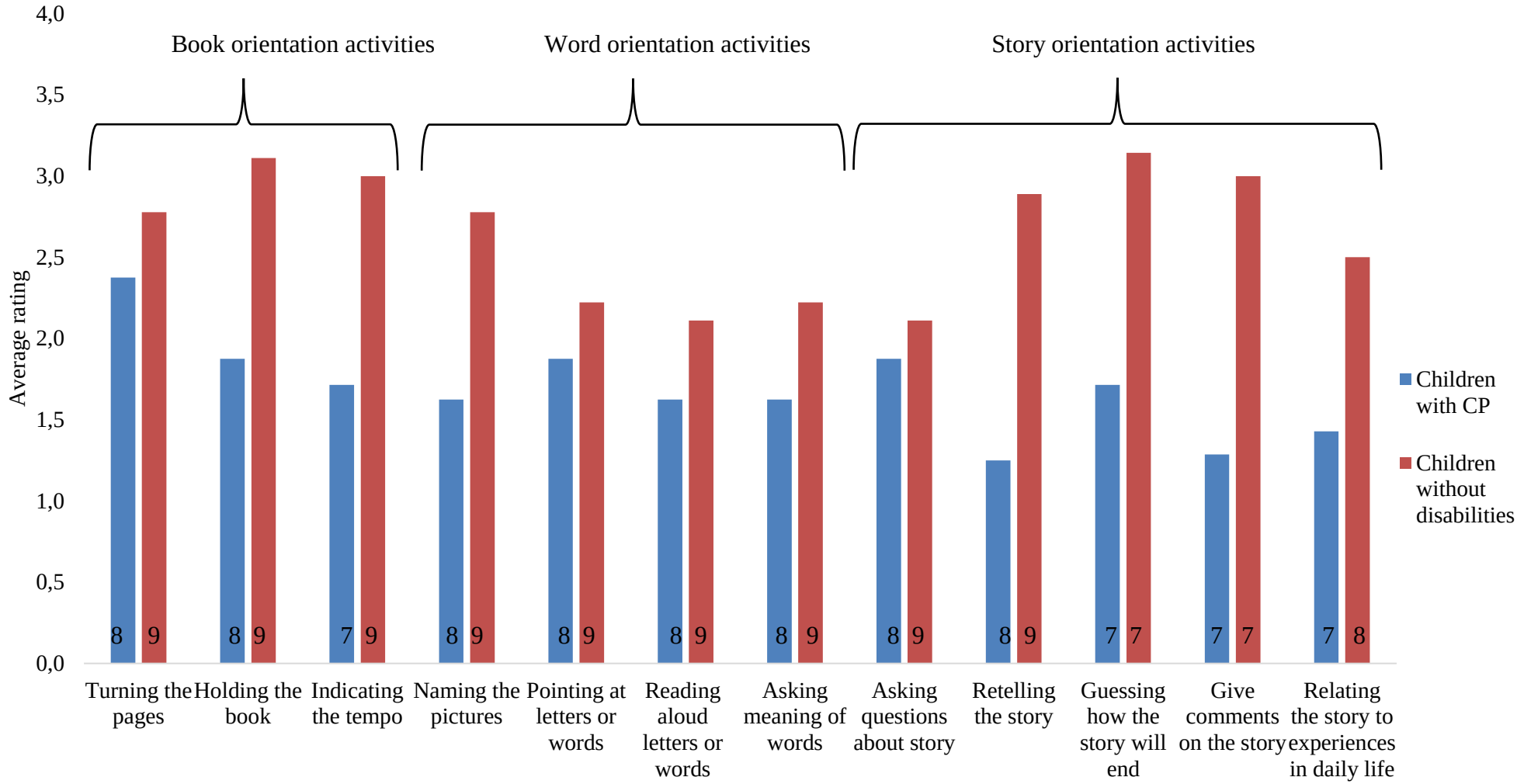

Figure 3.5. *Degree of child involvement in activities during storybook reading.*

Note. The numbers at the bottom of the bars indicate the number of respondents that indicated that this activity was conducted by them and/or their child.

The Mann Whitney U-Test showed significant differences between three activities that can form part of storybook reading, namely, indicating the tempo (p = 0.029), naming the pictures (p = 0.043) and retelling the story (p = 0.009). In each case, children without disabilities were more actively involved than children with CP.

A summary of the mean and median ratings for active involvement in storybook reading for book orientation, word orientation and story orientation activities is provided in Table 3.3.

Table 3.3

Average Ratings for Active Involvement in Storybook Reading for the two Groups

Storybook activity	**Children with CP** (n=10)		**Children without disabilities** (n = 10)		**p- value**
	M (*SD*)	Median	*M* (*SD*)	Median	
Book orientation	2.0 (0.34)	2	3.0 (0.17)	3	0.063
Word orientation	1.7 (0.13)	1	2.3 (0.3)	2	0.105
Story orientation	1.5 (0.27)	1	2.7 (0.42)	3	0.075

The p-values presented in Table 3.3 indicate no statistical significance between the results of the two groups for book orientation, word orientation or story orientation.

In the study by Peeters et al. (2009), significant differences were found between children with CP and children without disabilities in terms of their involvement in word orientation activities but not in story orientation or book orientation. Similar results were found in the current study, although the mean scores for children with CP were consistently below those of children without disabilities on all book-reading activities.

Physical and communication limitations often render children with CP unable to access and participate in activities without help, and they are often dependent on others (i.e. their caregivers) to facilitate their participation (Arthur-Kelly, Bochner, Center, & Mok, 2007). In a study by Dahlgren Sandberg (1998), it was found that children with LNFS took a passive role in storybook reading while the parents took on the more active role. Similar findings by

Light, Binger and Kelford Smith (1994) showed that the participation of children with LNFS and severe physical disabilities in story reading was at a superficial level where they were mainly involved in the mechanics of book reading (i.e. turning pages, pointing at letters or words) with very little involvement in taking meaning from the text (i.e. asking questions, talking about the story). In the current study, the active involvement of children with CP was found to be statistically significantly lower than that of children without disabilities in three of the 12 activities. Although there is therefore some indication of less involvement, overall involvement was similar in these two samples. A study with larger groups of participants may shed more light on similarities and differences.

Shared storybook reading has been shown to be a particularly important activity that can provide opportunities to foster a child's linguistic growth and literacy development (Kaderavek & Justice, 2002). The active involvement in shared storybook reading should be fostered for children with CP, as well as for children without disabilities, to provide them with a good pre-literacy foundation (Light & Kelford Smith, 1993).

3.4 Caregiver's own literacy materials and activities

3.4.1 Caregiver resources

A summary of the average number of the caregiver's own literacy materials available at home is provided in Table 3.4.

Table 3.4

Average Amount of Different Types of Literacy Materials Available for Caregivers' Own Use at Home for the Two Groups

Type of literacy material	**Caregivers of children with CP** (n = 10)			**Caregivers of children without disabilities** (n = 8)			**P-value**
	M (SD)	Median	Range	*M (SD)*	Median	Range	
Newspapers	2.1 (3.07)	1.5	0 – 10	0.3 (0.5)	0	0 – 1	0.279
Magazines	2.0 (3.23)	0.5	0 – 10	5.9 (8.9)	1	0 – 20	0.279
Reading books	5.3 (7.72)	3	0 – 25	6.4 (12.0)	1.5	0 – 35	1.00
Informative (study) books	1.4 (1.78)	1	0 – 5	4.4 (8.5)	1.5	0 – 25	0.279
TV guide	0.9 (1.2)	1	0 – 4	1.0 (1.7)	0.5	0 – 5	0.505
Religious books	0.7 (0.67)	1	0 – 2	1.1 (0.8)	1	0 – 2	0.382
Recipe books	0.5 (0.85)	0	0 – 2	1.5 (1.4)	1	0 – 4	0.83
Computer, laptop or tablet	0.3 (0.67)	0	0 – 2	0.75 (0.9)	0.5	0 – 2	0.195
Cell phone	1.6 (0.7)	1.5	0 – 3	1.9 (1.4)	1.5	0 – 5	0.743
Total number of literacy materials	14.8 (19.89)	11	2 – 57	23.1 (36.0)	10.5	0 - 59	0.195

Although results show that on average the caregivers of children without disabilities had more literacy materials compared to caregivers of children with CP, there was a lot of variability in both groups. The total number of materials ranged from two to 57 for the caregivers of children with CP and from 0 to 59 for the caregivers of children without disabilities. The variability and ranges of both groups are similar. The Mann Whitney U-Test showed no statistical difference. The *p*-values presented in Table 3.4 indicate no statistical significance between the results of the two groups.

Previous studies found no significant differences to the caregiver's own amount of literacy materials between the two groups (Koppenhaver et al., 1991; Light & Kelford Smith, 1993; Peeters et al., 2009).

3.4.2 Caregiver reading and writing activities

Caregivers were asked to rank their own use of different literacy-related artefacts on a scale of 1 (*never/almost never*) to 5 (*few times a day*) (see Question 39 in Appendix E). The average rating given to each item per group was calculated. Average ratings given to the frequency of use of literacy-related artefacts are displayed in Figure 3.6.

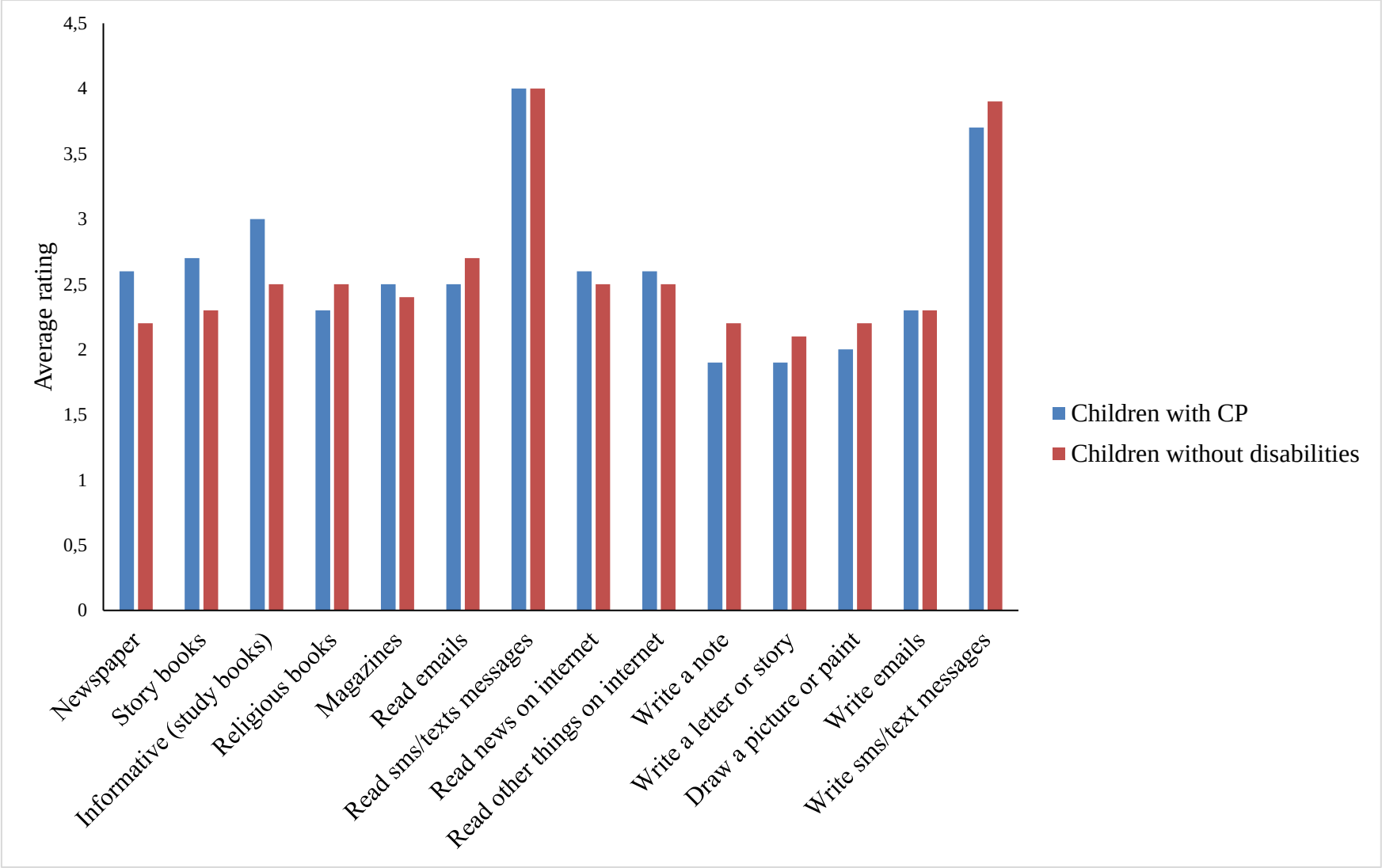

Figure 3.6 *Caregiver frequency of reading literacy materials and writing.*

Results show similar trends for both groups for the frequency of caregivers reading a variety of materials. The Mann Whitney U-Test indicated no significant differences between the two groups for the frequency of caregivers' activities or for overall literacy activity ($p = 0.796$).

The reading activity most frequently engaged in for both groups is the reading of SMS/text messages, with both groups of caregivers reading these everyday ($M = 3$, $SD = 1.25$ for caregivers of children with CP; $M = 3$, $SD = 1.3$ for caregivers of children without disabilities).

Results also show similar trends for both groups of caregivers, with the frequency of engaging in writing activities being similar. The writing activity most frequently engaged in for both groups is the writing of SMS/text messages, with both groups of caregivers writing SMS/text messages between a few times a week to everyday ($M = 2.7$, $SD = 1.34$ for caregivers of children with CP; $M = 2.9$, $SD = 1.4$ for caregivers of children without disabilities).

Other studies showed that caregivers' own literacy activities and materials (including caregivers' literacy resources and the frequency with which they engaged in reading and writing activities), did not differ between caregivers of children with CP and caregivers of children without disabilities (Peeters et al., 2009). This demonstrates that both groups have literate role models within their home environments, which is an important aspect to note (Koppenhaver et al., 1991; Peeters et al., 2009).

The important role of cell phones in modern society is also underlined by these results. The Pew Research Centre (2015), found that South Africans use cell phones as commonly as the citizens of the United States. Children from both groups also used cell phones relatively frequently. Cell phone use has not been explored in most previous studies on HLEs. It should also be noted that children may use cell phones for various activities, such as looking at photographs or playing games – some of these may not be regarded as literacy activities in the traditional sense. A study was conducted in Zambia which explored the use of a cell phone literacy game and the conditions under which it enhanced the literacy skills of Grade 1 learners (Jere-Folotiya et al., 2014). It was found that the game had a positive effect on spelling (Jere-

Folotiya et al., 2014). Therefore, it would be important in future research to explore the role that cell phones play in mediating literacy experiences for children with and without disabilities.

3.5 Caregiver's expectations for their child's literacy level

Caregivers were asked to indicate what their expectations were for their child's reading skills in the future (see Question 40 in Appendix E). They could respond by ticking one of seven options. This question was converted to a 6-point Likert scale. The first option, '*I don't know',* was removed from the scale, since it did not indicate either a high or a low expectation. The other six options were ranked from 1 (*My child won't be able to read*) to 6 (*My child will be able to independently read a book*), where 1 was the lowest expectation and 6 the highest expectation. The results are displayed in Figure 3.7.

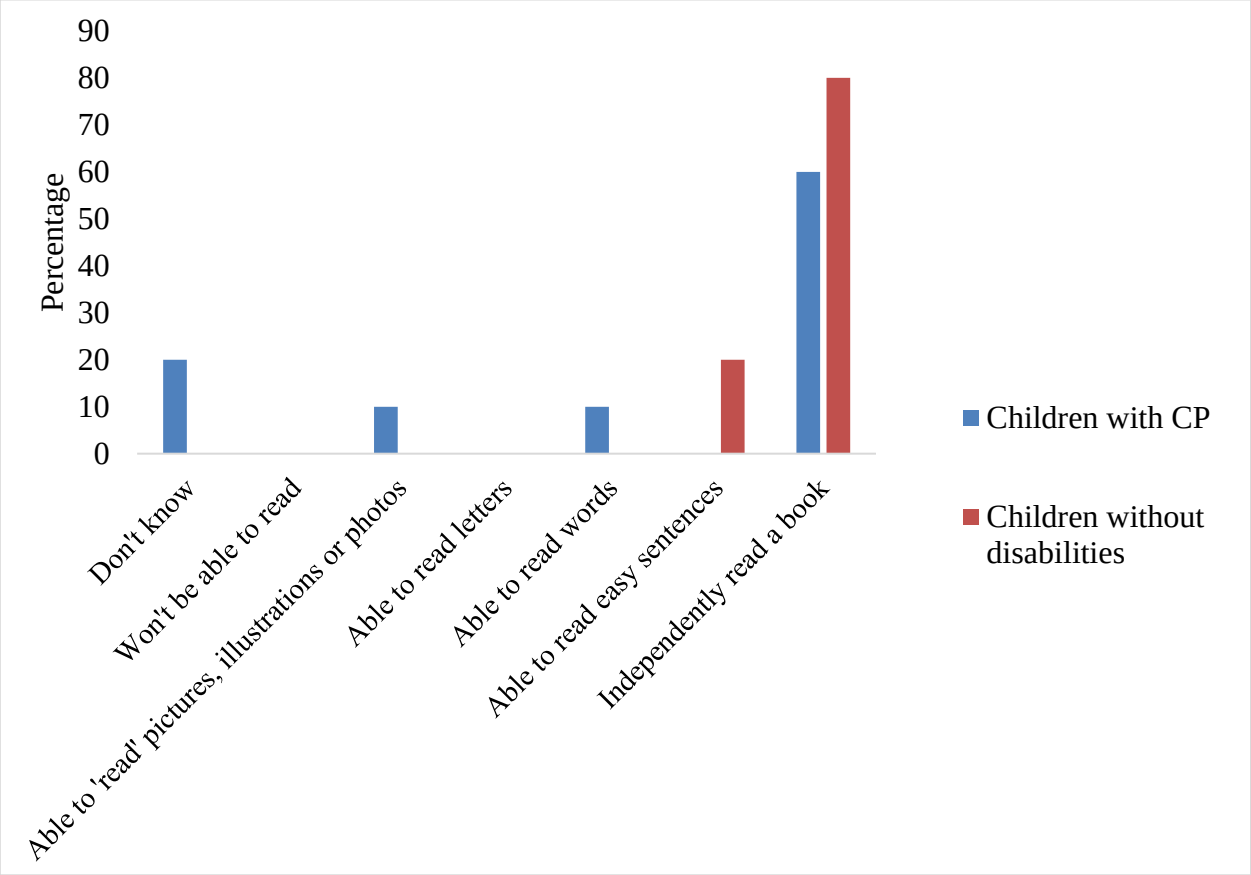

Figure 3.7 *Caregiver's expectations for their child's reading skills.*

Caregivers were asked to indicate what their expectations were for their child's writing skills in the future (see Question 41 in Appendix E). They could respond by ticking one of six options. This question was converted to a 5-point Likert scale. The first option, *'I don't know',* was removed from the scale, since it did not indicate either a high or a low expectation. The other five options were ranked from 1 (*My child will not be able to write or type*) to 5 (*My child will be able to write or type a long text or story*), where 1 was the lowest expectation and 5 the highest expectation. The results are displayed in Figure 3.8.

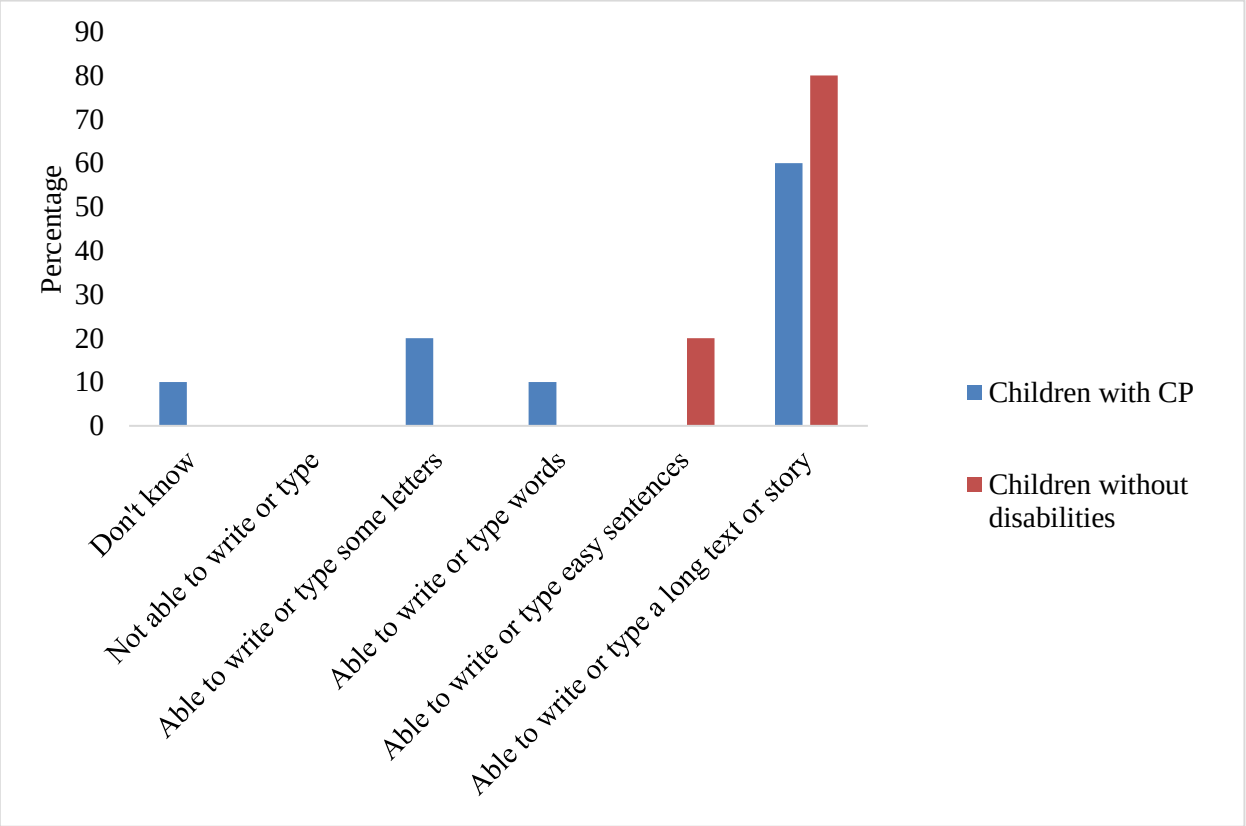

Figure 3.8 *Caregiver's expectations for their child's writing skills.*

Although the graphs show that more caregivers of children without disabilities than caregivers of children with CP expected their child to reach the highest level of reading and writing proficiency, the Mann Whitney U-Test indicated no significant differences between the expectations of the two groups regarding level of reading skills (p = 0.762) or writing skills (p = 0.497).

Other studies found significant differences in parents' expectations of their child's reading and writing skills (Justice et al., 2016; Peeters et al., 2009). In the study by Peeters et al. (2009), many parents of children with CP reported that they did not know what expectations to have for their child's reading and writing skills level. In the study by Justice et al. (2016), many had significantly lower expectations regarding their child's literacy development compared to parents of children without disabilities.

Previous research has found that high expectations, especially for children with disabilities, can be an important stimulating factor which influences children's literacy development (Koppenhaver et al., 1991). It is therefore encouraging that caregivers of children with CP did not have significantly lower expectations than caregivers of children without disabilities regarding their child's reading and writing skills.

3.6 Summary

The results of this small pilot study show that, in general, the HLEs of the two groups did not differ significantly for most of the variables investigated. Both groups used literacy materials with a similar frequency. Literacy materials available to the child and the frequency with which caregivers engaged in literacy mediating activities was similar between the groups. Regarding shared storybook reading, most caregivers of both groups indicated that they enjoyed this activity. The age at which caregivers started reading to their child did not differ between groups. Overall level of active engagement in book orientation, word orientation and story orientation activities during shared storybook reading also did not differ significantly between groups, although the mean ratings were lower for children with CP than for children without disabilities. Caregivers had similar amounts of literacy materials available for their own use, and also engaged with similar frequency in literacy materials. Their expectations regarding their child's literacy skills also did not differ significantly.

These results support those of Peeters et al. (2009), who, overall, also found limited differences between the HLEs of children with CP and peers without disabilities. It seems,

therefore, that both children with CP and children without disabilities tend to be exposed to stimulating HLEs.

Significant differences were found in child literacy interest, with children with CP being less interested overall in literacy activities. This may be a result of the difficulties children with CP often experience with literacy materials, making them less likely to seek out these experiences (Justice et al., 2016).

Significant differences were also found in the active engagement in three of 12 storybook reading-related activities, in which children with CP took a less active role than children without CP. The communication and physical impairments that children with CP often have may limit their ability to actively engage in various literacy activities, including storybook activities (Peeters et al., 2009; Smith, 2005).

4. CONCLUSION

The purpose of this pilot study was to describe the HLEs of preschool children with and without CP. Data was gained through caregiver self-administered questionnaires on five identified aspects of HLEs.

Similarities and differences were found in the HLEs of isiZulu preschool children with and without CP in KwaZulu-Natal. Both groups of caregivers engaged in literacy mediating activities with their children. Furthermore, similar trends were found in the frequency that the child and the caregivers in both groups engaged in literacy practices, which shows that both groups of children have literate role models to demonstrate literacy experiences.

In general, it is encouraging that caregivers of children with CP and caregivers of children without disabilities report many positive home literacy factors, such as frequency of use of various literacy materials, provision of literacy materials, caregiver engagement in activities with the child, and caregivers' own positive literacy habits. From the responses it seems that, despite challenges regarding cognition, motor skills and communication, children with CP are still exposed to a variety of home literacy activities and materials, have literate role models in the house, and have caregivers with similar expectations of them regarding future reading and writing skills (Burgess et al, 2002; Light & Kelford Smith, 1993; Peeters et al, 2009; Weikle & Hadadian, 2003).

At the same time, children with CP were reportedly less interested in literacy activities and also less actively engaged in certain activities during storybook reading. It would be important to further understand these differences and the reasons for them. Peeters et al. (2009) found that speech intelligibility and fine motor skills of children with CP predicted their participation in certain literacy activities. Due to the small sample size, similar analyses were not done in this study and it would be interesting to explore these further. It would also be interesting to find out if caregivers of children with CP make any adaptations to literacy materials (e.g. page fluffers, book mount) (Duris, 2005; Fenlon, McNabb & Pidlypchak, 2010) or to the way they engage in literacy activities with their children to make these activities and materials more accessible to

them.

Since the sample size in this study was small and the methodology prone to participant reactivity, the results serve merely to highlight possible further avenues of enquiry to better understand home literacy activities of children with CP and their peers without disabilities.

4.1 Strengths

This study was the first to attempt at describing the HLEs of children with CP and peers without disabilities from isiZulu-speaking homes in KwaZulu-Natal. This is important as children with CP in South Africa may face various challenges in their acquisition of literacy. To address these, an understanding of the nature of these challenges is necessary. This includes an understanding of specific aspects of the HLEs, as these have been found to predict later literacy and language skills in children without disability.

The meticulous adaptation and translation of the questionnaire can be regarded as a strength. The resulting questionnaire seemed appropriate to the context and caregivers seemed able to complete it without difficulties.

Although the sample was small, care was taken to match participants from both groups. The two groups were comparable on various important variables (child age and gender, number of other children in the home, and number of people in the home).

4.2 Weaknesses

A methodological constraint of this study is its small sample size. This had an impact on the type of statistical analysis that could be performed, as limited inferential statistics could be done. Furthermore, only literate caregivers were recruited, since a written questionnaire was used. This may have biased the sample and limits the ability to generalise the results.

A caregiver questionnaire provides information from the caregiver's perspective only and

therefore participants may have answered in what they perceived to be a socially desirable way.

A questionnaire does not allow for probing, confirmation or follow-up questions and therefore restricts the responses, and any missing data or discrepancies in the responses cannot be amended. Moreover, the reasons why caregivers responded as they did could not be further explored.

4.3 Clinical implications

The questionnaire used in this study could be used in adapted format (e.g. as an interview) by service providers of children with CP and their families in KwaZulu-Natal to find out more about the HLEs of the children. This information could then be used to build on existing strengths and address challenges in fostering appropriate preliteracy skills within the home. The questionnaire could also be used in a similar way with other populations of children in KwaZulu-Natal who may be at risk for delayed literacy skills, for example, children with other disabilities (e.g. Down Syndrome, Autism spectrum disorder, intellectual disabilities, dyslexia, or learning disabilities), or children who face environmental risks, such as poverty, single caregiver households, caregiver death due to HIV/AIDS, poor maternal mental health, and poor access to resources.

The results from the study suggest that caregivers of children with CP may be providing HLEs that are similar in many respects to those of children without disabilities. At the same time, the results suggest that children with CP may be less interested in certain literacy activities and also participate less in certain activities during shared storybook reading. Clinically, it would be important to discover the reasons for this and, where appropriate, provide caregivers with support to help them to adapt literacy materials and activities in such a way that children with CP can participate in these without experiencing barriers due to physical and/or communication challenges.

4.4 Recommendations for further studies

The current study needs to be replicated with a larger sample size in order to obtain more generalisable and representative results. Also, the caregiver questionnaire should not be used in isolation but be combined with other data collection methods in order to obtain a more comprehensive picture of the HLEs and general caregiver-mediated learning opportunities of children with CP. For example, focused interviews could be conducted with caregivers to gain a deeper understanding of the HLEs of children with CP and what value caregivers ascribe to them. Possible facilitators and barriers to home literacy activities could also be explored.

Future studies should focus on the reasons behind the differences in HLEs of children with CP and children without disabilities in order to gain a better understanding of whether caregivers are aware of the importance of these aspects of HLEs for their child's literacy development or if they lack the knowledge and skills of adapting literacy activities to suit the needs of their child with CP.

Foils should be built into the questionnaire in order to counteract the bias from socially desirable answers. A social desirability bias scale, such as the Marlowe-Crowne Social Desirability Scale, could be implemented to identify bias from participants answering in a socially desirable way.

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Appendix A

Evaluation form for the questionnaire for expert panel review

Home-based Literacy Experience Parent Questionnaire

Expert panel feedback

Thank you for your willingness to assist with the evaluation of this questionnaire. Please complete your personal information below, and see further instructions.

Personal Information:

Please complete.

Name	
Profession	
Years of experience of working with children aged 5-6	
Year of experience of working with children with Cerebral Palsy	
Year of experience of working with children from low income contexts	

Aim of the evaluation

The attached questionnaire is intended to be sent to literate parents of 5-6-year-old children with and without cerebral palsy from Zulu-speaking backgrounds. They will be recruited from Umgungundlovu, Ethekwini and Harry Gwala regions. Parents will receive both an English and Zulu version of the questionnaire. They will complete it on their own. Your input is intended to assist me to ensure that the questionnaire is complete, accurate and appropriate.

The questionnaire is based on an existing one compiled by Peeters, Verhoeven, van Balkom and de Moor (2009).

The questionnaire asks about the following home literacy domains:

Domain	***Question number***
Child literacy interests	1, 2, 3
Child activities during storybook reading	7
Materials and parental literacy for child literacy development	4, 5, 8, 9
Parents own literacy materials and activities	10, 11
Parents expectations for their child's literacy development	12, 13

Please use a pen to make written notes on the hard copy of the questionnaire. Alternatively, you may use the 'track changes' and/or 'comments' function in word to suggest changes or provide feedback. Please provide input on the following

1. Please indicate if anything needs to be added on an item.
2. Please indicate if any items should be excluded (not appropriate).
3. Please indicate if any items are unclear.
4. Please suggest changes to items in order for all items to be appropriate to the context and participants.
   Please also comment in general on the following:

Length:
Formatting:
Any other comments:

Many thanks for your valuable input.

Appendix B

Ethical Clearance Letter

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Humanities
Research Ethics Committee

21 November 2016

Dear Prof Bornman

Project:	**The home-based literacy experiences of pre-school children with cerebral palsy in KwaZulu-Natal**
Researcher:	**R Everett**
Supervisor:	**Dr K Tönsing**
Department:	**Centre for Augmentative and Alternative Communication**
Reference number:	**10096842(GW20161016HS)**

Thank you for the application that was submitted for ethical consideration.

I have pleasure in informing you that the Research Ethics Committee formally **approved** the above study at an *ad hoc* meeting held on 20 November 2016. Data collection may therefore commence.

Please note that this approval is based on the assumption that the research will be carried out along the lines laid out in the proposal. Should the actual research depart significantly from the proposed research, it will be necessary to apply for a new research approval and ethical clearance.

The Committee requests you to convey this approval to the researcher.

We wish you success with the project.

Sincerely

Prof Maxi Schoeman
Deputy Dean: Postgraduate Studies and Ethics
Faculty of Humanities
UNIVERSITY OF PRETORIA
e-mail:tracey.andrew@up.ac.za
Kindly note that your original signed approval certificate will be sent to your supervisor via the Head of Department. Please liaise with your supervisor.

Appendix C

Permission from KwaZulu-Natal Department of Education

education

Department:
Education
PROVINCE OF KWAZULU-NATAL

Enquiries: Phindile Duma Tel: 033 392 1041 Ref:.2/4/8/1006

Miss R Everett
11 Rosemont
2 Loveday Drive
Pietermaritzburg
3201

Dear Miss Everett

PERMISSION TO CONDUCT RESEARCH IN THE KZN DoE INSTITUTIONS

Your application to conduct research entitled: **"HOME-BASED LITERACY EXPERIENCES OF PRESCHOOL CHILDREN WITH CEREBRAL PALSY IN KWAZULU-NATAL"**, in the KwaZulu-Natal Department of Education Institutions has been approved. The conditions of the approval are as follows:

1. The researcher will make all the arrangements concerning the research and interviews.
2. The researcher must ensure that Educator and learning programmes are not interrupted.
3. Interviews are not conducted during the time of writing examinations in schools.
4. Learners, Educators, Schools and Institutions are not identifiable in any way from the results of the research.
5. A copy of this letter is submitted to District Managers, Principals and Heads of Institutions where the Intended research and interviews are to be conducted.
6. The period of investigation is limited to the period from 01 November 2016 to 25 May 2018.
7. Your research and interviews will be limited to the schools you have proposed and approved by the Head of Department. Please note that Principals, Educators, Departmental Officials and Learners are under no obligation to participate or assist you in your investigation.
8. Should you wish to extend the period of your survey at the school(s), please contact Miss Connie Kehologile at the contact numbers below
9. Upon completion of the research, a brief summary of the findings, recommendations or a full report/dissertation/thesis must be submitted to the research office of the Department. Please address it to The Office of the HOD, Private Bag X9137, Pietermaritzburg, 3200.
10. Please note that your research and interviews will be limited to schools and institutions in KwaZulu-Natal Department of Education.

(Please See List of Schools Attached)

Dr. EV Nzama
Head of Department: Education
Date: 14 November 2016

...Championing Quality Education - Creating and Securing a Brighter Future

KWAZULU-NATAL DEPARTMENT OF EDUCATION
Postal Address: Private Bag X9137 • Pietermaritzburg • 3200 • Republic of South Africa
Physical Address: 247 Burger Street • Anton Lembede Building • Pietermaritzburg • 3201
Tel.: +27 33 392 1004/41 • Fax.: +27 033 392 1203• Email: Kehologile.Connie@kzndoe.gov.za/Phindile.Duma@kzndoe.gov.za •Web:www.kzneducation.gov.za
Facebook: KZNDOE....Twitter: @DBE_KZN....Instagram: kzn_education....Youtube:kzndoe

Appendix D

Caregiver information letter and consent form

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Humanities

Mnumzane/Nkosikazi

Re: Ukuzimbandakanya komuntwana wakho kucwaningo lwemnfundo

Igama lami ngingu Robyn Everett. Ngifunda eNyuvesi yasePitoli ngifundela iziqu Mastazi zokulungisa nokwandisa izindela ezihlukile zokuxoxisana egumbini eliseNyuvesi yasePitoli. Ngifisa ufake isandla kulolucwaningo lwemfundo.

Isihloko salesisifundo: Imfundo yasekhaya ephathelene naloko abantwana abanenkinga yokufelwa amamasela okuhambisana nomqondo abadlula kuko uma besesebangeni lalabo abasalungiselelwa ukuya esikoleni. Injongo yalezizifundo ukuthola ulwazi olujulile ngaloku abantwana abadlula kuko (isibonela, ukudweba nokufunda izindotshana ebhukwini) benezifo zokukhubazeka kwamamasela okuhambisa nomqondo noma bengenazo nokuthi yini abanako emakhaya abo.

Yini elindelekile ngami?

Uma uvuma ukuzimbandakanya kulezizifundo, loku okulandelayo kuzobhekeka kuwe:

- Ukugcwalisa lolucwaningo olubhaliwe (ungakhetha isiNgisi noma isiZulu) ngoloko umntwana wakho asedlule kuko ekufundeni kwakhe. Kuzokuthatha imizuzu engamashumi amabili (20) ukugcwalisa lolucwaningo.
- Ukubuyisa lemvume yakho nocwaningo esikoleni esikhathini esiyiviki elilodwa.

Ayini amalungelo ami?

Ukuzimbandakanya kucwaningo akusiyo impoqo kukhululekile. Ungayeka ukuzimbandakanya noma nini bese imininingwane osinike yona, yakho nomntwana siyilahle masinyane.

Imininingwane yakho nomntwana wakho izogeinwa iyimfihlo yethu (angeke inikezwe omunye umuntu ongekho kucwaningo). Tbhukwana locwaningo lizobonwa yimina nothisha wami.

Centre for Augmentative and Alternative Communication, Room 3-36, Corn path Building, Lynnwood Road
University of Pretoria, Private Bag X20
Hatfield 0028, South Africa
Tel +27 (0)12 420 2001
Fax +27 (0) 86 5100841
Email aaac@up.ac.za
www.caac.up.ac.za

Fakulteit Geesteswetenskappe
Lefapha la Bomotho

Kuzokwenzekani ngalolonke ulwazi ositshele lona?

Lonke ulwazi luzobekwa ngokuphephile emabhukwini, kukhompuyutha, kuCD egumbini lokwandisa ulwazi ngezindlela ezihlukile zokuxoxisana, eNyuvesi yase Pitoli, iminyaka eyishumi nanhlanu (15). Ulwazi luyofundwa ezinkomfeni luphinde lusetshenziselwe ukubhala izindaba ezihlelwe ngobuciko bezesayensi. Lungabuye lusetshenziswe uma kuqhutshekwa nocwaningo. Noma kunjalo, akekho oyokwazi ngawe nomntwana wakho nakokonke ositshele kona.

Buyini ubungozi Kanye nenzuzo yaloku?

Asikho isikhathi lapho wena nomntwana wakho kuyoba nobungozi bokuthi nihlukumezeke. Lezizifundo zizosisiza ukuthi szai kabanzi ngezifundo zoloku abantwana abanenkinge yokufelwa amamasela okuhambisana nomqondo abadlule kuko besesemkhaya.

Ngingakuthokozela ukwazi ukuthi uyafisa yini noma cha ukuba yingxenye yalolucwaningo ngokuthi ugcwalise isiliphu esizobuya size kimina. Uma kukhona okunye ofisa ukukwazi, ungangithinta noma uthinte uthisha wami usebenzisa izinombolo ezinikezwe ngezansi.

Izifiso ezinhle

[redacted]

Robyn Everett
Email: everettrj@gmail.com
Cell: 082 4000 961

Usuku

[redacted]

Dr Kerstin Tönsing
Centre for Augmentative and Alternative Communication
Email: [redacted]
Office [redacted]

Usuku

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Humanities

Imvume yomzali yokuzimbandakanya kucwaningo: Isiliphu esiphendulayo

Igama lomntwana: _____

Igama lomzali/omnakekelayo: _____

Igama locwaningo: Imfundo yasekhaya ephathelene naloko abantwana abenenkinga yamamasela okuhambisana nomqondo abadhula kuko uma besesebangeni lalabo abasalungiselelwa beqeqeshelwa ukuya esikoleni nalabo abangenankinga Kwa-Zulu Natali.

Umcwaningi: Robyn Everett
Master's Student
Centre for AAC
[redacted]

Uthisha: Dr Kerstin Tönsing

Mina, _____
(Igama nesibongo)

☐ Nginikeza imvume ukuthi umntwana wami azimbandakanya kulolucwaningo. Imvume yami ayiphoqelekile futhi ngiyaqonda ukuthi ngingayeka noma nini ukuqhubeka nalezizifundo. Ngiyaqonda nokuthi engikunikezile ngocwaningo kuzohlala iminyaka eyishumi nanhlanu (15) equmbini lazezizfundo, alukho ulwazi nemininingwane oluyodluliselwa komunye umuntu ongaphathelene nezifundo zocwaningo. Ngiyaqonda nokuthi ingqikithi nemininingwane ingabuye isetshenziselwe uhlaziyo futhi.

NOMA

☐ Angiyinikezi imvume yokuzimbandakanya kulezizifundo zocwaningo.

_____ _____
Umzali/omnakekelayo Usuku

Centre for Augmentative and Alternative Communication, Room 3-36, Corn path Building, Lynnwood Road
University of Pretoria, Private Bag X20
Hatfield 0028, South Africa
Tel +27 (0)12 420 3001
Fax +27 (0) 86 5100841
Email saak@up.ac.za
www.caac.up.ac.za

Fakulteit Geesteswetenskappe
Lefapha la Bomotho

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Humanities

(date)

Dear Sir/Madam

Re: Participation of your child in a research study

My name is Robyn Everett. I am a student at the University of Pretoria and I am currently enrolled for a Masters degree in Augmentative and Alternative Communication (AAC) at the Centre for AAC at the University of Pretoria. I would like to ask you to participate in a research study.

The title of my study is: "*Home-based literacy experiences of preschool children with cerebral palsy in Kwa-Zulu Natal*". The aim of the study is to find out more about the literacy experiences (for example, drawing and storybook reading) children with cerebral palsy have in their homes.

What will be expected of me?
Should you give consent to participate in the study, the following will be expected of you:

- To complete the attached written questionnaire (you can choose the English or isiZulu version) about your child's literacy experiences. It will take about 20 minutes to complete the questionnaire.
- To return this consent form and the questionnaire to school within one week.

What are my rights?
Participation in the research is voluntary. You may stop participating at any time and all information you gave us about you and your child will be immediately destroyed.

The personal information you give us about you and your child will be kept confidential (i.e. it will not be shared with anyone outside of the study). The questionnaires will only be seen by myself and my supervisor.

Centre for Augmentative and Alternative Communication, Room 2-36, Corn path Building, Lynnwood Road
University of Pretoria, Private Bag X20
Hatfield 0028, South Africa
Tel +27 (0)12 420 2001
Fax +27 (0) 86 5100841
Email saalc@up.ac.za
www.aac.up.ac.za

Fakulteit Geesteswetenskappe
Lefapha la Bomotho

What will happen to the information that is collected?
The information will be safely stored on paper and on computer CDs at the Centre for Augmentative and Alternative Communication (CAAC), University of Pretoria for 15 years. The information will be presented at conferences and will also be used to write a scientific article. It may also be used for further research. However, no identifying information about you or your child will ever be shared.

What are the risks and benefits?
At no time during the participation in the research will you or your child be at risk of any harm. This study will help us understand more about the literacy experiences that children with cerebral palsy have at home.

I would be grateful if you could tell me if you want to take part in the study or not by completing the attached reply slip. For any further information, please contact me or my supervisor using the contact details supplied below.

Kind regards

[redacted]

Robyn Everett
Email: [redacted]
Cell: [redacted]

Date

[redacted]

Dr Kerstin Tönsing
Centre for Augmentative and Alternative Communication
Email: Kerstin.Tonsing@up.ac.za
Office Tel: [redacted]

Date

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Humanities

Parental Informed Consent: Reply Slip

Name of Child: _____

Name of Parent/Caregiver: _____

Project title: Home-based literacy experiences of preschool children with cerebral palsy in Kwa-Zulu Natal.

Researcher: Robyn Everett
Master's Student
Centre for AAC
Cell: [redacted]

Supervisor: Dr Kerstin Tönsing

I, _____
(Name and surname)

☐ give consent for my child to participate in this study. My consent is voluntary and I understand that I may stop participating in the study at any time. I understand that the information will stored for 15 years at the CAAC and that none of the personal information will be shared with anyone outside of the study. I understand that the information may be re-used for analysis.

OR

☐ do not give consent to participate in this study.

_____ _____
Parent/Caregiver Signature Date

Centre for Augmentative and Alternative Communication, Room 2-36, Com path Building, Lynnwood Road
University of Pretoria, Private Bag X20
Hatfield 0028, South Africa
Tel +27 (0)12 420 2001
Fax +27 (0) 86 5100041
Email saak@up.ac.za
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Appendix E

Caregiver questionnaire regarding home-based literacy experiences of preschool children

~~Home Based Literacy Experiences~~

Imibuzo egondene nombheki yomntwana

Primary Caregiver Questionnaire

For Office Use:
CP/TD

A. Imininingwane ngomuntu ophendula lolucwaningo

Background information on the person completing the questionnaire

Faka uphawu eduze kwempendulo.

Please tick your answers.

1. Uhlobene kanjan nomtwana?

How are you related to the child?

	uMama *Mother*
	uBaba *Father*
	Umbheki, cacisa ubudlelwano benu *Caregiver, please specify relationship* _____

2. Wazalwa nini? (usuku/ inyanga/unyaka)

What is your date of birth? (day/month/year) _____

3. Ibanga lemfundo eliphezulu onalo?

What is your highest academic qualification?

	Imfundo esamazingeni aphansi *Completed Primary school*
	Ibanga lesishagalolunye *Completed Gr 9*
	Ibanga leshumi *Completed Matric*
	iCertificate Completed Certificate
	iDiploma *Completed Diploma*
	iziqu *Completed Degree*

4. Wenza msebenzi muni kumanje?

What is your current occupation?

	Angisebenzi *Unemployed*
	Ngigada ikhaya *Homemaker*
	Ngibamba amatoho (chaza kafushane ukuthi kuphi): *Part time employment (please explain where):* _____
	Ngiqashwe ngokuphelele (chaza ukuthi kuphi): *Full time employment (please explain where):* _____
	Okunye okwenzayo (chaza): *Other (please explain):* _____

Imininingwane ngeseimo sasekhaya

Information on home environment

5. Nivamise ukukhuluma isisZulu na ekhaya?
Do you mostly speak isiZulu in your home?

☐ Yebo
Yes
☐ Cha
No

6. Iluphi olunye ulimi enilukhulumayo ekhaya?
What other languages do you speak at home?

_____

7. Ukhuluma limu luni nomtwana wakho?
What language do you speak to your child?

_____

8. Ngobani amagama abantu enihlala nabo ekhaya kanye nomntwana wakho?
Who are all the people who live in your home with you and your child?

Ubudlelwano babo nomtwana wakho *Relationship to your child*	Islisa/isifazane *Male/Female*	iminyaka *Age*	Ulimi olukhulunywa ilomuntu ekhaya *Languages spoken by this person in the home*

9. Ninawo yini amanzi ahlanzekile?
Do you have access to clean tap water?

☐ Yebo
Yes
☐ Cha
No

10. Uma kungu yebo, umpompi ukuphi?
If yes, where is the tap?

	Phakathi endlini *Inside the house*
	Egcekeni *In the yard*
	Umpompi womphakathi *A community tap*

11. Ninawo yini ugesi ekha
Does your home have electric..,.

	Yebo *Yes*
	Cha *No*

12. Ninayo yini indlu encane esendlini?
Does your home have an indoor toilet?

	Yebo *Yes*
	Cha *No*

13. Ikhaya lenu lifulelwe ngani?
What type of roof does your house have?

	Uthayela *Tin roof*
	Utshani *Thatch roof*
	Amathayela *Tiled roof*
	Okunye (chaza): *Other (please specify):*_____

14. Malini ocabanga ukuthi umndeni wakho uyayisebenzisa kanye nemali oyongayo ngenyanga?
How much money do you think your household has for spending and saving every month?

	Ngaphansi kuka R6250 ngonyanga *Less than R6250 per month*
	uR6250 nangaphezulu *R6250 or more per month*

B. Imininigwane ng

Background information abo

Faka uphawu eduze kwempendulo.
Please tick your answers.

15. Umntwana wakho wazalwa nini? (usuku/inyanga/unyaka)
What is your child's date of birth? (day/month/year) _____

16. Umntwana wakho ungubulili buni?
Is your child:

☐ Umfana
A boy
☐ Intombazane
A girl

17. Umntwana wakho uhamba ipreschool/isidlalisa bantwana/inkulisa/isikole?
Does your child go to a preschool/play group/crèche/school?

☐ Yebo
Yes
☐ Cha
No

18. Babeneminyaka emingaki beqala ukuya ePreschool/esidlalisa bantwana/enkulisa/isikole?
How old were they when they started going to preschool/play group/crèche/school?

_____

19. Uma uqhathanisa umntwana wakho nezinye izingane, waphuza ukuhlala, ukuma, ukuhamba?
Compared to other children, was your child very late in sitting, standing or walking?

☐ Yebo
Yes
☐ Cha
No

20. Uma uqhathanisa umntwana wakho nezinye izingane unayo yini inkinga ekuboneni, phakathi kwasemini nasebusuku?
Compared with other children does your child have difficulty seeing, either in the daytime or at night?

☐ Yebo
Yes
☐ Cha
No

21. Umntwana wakho unayo inkinga ekuzweni?
Does your child have any difficulty hearing?

☐ Yebo
Yes
☐ Cha
No

22. Uma utshela umntwan ıkinga yokuqonda ukuthi uqonde ukuthini?
When you tell your child to do something, does he/she seem to understand what you saying?

☐ Yebo
Yes
☐ Cha
No

23. Engabe umntwana wakho ukhombisa inkinga na yokuhamba noma ukunyakazisa izingalo nemilenze noma ukukhombisa ubuthaka nokukhonkobala kwezingalo noma imilenze?
Does your child have difficulty walking or moving his/her arms or does he/she have weakness and/or stiffness in his/her arms or legs?

☐ Yebo
Yes
☐ Cha
No

24. Kungabe umntwana wakho ngesinye isikhathi uvukwa yisifo sokwuwa, noma aqinelane okanye alahlekelwe yingqondo?
Does your child sometimes have fits, become stiff or lose consciousness?

☐ Yebo
Yes
☐ Cha
No

25. Umntwana wakho ufunda ukwenza izinto kanye nezinye izingane ezinemnyaka yazo na?
Does your child learn to do things like other children his/her age?

☐ Yebo
Yes
☐ Cha
No

26. Nixhumana kanjani nor odwa noma okungaphezulu.
How does your child communicate with you? You can tick more than one.

- ☐ Umntwana ukhomba izithombe ukuxhumana name
  My child points at pictures to communicate
- ☐ Umntwana ukhomba ngekhanda noma ngomunwe
  My child uses gestures and pointing
- ☐ Umntwana ukhombisa ngobuso (ngokumamatheka)
  My child uses facial expressions (e.g. smiling)
- ☐ Umntwana ukhomba ngamehlo (ukukhomba ngamehlo loku akucelayo)
  My child uses eye pointing (e.g. using their eyes to show you what they want)
- ☐ Umntwana ukhuluma “ngemisindo” mayefuna ukusho into ethile
  My child makes noises to ‘talk’
- ☐ Umntwana ukukhuluma
  My child talks
- ☐ Ngezinye izindlela (chaza kafushane)
  Other ways (please describe):
  _____

27. Ukukhuluma komntwana wakho kwehlukile yini kunokujwayelekile? (okungacaceli abanye abantu ngaphandle komkhaya)?
Is your child’s talking different from normal (e.g. not clear enough to be understood by people other than his/her family)?

- ☐ Yebo
  Yes
- ☐ Cha
  No

28. Uma uqhathanisa umntwana wakho nontanga bakhe zikhona yini izimpawu ezikhombisa ukusebenza kancane kwengqondo yakhe?
Compared with other children of his/her age, does your child appear in any way to be mentally backward or slow?

- ☐ Yebo
  Yes
- ☐ Cha
  No

C. Imininingwane yemisebenzi yakho nengane
Information about you and your child's activities

Faka uphawu eduze kwempendulo
Please tick your answers

29. Umntwana wakho ukusebenzisa kangakanani loku okulandelayo:
How often does your child use:

	1 Akakusebenzisi *Never*	2 Akajwayele ukukusebenzisa *Almost Never*	3 Kanye ngesonto *Once a week*	4 Izikhathi ezimbalwa ngesonto *Few times a week*	5 Nsuku zonke *Every day*	6 Izikhathi ezimbalwa ngosuku *Few times a day*
Omagazini *Magazines*	1	2	3	4	5	6
Izincwadi zezingane *Children's books*	1	2	3	4	5	6
Izincwadi ezihlekisayo *Comic/Cartoon books*	1	2	3	4	5	6
Iphephandab *Newspaper*	1	2	3	4	5	6
Izindaba kuTape/CD/DVD/ikhompuyuta *Stories on tape/CD/DVD/computer*	1	2	3	4	5	6
Izincwadi zomculo *Songbooks*	1	2	3	4	5	6
Izincwadi zokuhlobisa ngemibala *Activity/colouring books*	1	2	3	4	5	6
Ikhompuyuta/laptop/tablet *Computer, Laptop or Tablet*	1	2	3	4	5	6
Umakhalekhukhwini *Cell phone*	1	2	3	4	5	6
Izinto zokubhala(ipeni,ipensela lomsizi) *Writing stuff (e.g. pens, pencils)*	1	2	3	4	5	6
Okokudweba(amakhilayoni,ikoki) *Drawing stuff (e.g. crayons, Koki's)*	1	2	3	4	5	6
Izincwadi zezenkolo(ibhayibeli,eyomculo,iKoran noma okunye) *Religious books (bible, hymn book, Koran and other)*	1	2	3	4	5	6

30. Umntwana wakho unomdlandla k
How interested is your child in:

	1 Akanamudlandla *No interest*	2 Omuncane *A little interest*	3 Omkhulu *A lot of interest*
Ekubhaleni *Writing*	1	2	3
Ekudwebeni *Drawing*	1	2	3
Ekupendeni *Painting*	1	2	3
Ekufundeni izincwadi zezindaba *Storybook reading*	1	2	3

31. Kungaki kulokhu okulandelayo UMNTWANA WAKHO anakho kokukusebenzisela ekhaya?
How many of each of these items does YOUR CHILD have available to use at home?

Izincwadi zakhe (okungezakhe yedwa) *Own books (belonging only to your child)*	
Omagazini *Magazines*	
Izincwadi zezingane *Children's books*	
Izincwadi ezihlekisayo *Comic/Cartoon books*	
Izindaba kuTape/CD/DVD/ikhompuyuta *Stories on tape/CD/DVD/computer*	
Izincwadi zomculo *Songbooks*	
Izincwadi zokuhlobisa ngombala *Activity/colouring books*	
Izincwadi zenkolo(ibhayibheli,ezomculo,iKoran noma okunye) *Religious books (bible, hymn book, Koran and other)*	

32. Unokungaki kwaloku okulandelayo ekhaya okusetshenziswa NGUWE kuphela?
How many of each of these items do you have in your home for YOUR OWN use?

Amaphephandaba *Newspapers*	
Omagazini *Magazines*	
Izincwadi zokufunda nje *Reading books*	
Izincwadi zolwazi *Study books*	
Inkomba ngokwenzeka kumabonakude *TV guide*	
Izincwadi zenkolo(ibhayibheli,ezomculo,iKoran noma okunye) *Religious books (bible, hymn book, Koran and other)*	
Izincwadi zokupheka *Recipe books*	
Ikhompuyuta/laptop noma iTablet *Computer, laptop or tablet*	
Umakhalekhukhwini *Cell phone*	

33. Ukwenza kangakanani okulandelayo:
How often do you:

	1 Angikwenzi *Never*	2 Cishe ngingakwenzi *Almost never*	3 Ngezikhathi ezimbalwa ngenyanga *A few times a month*	4 Masonto onke *Every week*	5 Nsuku zonke *Every day*
Ukuya eLayibhurari nengane (umtapo wolwazi) *Visit the library with your child*	1	2	3	4	5
Ukufundela ingane yakho (ibhuku,umagazini,iSMS noma okunye *Read to your child (this can include magazines, sms, books or other)*	1	2	3	4	5
Ukufundela ingane yakho incwadi yendaba *Read a storybook together with your child*	1	2	3	4	5
Ukudlala nengane endlini *Play with your child inside*	1	2	3	4	5
Ukudlala nengane ngaphandle *Play with your child outside*	1	2	3	4	5
Ukubuka umabonakude *Watch TV programmes with your child*	1	2	3	4	5
Ukucula nengane yakho *Play rhyme or singing games with your child*	1	2	3	4	5
Ukufunda amagama noma ukulandelana kwezinhlamvu zombhalo *Read names or letters with your child*	1	2	3	4	5
Ukufunda izincwadi zokupheka noma izinto ezizothengwa nengane yakho *Read recipes or shopping lists with your child*	1	2	3	4	5
Ukufunda izimpawu zemigwaqo nengane yakho *Read public road signs with your child*	1	2	3	4	5
Ukufunda amagama ezitolo nengane yakho *Read shop names with your child*	1	2	3	4	5
Ukulekelela ingane ukuba izifundele ngokwayo *Help your child to read by him-/herself*	1	2	3	4	5
Ukulekelela ingane ukuba izibhalele ngokwayo *Help your child to write by him-/herself*	1	2	3	4	5

34. Uyayifundela yini ingane yakho i
Do you read storybooks to your child?

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Yebo *Yes*	Cha *No*

35. Uma umfundela umntwana wakho izincwadi zezinganekwane, wabe engakanani umntwana wakho ngesikhathi uqala ukmfundela izinganekwane?
If you read storybooks with your child, how old was your child when you began to read them storybooks?

_____

36. Kuvame kangakanani umntwana acele ukuthi umfundele?
How often does your child ask to be read to?

Akakaze *Never*	Cishe akakaze *Almost Never*	Kanye ngesonto *Once a week*	Izikhathi ezimbalwa ngesonto *Few times a week*	Nsuku zonke *Every day*	Izikhathi ezimbalwa ngosuku *Few times a day*

37. Uyathanda na ukufundela umntwana wakho izincwadi?
Do you like to read storybooks to your child?

	Cha angithandi ukumfundela *No, I don't like to read to my child*
	Kwezinye izikhathi ngiyathanda ukumfundela *Sometimes I like to read to my child*
	Yebo ngiyathanda ukumfundela *Yes, I like to read to my child*

38. Sicela usixoxele ngezinto enizenzayo nomntwana wakho uma umf

Please tell us about the things that you and your child do when you and your child read a story together.

	0 Akekho owenza lokho ngoba asizifundi izincwadi zezindatshana ndawonye. *No-one does this because we don't read stories together*	1 Lokhu kwenziwa yimi kuphela *Only I do this*	2 Ngenza loku kwesinye isikhathi angilingisele *I usually do this and my child sometimes does this*	3 Umntwana uvame ukwenza loku bese ngimulingisela ngenye inkathi *My child usually does this and I do it sometimes*	4 Loku kwenziwa umntwana kuphela *Only my child does this*
Ukuphendula amakhasi *Turn the pages*	0	1	2	3	4
Ukubamba incwadi *Hold the book*	0	1	2	3	4
Ukukhetha ukuthi sifunda masishane noma kancane *Decide how fast or slow we read*	0	1	2	3	4
Ukuchaza amagama ezithombe *Name the pictures*	0	1	2	3	4
Ukukhomba izinhlamvu noma amagama *Point to letters or words*	0	1	2	3	4
Ukuphimisa izinhlamvu noma amagama *Read letters or words out loud*	0	1	2	3	4
Ukubuzana incazelo yamagama *Ask the meaning of words*	0	1	2	3	4
Ukubuza imibuzo ngendaba *Ask questions about the story*	0	1	2	3	4
Ukuxoxa kabusha indaba esebenzisa amagama akhe noma enye indlela yencazelo *Retell the story, using own words or by using another means of communication*	0	1	2	3	4
Ukuqagela ukuthi indaba izophela kanjani *Guess how the story will end*	0	1	2	3	4
Ukuphawula ngendaba *Give comments on the story*	0	1	2	3	4
Ukukhuluma ngokuthi indaba ixhumana kanjani nempilo yangempela *Talk about how the story links to real life*	0	1	2	3	4

39. Uvamise kangakanani ukwenza loku okulandelayo:
How often do you do the following:

	1 Angikwenzi/ Akajwayele ukukusebenzisa *Never/Almost Never*	2 Kanye ngesonto *Once a week*	3. Izikhathi ezimbalwa ngesonto *Few times a week*	4 Nsuku zonke *Every day*	5 Izikhathi ezimbalwa ngosuku *Few times a day*
Ngifunda iphephandaba *I read the newspaper*	1	2	3	4	5
Ngifunda izincwadi zezindaba *I read storybooks*	1	2	3	4	5
Ngifunda izincwadi ezinika ulwazi *I read informative (study) books*	1	2	3	4	5
Ngfunda izincwadi zenkolo (ibhayibheli,ezomculo,iKoran nokunye) *I read religious books (bible, hymn book, Koran and/or other)*	1	2	3	4	5
Ngifunda omagazini *I read magazines*	1	2	3	4	5
Ngifunda amaEmail *I read e-mails*	1	2	3	4	5
Ngifunda imlayezo (sms/ whatsapp) *I read sms or other types of text messages (e.g. WhatsApp)*	1	2	3	4	5
Ngifunda izindaba kuInternet *I read the news on the internet*	1	2	3	4	5
Ngifunda ezinye izinto kuInternet *I read other things on the internet*	1	2	3	4	5
Ngibhala phansi umbono *I write a note*	1	2	3	4	5
Ngibhala incwadi noma indaba *I write a letter or a story*	1	2	3	4	5
Ngidweba isithombe noma ngipende *I draw a picture or paint*	1	2	3	4	5
Ngibhala amaEmail *I write e-mails*	1	2	3	4	5
Ngibhala iSMS noma eminye imilayezo(whatsapp) *I write sms or other types of text messages (e.g. WhatsApp)*	1	2	3	4	5

40. Faka uphawu oluchaza ngezimfiso zokuthi amakhono **<u>okufunda kwengane</u>** yakho abe yikho esikhathini esizayo:
*Tick the one that best tells us what you expect your child's **<u>reading skills</u>** to be in the future:*

	Angazi ukuthi ngicabangani ngamakhono okufunda kwengane yami *I don't know what to expect when I think about my child's reading abilities.*
	Umntwana wami ngeke akwazi ukufunda *My child won't be able to read.*
	Umntwana wami uyokwazi ukuthi afunde izithombe *My child will be able to 'read' pictures, illustrations or photos.*
	Umntwana wami uyokwazi ukufunda izinhlamvu *My child will be able to read letters.*
	Umntwana wami uyokwazi ukufunda amagama *My child will be able to read words.*
	Umntwana wami uyokwazi ukufunda imisho elula *My child will be able to read easy sentences.*
	Umntwama wami uyokwazi ukuzifundela yedwa incwadi *My child will be able to independently read a book.*

41. Faka uphawu oluchaza ngezimfiso zokuthi amakhono **<u>okubhala kwengane</u>** yakho abe yikho esikhathini esizayo:
*Tick the one that best tells us what you expect your child's **<u>writing skills</u>** to be in the future:*

	Angazi ukuthi ngilindeleni mangicabanga ngamakhono okubhala kwengane yami *I don't know what to expect when I think about my child writing abilities.*
	Umntwana wami angeke akwazi ukubhala ngeKhompuyuta/laptop/tablet *My child will not be able to write or type with a computer/laptop/tablet.*
	Umntwana wami uyokwazi ukuthi abhale izinhlamvu ezithile *My child will be able to write or type some letters.*
	Umntwana wami uyokwazi ukuthi aqpphe (aType) amagama emshinini *My child will be able to write or type words.*
	Umntwana wami uyokwazi ukubhala noma aqpphe (aType) umusho olula emshinini *My child will be able to write or type easy sentences.*
	Umntwana wami uyokwazi ukubhala noma aqpphe (aType) umlayezo omude noma indaba emshinini *My child will be able to write or type a long text or story.*

Ngiyabonga kakhulu!
Thank you so much!

Appendix F

Principal Information Letter and Permission Slip

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Faculty of Humanities

(date)

The Principal (name)
(School name and address)

Dear _____(name of principal),

Re: Permission to conduct research study at your school
(date)

My name is Robyn Everett. I am currently enrolled for a Masters degree in Augmentative and Alternative Communication (AAC) at the University of Pretoria. The title of my study is "*Home-based literacy experiences of preschool children with cerebral palsy in Kwa-Zulu Natal*". The aim of the study is to describe the home-based literacy experiences of 5-6 year old children with cerebral palsy from isiZulu speaking homes in Kwa-Zulu Natal.

I have been granted permission by the Department of Education of your province to access particular preschools and schools in order to carry out the above research. Please see attached copy of this permission letter.

I would be much obliged if you would permit me to include your school, _____(name of school) in this study.

Rationale for the study
Studies have found that home literacy experiences appear to have a role to play in literacy development, however little is known about the home literacy experiences of South African children with cerebral palsy. A better understanding of these experiences can serve as a basis for the development of future interventions.

What will be expected of the school?
I will require the help of you and the teachers to identify learners who are first language isiZulu learners with cerebral palsy between the ages of 5 years, 0 months - 6 years, 11 months whose caregivers are literate and who could possibly participate in the study. I will require the help of the teacher to send an information letter, consent form, and questionnaire home with the identified learner. I will ask that the consent forms and questionnaires (from caregivers that agree to participate) be returned to school within one week. I would also like to provide the teacher with reminder notes to send home in children's home work books to encourage caregivers to return the consent form and/or questionnaire

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Fakulteit Geesteswetenskappe
Lefapha la Bomotho

What will be expected of the caregivers participating in the study?

- The caregivers will be expected to complete a written questionnaire. The questionnaire will be in both English and isiZulu.
- They will be requested to return the consent form and (if they consent) the questionnaire within one week of receiving it.

The following ethical principles will be upheld within this study:

- Permission has been obtained from the Department of Education of your province (see attached).
- Written consent from all participants' will be obtained prior to conducting the study.
- All participants will be made aware of their right to say that they do not want to participate and that, even if they consent, that they may withdraw from the study at any point in time without any negative consequences to themselves or their children.
- The personal information gained from the questionnaires during the study will be accessed only by the researcher and her supervisor.
- All information will be kept confidential from those external to the study. Any identifying information will be removed from the questionnaire (e.g. names of caregiver or learner). No individual or school names will be mentioned in any published data.

Who will have access to the results of the study?

The research will be stored in both hard copy and electronic format at the University of Pretoria in the Centre for Augmentative and Alternative Communication for 15 years. The data obtained from the research will be used for writing a Master's dissertation, writing scientific papers and for presentation at professional conferences and seminars. A summary of the results will be made available for any interested staff or parents.

What are the risks and the benefits?

At no time during the participation in the research will the caregivers or their children be at risk of any harm. Potential benefits of this study may include extending research within the field of literacy development and other children who have cerebral palsy in the future might benefit from the information gained in this study as it can be used for future interventions.

Please feel free to contact me or my supervisor if you have any questions about this study. I look forward to receiving your response.

Kind regards,

[redacted]

Robyn Everett
Email:
Cell: (

[redacted]

Dr Kerstin Tönsing
Centre for Augmentative and Alternative Communication
Email:
Office

Date

Date

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Faculty of Humanities

Principal permission: Reply Slip

Name of principal: _____

Name of School: _____

Project title: Home-based literacy experiences of preschool children with cerebral palsy in Kwa-Zulu Natal.

Researcher: Robyn Everett, Master's candidate, Centre for AAC

I_____,
(Name and surname)

(please tick box that applies)

☐ give permission to Robyn Everett to recruit participants from the school named above for possible participation in the study entitled 'Home-based literacy experiences of preschool children with cerebral palsy in Kwa-Zulu Natal'. This permission is voluntary and I understand that I may withdraw it at any time. I understand that the data will stored for 15 years at the CAAC and that all data will be treated confidentially. I understand that the data maybe re-used for analysis. I understand that the data may be used for a scientific article and for conference presentations. I understand that all information used and obtained in this study will be treated as confidential.

OR

☐ do not give permission to Robyn Everett to recruit participants from the preschool named above for possible participation in the study entitled 'Home-based literacy experiences of preschool children with cerebral palsy in Kwa-Zulu Natal'.

_____
Principal Signature

_____
Date

School stamp

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Fakulteit Geesteswetenskappe
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Appendix G

Feedback and adjustments following Expert Panel 1

Original question	Suggested change	Reason for change	Revised question
What is you marital status? - Single and/or never married - Married - Divorced - Widower/Widow	- Delete never married - Delete divorce and widower/widow - Add living together	No need to distinguish	What is you marital status? - Single and/or never married - Married or living together
Is Zulu the language most frequently spoken in your home?	Rewording	Easier to understand	Do you mostly speak isiZulu in your home?
Is Zulu the language most frequently spoken in your home?	Change Zulu to isiZulu	Consistent use of term throughout questionnaire	Do you mostly speak isiZulu in your home?
What other languages are spoken in the home?	Rewording	Easier to understand	What other languages do you speak at home?
Please describe the other people living in your home?	Rewording	Easier to understand	Who are all the people who live in your home?
Do you have access to tap water?	Add 'clean'	Clarify state of water/sanitation	Do you have access to clean tap water
Does your house have a 'jojo' tank?	Delete	Not suggestive of SES	Does your home have an indoor toilet
What do you use to cook your food?	Delete	Not suggestive of SES	What type of roof does your house have?
How many adults in your home are employed	Delete	Not necessary for SES as other questions regarding SES have already been asked.	Removed
Please indicate all sources of income that your family has?	Delete	Not necessary for SES as other questions regarding SES have already been asked.	Removed
Which of these contributes the most to your family's income?	Delete	Not necessary for SES as other questions regarding SES have already been asked.	Removed
Please indicate how much money you think your household has for spending and saving every month? (R500-R2000; R2100 – R4000; R4100 – R6000; More than R6100)	Change cut off amounts	Focus question on determining whether family income falls below or above lowest income tax bracket, as this is indicative of SES	How much do you earn in a year? (Less than R75000 per year; More than R75000 per year) (annual taxable amount)
Is your child: - Male - Female	Change wording	Easier language to understand	Is your child: - A boy - A girl
n/a	Additional question	Information about educational placement of the child can assist in interpreting results	Does your child go to a preschool/playgroup/crèche?

Original question	Suggested change	Reason for change	Revised question
Please indicate how your child communicates with you: - Speech - Gestures and pointing - Facial expressions (e.g. smiling) - Eye pointing (e.g. using their eyes to show you what they want) - Vocalizations (sounds) - Pointing at pictures to communicate - Other ways (please describe)	1. To rearrange order 2. To begin each statement with 'My child…" 3. To describe speech as - Talks in words - Talks in sentences	1. Easier to follow 2. More personal response to a question 3. More accurate description of speech	Please indicate how your child communicates with you: - My child Pointing at pictures to communicate - My child uses gestures and pointing - My child uses facial expressions (e.g. smiling) - My child uses eye pointing (e.g. using their eyes to show you what they want) - My child doesn't talk - My child makes noises to 'talk' - My child talks in words - My child talks in sentences - Other ways (please describe)
Two questions about motor abilities based on the Gross Motor Function Classification System (GMFCS) and the Manual Ability Classification System (MACS)	Remove from questionnaire and ask teacher to complete it rather. Replace with the Ten Question Questionnaire (Durkin, Hasan & Hasan, 1995).	GMFCS and MACS terminology too difficult for caregiver. Ten Questions Questionnaire is the official screener for childhood disabilities	The GMFCS and MACS-based questions were removed from questionnaire. Included the Ten Question Questionnaire items instead.
	Replace with the Ten Question Questionnaire (Durkin, Hasan & Hasan, 1995).		
How often does your child use: - Child Magazines	Rewording – remove child	Don't need to be so specific. Rather have 'magazine' as these sometimes have child sections	How often does your child use: - Magazines
How often does your child use: - Play-do-books	Revise and reconsider using a different description	Not appropriate/familiar to SA context	How often does your child use: - Activity/colouring books
How often does your child use: - Comic books	Revise and explain more what these are	Caregivers are unlikely to be familiar with this term	How often does your child use: - Comic/Cartoon books
How often does your child use:	Additional option– cellphone	Sms/whatsapp is a form of literacy that children may be exposed to	How often does your child use: - Cellphone
How often does your child use:	Additional option – Religious books/texts	Often an important book/text in households	How often does your child use: - Religious books (Bible, hymm book, Koran and other)

Original question	Suggested change	Reason for change	Revised question
How often does your child use: - Writing stuff - Drawing stuff	Elaborate and give examples on what 'stuff' is	Not clear	How often does your child use: - Writing stuff (e.g. pens, pencils) - Drawing stuff (e.g. crayons, Koki's"
How many of each of these does YOUR CHILD have available to use?	Rewords to add 'at home' to the question	Focus of the study is on the home environment therefore want to focus only on what they have available at home	How many of each of these does YOUR CHILD have available to use at home?
How many of each of these does YOUR CHILD have available to use at home? - Dictionaries or encyclopedias	Remove	Not appropriate to the context	Removed
How many of each of these does YOUR CHILD have available to use at home? - Taped-recorded stories	Elaborate/reword	Not vocabulary used in SA	How many of each of these does YOUR CHILD have available to use at home? - Stories on tape/CD/DVD/computer
How many of each of these does YOUR CHILD have available to use at home?	Additional option – Religious books/texts	Often an important book/text that are available in households	How many of each of these does YOUR CHILD have available to use at home? - Religious books (Bible, hymn book, Koran and other)
How often do you: - Watch child programmes on TV with the child	Remove the word 'child' in 'child programmes'	The child may watch other programmes on TV	How often do you: - Watch programmes on TV with the child
How often do you: - Play with your child	State whether inside or outside (as the following question states outside)	Unclear what is being asked (as the following question states outside)	How often do you: - Play with your child inside
How often do you:	Additional options of literacy exposure opportunities	Other opportunities for literacy exposure that are contextually relevant	How often do you: - Read public road signs with your child - Read shop names with your child
Please tell us about the things that your child does when you and your child read a story together -Only I participate in this activity - I usually participate in this activity and my child participates occasionally - My child usually participates in this activity and I participate occasionally - Only my child participates in this activity	Reword	Add a parent orientation, and simplify the wording to make it easier to understand	Please tell us about the things that you and your child do when you and your child read a story together -Only I do this - I usually do this and my child sometimes does this - My child usually does this and I do it sometimes - Only my child does this

Original question	Suggested change	Reason for change	Revised question
Please tell us about the things that your child does when you and your child read a story together - Turning the pages - Holding the book etc.	Change to present tense	Easier to understand	Please tell us about the things that your child does when you and your child read a story together - Turns the pages - Holds the book etc.
How often do you: - Read the newspaper - Read books	Add "I" to the beginning of each statement	Easier to understand Same format as Q41 and Q42	How often do you: - I Read the newspaper - I Read books
How often do you: - I write a letter, note or story	To separate and make 'note' a separate item	Parents are more likely to write a small note than a letter and therefore they should have an often to separately report on that	How often do you: - I write a letter or story - I write a note
How often do you: - Visit the library with your child - Play with the child - Play rhyme games with the child	To consistently use 'your child' instead of 'the child'	Consistency Parent orientation	How often do you: - Visit the library with your child - Play with your child - Play rhyme games with your child
n/a	Addition	Cannot assume everyone reads to their child	Do you read storybooks to your child?
Format suggestions			
Circle your answer Please tick where appropriate	Use consistent response throughout questionnaire	Consistency and ease of understanding instructions throughout questionnaire	Please tick your answers
No vertical lines in tables	Put vertical lines in table	Clearer to mark the answer	Vertical and horizontal lines inserted into table
n/a	Reorder questions	Group related items for ease of completion and user-friendliness	Reordered questions

Appendix H

Feedback and adjustments following Expert Panel 2

Original question	Suggested change	Reason for change	Revised question
What is you marital status? - Single and/or never married - Married or living together	Delete	Not necessary to know for the study. The household constellation is more important, and another questions asks about this.	Removed
How much do you earn in a year? (Less than R75000 per year; More than R75000 per year)	Delete	Not culturally appropriate to ask about money	To remain in for pilot study to check appropriateness before leaving or omitting.
n/a	Addition	Important to know how long they have been at an educational facility	How old were they when they started going to preschool/play group/creche?
Compared to other children, did your child have any serious delay in sitting, standing or walking?	Change wording to' very late'	Insensitive and may be misinterpreted	Compared to other children, was your child very late in sitting, standing or walking?
Please indicate how your child communicates with you: - My child talks in words - My child talks in sentences etc.	Remove the items: - My child talks in words - My child talks in sentences	Has already been asked in Q26	Please indicate how your child communicates with you: - My child points at pictures to communicate - My child uses gestures and pointing - My child uses facial expressions (e.g. smiling) - My child uses eye pointing (e.g. using their eyes to show you what they want) - My child doesn't talk - My child makes noises to 'talk' - Other ways (please describe)
Compared with other children of his/her age, does your child appear in any way to be mentally backward or slow?	Reword 'mentally backward or slow' Potential new wording 'slower'	Potentially not culturally appropriate To keep in for pilot study and discus appropriateness with pilot study participants	Compared with other children of his/her age, does your child appear in any way to be mentally backward or slow?
How many of each of these items do you have in your home for YOUR OWN use?	Move current position as Q33	Better flow Can compare to similar question asking about items available to child	Moved Q to position Q33
Tick the one that best tells us what you expect your child's reading skills to be in the future:	Bold 'reading skills'	Not very clear that Q41 and Q42 are asking about different aspects of literacy	Tick the one that best tells us what you expect your child's **reading skills** to be in the future:
Tick the one that best tells us what you expect your child's writing skills to be in the future:	Bold 'writing skills'	Not very clear that Q41 and Q42 are asking about different aspects of literacy	Tick the one that best tells us what you expect your child's **writing skills** to be in the future:

Appendix I

Declaration of Originality

UNIVERSITY OF PRETORIA

DECLARATION OF ORIGINALITY

This document must be signed and submitted with every essay, report, project, assignment, dissertation and/or thesis.

Full names of student: Robyn Jill Everett

Student number: u10096842

Declaration

1. I understand what plagiarism is and am aware of the University's policy in this regard.

2. I declare that this dissertation (eg essay, report, project, assignment, dissertation, thesis, etc) is my own original work. Where other people's work has been used (either from a printed source, Internet or any other source), this has been properly acknowledged and referenced in accordance with departmental requirements.

3. I have not used work previously produced by another student or any other person to hand in as my own.

4. I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.

SIGNATURE OF STUDENT:

SIGNATURE OF SUPERVISOR:

Appendix J

Statement from Language Editor

Toni Muir
Writer and Editor

To Whom It May Concern.

I hereby confirm that I conducted the language editing of the Master's dissertation/mini-dissertation of Robyn Jill Everett. The document with my edits was sent to the student on 7 July 2017.

Toni Ingrid Muir

7 July 2017