Play to promote development and learning in children infected with Human Immune Virus (HIV): Case studies of three children

GENÉ SYMONDS

A minithesis submitted in partially fulfillment of the requirements for the Degree Magister Scientiae in Occupational Therapy in the Department of Occupational Therapy, University of the Western Cape

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KEYWORDS

Play

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Playfulness

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Occupational intactness

Occupational Accuracy

DEFINITION OF KEYWORDS

Play

"Play differs from other occupations such as self-care or work by the source of the motivation and the degree of freedom associated with it" (Bundy, 1997, p. 52). Play is defined by Bundy (1991, p. 59) "as a transaction between an individual and the environment that is intrinsically motivated, internally controlled and free of many of the constraints of objective reality". Play is "an intricate, multifaceted, growth-perpetuating experience" Schaaf and Burke (cited in Parham & Fazio, 1997, p. 79); and is self motivated, self-directed, and reinforcing (Csikszentmihalyi, cited in Parham & Fazio, 1997, p. 89).

Play-based intervention

For the purpose of this study, play-based intervention is defined as an occupational therapy intervention in which play is used as the modality through which the therapeutic aims are met. Play is used in conjunction with other occupational therapy frames of reference.

Playfulness

"Playfulness can be determined within any transaction by evaluating the presence of three elements: intrinsic motivation, internal control and freedom to suspend reality" (Bundy, 1997, p. 52).

Sensory-motor skills

For the purpose of this study, sensory-motor development refers to integrated sets of developmental skills that contain both motor and sensory components. In occupational therapy, the terms sensory-motor development are used when referring to early development in children. For example, when a baby learns to sit, the act of sitting is understood to contain neuro-muscular components of balance between the trunk flexor and the extensor muscles (motor component) as well as vestibular or proprioceptive stimulation such as activation of the hair cells in the semi-circular canals in the middle ear (sensory component) that aid in balancing

and keeping the trunk up-right. Whilst sensory-motor development was the focus of this study, the researcher acknowledges that the construct of 'development' in early childhood contains much more than only sensory-motor aspects. Other aspects of development such as emotional, psychological or socio-cultural aspects where not explored or elaborated on.

Occupational appeal is defined as "the degree to which the client finds the therapeutic occupation desirable in terms of levels of productivity, pleasure, and restoration" (Pierce, 2001, p. 87).

Occupational intactness is "the degree to which a therapeutic occupation occurs in the usual spatial, temporal and sociocultural conditions in which it would usually occur for that client if it were not being used as intervention" (Pierce, 2001, p. 254).

Occupational accuracy "is the degree to which the therapeutic occupation precisely targets collaboratively developed occupational goals" (Pierce, 2001, p. 256).

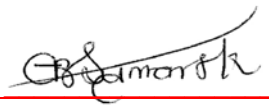
ABSTRACT

Young children admitted to New Somerset Hospital in Cape Town, South Africa who are infected with HIV/AIDS, demonstrate a lack of active, spontaneous play and present with delays in their sensory-motor development. Occupational therapy is concerned with enabling occupations to promote health and well-being. Play, is considered to be a child's main occupation and is essential for optimal development, health and well-being. Therapeutic play is an intervention that could enable children to function and develop to their optimal abilities. The aim of this study was to explore the use of play with toddlers who are HIV positive to facilitate play, playfulness and sensory-motor development. The objectives were to explore how the therapist facilitated play, to explore how the child responded to the intervention, to explore how playfulness manifested as a facilitatory strategy and to explore how playfulness manifested as a response. A qualitative approach framed the case study research method with three participants between the ages of twelve months and three years. The main source of data was a record of the play-based intervention with the three participants. Additional data was obtained from participant observation of the children's responses to the play-based intervention, and hospital and occupational therapy record notes. A theory analytical strategy was used by coding data using theoretic propositions inductively. Each case was first analyzed individually, and then an analysis was made across the cases. Qualitative analysis of the data was done manually by coding, seeking categories and eliciting emergent themes by using an analytical strategy of theoretical propositions and an analytical technique of explanation building. Coding was done inductively, using theoretical constructs from the occupation by design, namely the elements of appeal, intactness and accuracy. Signs of playfulness were coded according to evidence of the elements of playfulness, namely perception of control, intrinsic motivation, suspension of reality or framing were evident in the data. Findings of the study were reported under two themes: *Playful enablement – the therapist* and *Engaging, playing and developing – the child.*

DECLARATION

I declare that *Play to promote development and learning in children infected with Human Immune Virus (HIV): Case studies of three children* is my own work, that it has not been submitted for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Gené Bronwyn Symonds 16th November 2010

Signed: 

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CONTENTS

CHAPTER 1: INTRODUCTION

1.1 Introduction

Play, considered to be a child's most important occupation (Case-Smith, 2005; Parham & Primeau, 1997) is often negatively affected in children who are HIV positive (Ramugondo, 2004). As play enhances the developmental milestones needed for learning and development in children (Isenberg & Quisenberry, 2002), it is a valued therapeutic tool in occupational therapy intervention with children. The Joint United Nations Programme on HIV/AIDS [UNAIDS] (2009) has estimated that 33.4 million people worldwide are living with HIV/AIDS. The broad purpose of this study was to explore the use of play to promote development and well-being in HIV positive children.

The researcher was an occupational therapist employed at New Somerset Hospital in Cape Town, South Africa. Although occupational therapy services were rendered to the entire hospital, client referrals were predominantly received from the paediatric wards. These referrals were mainly children under the age of three years who were HIV positive and have also been diagnosed with developmental delay.

HIV and AIDS are considered to be an epidemic worldwide, but more so in Sub-Saharan Africa (Brookes, Shisana and Richter, 2004; UNAIDS, 2009). South Africa is considered the world's largest population of individuals living with HIV (5.7 million). In 2008, approximately 430 000 children were born with HIV. This brought the global total number of children under the age of 15 years living with HIV to 2.1 million (UNAIDS, 2009). Sub-Saharan Africa accounts for 91% of the total number of newly infected children worldwide. Hence, out of most children living with HIV, nine out of ten live in Sub-Saharan Africa (UNAIDS, 2009). According to the Department of Health (2010), 429 000 children were infected with HIV in South Africa in 2009. The Department of Health (2005) anticipated that AIDS would account for a 100% increase in child mortality by the year 2010. Latest statistics indicate that HIV/AIDS is still the number one leading cause of child

mortality in South Africa (Sanders, Bradshaw & Ngongo, 2010). Infants are infected vertically during pregnancy and delivery via the placenta, through contact with blood or other fluids in the birth canal and past-partum through breastfeeding (Alder, 1993). Infants born to infected mothers are not confirmed to be HIV positive until after the age of 18 months owing to the presence of maternal anti-bodies (Anderson, Hinojosa, Bedell & Kaplan, 1990; Sharland, Gibb, Tudor-Williams, Walters & Novelli, 1997). Literature suggests that vertically infected infants are at risk of developmental impairments in a number of areas ranging from cognitive, motor and emotional impairments (Stein, Krebs, Richter, Tomkins, Rochat & Bennish, 2005). Neurodevelopmental impairment has been identified in children infected with HIV as the virus is known to enter the central nervous system early in the course of the disease. Clinical signs of neurological dysfunction may appear as early as two months of age (Tepper, Farley, Rothman, Houck, Forget, Collin-Jones & Wachtel, 1998).

Children admitted to New Somerset Hospital may have had chronic gastroenteritis, respiratory tract infections, anemia, neglect, defaulting on antiretroviral medication and severe malnutrition. The length of stay varied in May 2007, the average length of stay was between 7 and 21 days. Of the 153 patients admitted to the paediatric wards in May 2007, 32% were HIV exposed and 14.2% had a confirmed diagnosis of HIV (New Somerset Hospital statistics, May 2007). Typically children seen at New Somerset Hospital could be poverty stricken, the mother could be unemployed, could possibly not yet have disclosed her status to her family, or the child could have been abandoned. On observation in the wards there appeared to be limited interaction between the mother and child, and there appeared to be limited engagement by the child with the environment, indicating a lack of playfulness.

1.2 Rationale

Occupational therapists play a major role in facilitating intervention through play with children that have been diagnosed with developmental delay. Interventions for children with HIV infection are assumed to be similar to those used with

children with developmental delay, disability and terminal illness, with the emphasis on play-based therapeutic interventions (Anderson et al., 1990). However, some subtle yet specific differences in the treatment of children with HIV are not yet readily available to occupational therapists. Parham and Primeau (1997) describe play as the primary occupation of childhood, with inherent purpose and meaning. Occupation contributes to the health and well-being of individuals by providing meaning and quality of life, and play, in particular, by creating experiences of joy (Royeen, 1997). The impact of HIV/AIDS on the child and the family has been researched and documented. However, to date, there is limited published research on the effects of HIV on childhood play and development. Some of the studies in this field are described below.

In a pilot study, Parks, Oakley and Fonseca (1998) explored play development in ten children infected with HIV. Although the sample size was too small to make generalizations, the findings of the study revealed that some participants had difficulty with play participation; the environment was not supportive of play and there were interpersonal restrictions on play. Parks et al. (1998) describe the lack of play participation as limited occupational engagement and thus a lack of the benefits of play on development. The lack of environmental support of play was explained in children who were either orphaned or the parents were very protective and did not encourage play. Interpersonal interactions were restricted owing to HIV positive children falling prey to being victimized and are therefore not afforded opportunities to engage in play (Parks et al., 1998). It can thus be understood that some children who are HIV positive could present with problems in their play development. Ramugondo (2004) reports a South African study in which play was explored as a health-giving occupation by promoting playfulness between caregivers and children living with HIV/AIDS. She found that play could benefit health, well-being and sensory-motor development. For a number of reasons, some children may experience play deprivation and deficits in play skills and playfulness (Missiuna & Pollock, 1991). As research in this area is limited, more insight into play development and play skills of HIV/AIDS positive children could benefit paediatric occupational therapy practice with a focus on play-based interventions.

1.3 Research Problem and Research Question

Children with HIV often present with delayed development in sensory–motor skills. With the expected increase in incidence of HIV positive children in South Africa it is postulated that more occupational therapists will have HIV positive children as clients. At present, knowledge about occupational therapy for this population group is emerging but not yet fully understood. The research question turned on what the appropriate intervention for this population could or should be. The research question was: How does play facilitation during occupational therapy intervention assist in encouraging play and development in children who are HIV positive?

1.4 Aim and Objectives

The aim of the study was to explore the use of play with three children who are HIV positive to facilitate their active engagement in play to enhance their sensory-motor development. The objectives of the study were: to explore how the therapist facilitated play, to explore how the child responded to the intervention, to explore how playfulness manifested as a facilitatory strategy and to explore how playfulness manifested as a response.

CHAPTER 2: LITERATURE REVIEW

In this chapter, a review of the literature is presented on HIV in children and the effect of HIV on child development. That is followed by a description of the theoretical framework of the study namely, the human as an occupational being, the value of occupational engagement and the profession's stance on occupational justice. A review on play as the primary occupation in childhood and playfulness as a disposition of play is then presented. The chapter ends with a discussion on the therapeutic power of play and Pierce's (2001) theory of occupation by design.

2.1 HIV/AIDS

The high prevalence of HIV infection in pregnant women in South Africa has initiated research in implementing interventions to reduce mother-to-child transmission through administering antiretroviral medication, delivering infants through caesarean sections, and alternative feeding practices (Stein et al., 2005; UNAIDS, 2009). These practices are considered to reduce transmission of the virus from an estimated 30% to 35% (UNAIDS, 2009). Unfortunately these practices are not all readily available throughout Sub-Saharan Africa (Stein et al., 2005, UNAIDS, 2009).

HIV develops very rapidly among infants and children. Without treatment, a third of children with HIV will die of AIDS before the age of one year (Newell, Coovadia, Cortina-Borja, Rollins, Gaillard & Dabis, 2004). Antiretroviral (ARV) therapy is considered the most effective treatment for children with HIV/AIDS (Averting HIV and AIDS, 2010), and therefore play a significant role in the promotion of health for children infected with HIV. The effectiveness of ARV treatment in prolonging life was studied in 586 HIV positive children in Africa and Asia. After two years these children were still alive (O'Brien, et al., 2007).

Researchers recommend initiating ARVs in children before they present with symptoms of the disease to ensure optimal effectiveness (Chakraborty et al., 2005;

Luzuriaga & Sullivan, 2002). Children in South Africa only have access to ARVs when their CD4 count is below 20% of the normal rating (Potterton et al., 2009). Owing to this policy, South African children are at significant risk of central nervous systems impairments resulting in developmental delay before they are able to start on ARV's (Potterton et al., 2009).

Clinical symptoms present in infected children develop in four stages (WHO, 2007). After an initial asymptomatic stage the child may have hepatosplenomegaly, seborrhoeic dermatitis, herpes zoster and recurrent or chronic upper respiratory tract infections in the second stage. In stage three they may have unexplained malnutrition, unexplained persistent diarrhea, oral candidiases and pulmonary tuberculosis. Stage four the final stage of the disease, is marked with some of the following symptoms: unexplained wasting, pneumocystis pneumonia, recurrent severe presumed bacterial infections, CNS toxoplasmosis, HIV-related encephalopathy, HIV-related cardiomyopathy and HIV-related nephropathy (WHO, 2007).

2.1.1 HIV/AIDS and sensory-motor development

Children affected by HIV/AIDS present with clear indications of developmental delay in all areas of sensory-motor, cognitive and speech development due to central nervous system impairments (Potterton, Stewart, Cooper, Goldberg, Gajdosik & Baillieu, 2009; Stein et al., 2005). The effect of HIV/AIDS on a child's sensory-motor development has been described by Parks et al. (1998, p. 672) as follows: "when HIV infection affects the central nervous system, severe encephalopathy may result in cognitive, language, and motor delays". The delay in development contributes towards the children being considered vulnerable and at risk for learning difficulties and other disabilities. (Guest, 2001; Parks et al., 1998). Potterton et al. (2009) investigated 122 children infected by HIV/AIDS from Soweto, South Africa for the extent of neurodevelopmental delay and found that 78% of the children presented with cognitive developmental delay and 87% presented with neurodevelopmental delay. Molineux (1997, p. 195) describes the

pandemic as fatal and states: “There is currently no cure for AIDS or HIV infection. Treatment is therefore aimed at maintaining quality of life by alleviating symptoms and opportunistic infections”.

From the above it is concluded that children are greatly affected by HIV/AIDS. The effect of HIV/AIDS on a child’s development as noted by Potterton et al. (2009) is of concern to occupational therapists. Occupational therapy is in a key position to provide interventions for those infected with and affected by HIV/AIDS as play is the main occupation in childhood and forms an integral part in a child’s development with marked benefits to health and well-being.

2.2 Theoretical Framework

2.2.1 Occupation and Occupational Engagement

The broad theoretical framework of this study is the occupational therapy emphasis on human occupation and the belief that occupational engagement is vital for health and well-being (Wilcock, 1993). Occupation is viewed as the primary modality of occupational therapy (Clark et al, 1991; Pierce, 2001; Zemke & Clark, 1996). Within this broad framework, play is situated as the dominant occupation of childhood (Bundy, 1997; Fisher, 1992; Parham & Fazio, 1997). Engagement in play is viewed as essential for healthy development and well-being (Royeen, 1997).

Many researchers have defined occupation. Wilcock (1993, p. 18) defines occupation as “the mechanism by which individuals demonstrate the use of their capabilities by achievements of value and worth to their society and the world”. Fisher (1998, p. 12) states that “occupation is an activity that is both meaningful and purposeful to the person who engages in it”. Although there are various meanings, one central tenet is noted: occupation is to be considered as “the process of doing with meaning” (Royeen, 2002, p. 116). Watson and Fourie (2004, p. 21) state: “Occupation offers an ideal channel for the realization and

utilization of human potential and poses opportunities through which people can create and transform their lives, pursue aims, overcome barriers, learn new ways of achieving health and happiness and discover meaning and purpose in life". Occupation is thus considered essential for living and being. Engagement in occupation can be described as the synthesis between the person, the occupation and the environment (Watson & Fourie, 2004).

Occupational therapists thus view engagement in play as a human right (UNICEF, 2002) which is essential for optimal development, health and well-being.

2.2.2 Occupational Justice

Of particular importance to toddlers with HIV/AIDS is the profession's belief in occupational justice. "In an occupational justice framework, access to occupations of personal meaning and societal value is seen as a right" (Polatajko et al. 2007, p. 63). Occupational justice provides a platform for occupational therapists to address the occupational needs of marginalized communities. "Occupational justice provides a framework for asking questions about inequities of opportunity for occupational development, or inequities related to lack of appropriate enablement for those living with a disability" (Townsend, 2003, p. 13). In this study, toddlers infected with HIV/AIDS were identified as a marginalized community. The stigma attached to HIV infection and poor socio economic circumstances put toddlers with HIV at risk and categorizes them as a vulnerable and marginalized group. It is postulated that their circumstances and illness deprive them of opportunities to play and develop sensory-motor skills which aid their learning, health and well-being. HIV positive children are thus considered to be at risk of occupational deprivation and alienation (Daunhauer & Cermak, 2008; Missiuna & Pollock, 1991; Polatajko et al., 2007) due to reduced opportunities to engage in play. Their opportunities to play are thus considered to be in jeopardy.

2.3. Play child's main occupation

UNICEF (2002), acknowledges that play is central among the needs and rights of children. Occupational therapists view play as a child's main occupation. Isenberg and Quisenberry (2002) explain that early opportunities to engage in play provide the foundation for sensory-motor development. Children's engagement in play depends on the opportunities they are given to play. These opportunities are dependent on the availability of play materials, play space, equipment and role models available to them (Parham & Fazio, 1997). Poverty and marginalization contribute towards unjust opportunities for play for HIV positive children. Parham and Fazio (1997) refer to the intrinsic ability of play to unlock human potential that has been suppressed by illness, disadvantage or disability.

Ramugondo (2005, p. 318) states that: "the link between play as occupation and health has been made by many researchers, including occupational therapists". She asserts that play provides the ability to have a positive influence on and from one's environment. Positive experiences provide a sense of agency and ultimately the perception of competency, which is an important notion of health and well-being (Ramugondo, 2005). "Heath-promoting occupational therapy interventions with a child can be through play, as a vehicle through which the child can be equipped to adapt so that person-environment interactions can be performed with competence and satisfaction" (Ramugondo, 2005, p. 318). Play provides a magical experience in which children become masters of their own environments and exude an atmosphere of pleasure, which in itself is a health promoting experience.

Play is a dynamic process that develops and changes as it becomes increasingly more varied and complex (Isenberg & Quisenberry, 2002). It is considered a key facilitator for learning and development across domains and reflects the social and cultural contexts in which children live (Isenberg & Quisenberry, 2002). Play is considered to be essential to child development and occupies a central role in children's lives regardless of culture or heritage.

Engagement in play is also considered to have a positive effect on health (Rodger and Ziviani, 1999). Chandler (1997, p. 10) describes the applications of play to health and wellness as follows: “Health is much more than merely the absence of the disease. Health has phenomenological components of perceived joy through play as a part of life and the meaning and quality of living life derived from the patterns of occupations, including play”. Health and well-being are essential components of life and are seen as the factors that make life worth living. Reduced playfulness may influence the development of other aspects of functioning in children (Bundy, 1997).

2.3.1. Therapeutic Play

Theories of play have developed from classical theories of play with emphasis on explanations of the existence and purpose of play, to contemporary play theories that value the role of play in child development (Stagnitti, 2004). More recent attempts to theorise play for occupational therapy is the current emphasis on dispositions of play, such as suspending reality, being internally motivated and experiencing fun and pleasure (Stagnitti, 2004).

Play as intervention is well described in the literature (see for instance, Case-Smith, 2005; Chandler, 1997; Parham and Fazio, 1997; Rodger and Ziviani 2007). Frames of references for intervention are at times combined with play to obtain therapeutic goals, for example, the sensory integration, neurodevelopmental or perceptual-motor frames of reference (Rodger & Ziviani, 1999). Therapeutic play is vital to the treatment of children with developmental problems (Parham & Primeau, 1997).

2.3.2. HIV/AIDS and Play

In a South African study on play with HIV infected children, it was observed that children with HIV appeared less playful and subsequently had limited interaction with the environment (Ramugondo, 2004; 2005). This observation prompted an investigation into the promotion of playfulness between thirty children living with

HIV/AIDS and their caregivers from poor socio-economic circumstances (Ramugondo, 2004). The findings revealed that caregivers can promote engagement in play. She found that younger mothers seemed to have a lack of interest in their children's play, but after collaborative brainstorming around the benefits of play and how to promote play, the caregivers were able to see a link between the occupation of play and their children's health (Ramugondo, 2004). Furthermore, an increase in the children's playfulness was observed (Ramugondo, 2004).

2.3.3. Playfulness

Bundy (1997) and others developed a dispositional sense of play, emphasizing children's approach to play or their playfulness. She stated that play should be understood as a process or attitude that a child brings to a situation. Playfulness is described as the disposition to play (Skard & Bundy, 2008). Although playfulness is regarded as one aspect of play, it is suggested that playfulness may be considered as the most important aspect of play. As occupational therapists view play as the primary occupation in childhood, assessment of play is integral in interventions with young children. Bundy's model of playfulness (revised model, 2008) is therefore based on literature which supports that playfulness can be determined by the assessment for the presence of four elements: intrinsic motivation, internal control, and the freedom to suspend reality and framing (Skard & Bundy, 2008).

Intrinsic motivation refers to the child's impetus to play for the purposes of playing, not for an external reward (Skard & Bundy, 2008). Internal control refers to the child's freedom to choose to play and that the child directs and controls what is played (Skard & Bundy, 2008). Freedom to suspend reality implies pretending, make-believe, fantasy and the choice of using objects for another purpose that it is used for in reality (Skard & Bundy, 2008). Framing is the child ability to give and respond to social cues (Skard & Bundy, 2008).

2.3.4. Play as a means and ends

Play can therefore be utilized as a means and ends of occupational therapy intervention. As early as 1989, Schaaf and Mulrooney (as cited in Parham & Fazio, 2008, p. 31) engaged in research in which play was used as both means and ends of occupational therapy. The study aimed at ensuring that play was central in assessment, intervention and in the measurement of outcomes in an early intervention programme with five children with developmental, neuromuscular and sensory impairments (Schaaf & Mulrooney, cited in Parham & Fazio, 2008, p. 31). Results on the Knox Preschool Play Scale indicated that encouraging gains were made. In a more recent study by Tanta, Deitz, White and Billingsley (2005), five preschoolers with play delays were paired with one peer with higher play skills. The preschoolers were engaged in free play sessions. The findings of the study indicated that the five preschoolers showed increased play skills and hence their social play skills had improved. In addition to direct intervention, there is mounting evidence that improving caregiver-child interactions and providing frequent opportunities for engagement in occupations such as play will lead to further developmental outcomes (Daunhauer & Cermak, 2008).

The use of therapeutic activities and occupations, frequent opportunities to engage with age-appropriate play objects and active caregivers can improve a child's development and well-being (Daunhauer & Cermak, 2008). Play can therefore be used as a means and ends of occupational therapy interventions.

2.3.5. The therapeutic power of play

Pierce (2001) proposes a theory for understanding the dimensions of occupation, to enable occupational therapist to enhance their intervention. Pierce's theory, the 'occupation by design' approach describes occupation in terms of three elements: appeal, intactness and accuracy (Pierce, 2001). Therapeutic power of play is said to emanate from the 'occupation by design' approach (Pierce, 2001). Pierce (2001) identifies three sources of power in therapeutic occupations, including play.

Occupational appeal refers to the attractiveness of the activity to the child (Pierce, 2001). Occupational intactness refers to the extent to which an activity is used holistically (Pierce, 2001). Occupational accuracy is defined as an activity which meets the therapeutic goals (Pierce, 2001). A combination of these three elements ensures that the therapeutic power of play is revealed.

In summary, occupation is thus considered vital to human potential (Watson & Fourie, 2004). Marginalized communities are at risk of occupational deprivation (Townsend & Polatajko, 2007). HIV/AIDS positive children specifically could benefit from play based therapeutic interventions to assist in their development and well-being. By adopting the 'occupation by design' approach, the therapeutic power of play is thought to emanate (Pierce, 2001). Including and educating caregivers during intervention sessions further strengthen the therapeutic power of play to ensure frequent opportunities for play, hence ensuring that play becomes a means and ends of occupational therapy intervention (Daunhauer & Cermak, 2008).

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 Research Design

As this research project focused on exploring play to facilitate sensory-motor development and playfulness with three HIV positive toddlers, a qualitative case study design was used. Qualitative research involves an interpretive, naturalistic approach to its subject matter (Silverman, 2004). The data was descriptive in nature and a qualitative case study design allowed the researcher to track development of sensory-motor skills and playfulness through the play-based interventions of the three participants. Qualitative research has been used in occupational therapy to provide evidence to enhance practice (Curtin and Fossey, 2007) and to develop deeper understanding of the human as occupational being (Clark, 1997). It was deemed an appropriate design to investigate the facilitation of play in toddlers.

3.2 Research Methods

The research method used was a case study method. Case study research is used to explore real life experiences and situations, when the researcher is interested in both the phenomenon and the context in which it occurs (Yin, 2009). Case study research seeks out rich, in-depth information (George, Wilcock & Stanley, 2001). It aims to investigate a particular topic in its context from multiple viewpoints (Fisher & Ziviani, 2004). Therefore in this study, case study research was used to explore play with three HIV positive children.

3.3 Participant Selection

Purposive sampling was beneficial to identify participants for this study as "purposive sampling emphasizes a criterion based selection of information rich cases from which a researcher can discover, understand and gain more insight on issues crucial for the study" Merriam (1998, p. 61). Clients considered having a rich story and who were thought to allow for the maximum amount of information to be

learnt was selected. Thus only three participants were selected. Four participants met the inclusion criteria but as a result of non-compliance to therapy, one participant was excluded from the study.

Multiple case studies have distinct advantages in that the evidence is often considered more compelling, and the overall study is therefore regarded as being more robust (Yin, 2009). Selection of participants was made by means of screening the files of paediatric clients referred to occupational therapy at New Somerset Hospital between November 2007 and May 2008. Participants met the following inclusion criteria: the toddler had a confirmed diagnosis of HIV; the toddler was aged between twelve months and three years; the toddler had marked developmental delay; the toddler had two or more periods of hospitalisation, or had been hospitalized for more than four consecutive weeks; the toddler came from an evidentially poor socio-economic background; and the mother or caregiver was willing to participate and gave informed consent.

3.4 Data Gathering

Data gathering occurred prior, during and after each intervention between April 2008 and July 2008. Data was gathered for each case individually and consisted of background medical information from the toddler's hospital file, findings of an occupational therapy assessment, and documentation of the intervention that included aims, implementation and the child's response, filed notes of the researcher's observations and reflections and collateral information from a parent or caregiver.

The occupational therapy assessment consisted of two tests, the Test of Playfulness, Version 4 (Skard & Bundy, 2008) and the WITS Developmental Profile (Stewart-Lord, 1980; 1998) and observations. The Test of Playfulness, Version 4 (Skard & Bundy, 2008) is a 29-item observation instrument designed to evaluate free play in children between the ages of 6 months and 14 years, regardless of their developmental abilities. The Test of Playfulness (ToP) evaluates the child's

disposition of playfulness in terms of four elements namely, internal control, intrinsic motivation, freedom to suspend reality, and framing. Validity and reliability of the ToP has been demonstrated (Bundy, Nelson and Metzger & Bingaman, 2001).

Play is intrinsically motivated. Children engage in a play activity purely because they want to play (Skard & Bundy, 2008). Internal control refers to the fact that the child is in control of their actions and some of the outcomes of the activity. The child thus decides on what to play with and who to play with (Skard & Bundy, 2008). Freedom to suspend reality is defined as the child's ability to choose how close to objective reality the play will be (Skard & Bundy, 2008). This refers to child's ability to engage in pretend play. Framing, the last aspect of playfulness is described as the child's ability to react or respond to social cues in order to be a good player (Skard & Bundy, 2008). "The four elements of playfulness reflect the player's contributions to a play transaction" (Skard & Bundy, 2008, p. 73).

The extent, intensity, and skillfulness of play behaviours are scored on a four-point scale (0 to 3). Children are scored on the extent that they decide what to do during play, the intensity with which they try to overcome barriers to persist in play, the skill with which they try to maintain enthusiasm during play and the extent, intensity, and skill displayed in social play (Skard & Bundy, 2008). The scores are obtained from a 15 to 20 minute observation of free play with playmates or a familiar caregiver. Typically the ToP was scored from videotaped fragments of free play. Nichols (cited in Skard and Bundy, 2008, p. 77) and Skard and Bundy (2008) reported that the ToP can be scored directly, without videotaping as the scores correspond.

The ToP, Version 4 (Skard & Bundy, 2008), was administered by the researcher within the child's natural play environment. An indoor free-play session was observed for 15 minutes. The assessment was scored directly (Nichols cited in Skard & Bundy, 2008, p. 77). The researcher ensured limited involvement in the play session by being positioned in the corner of the room. The researcher recorded

the child's play interactions through in-depth field notes. The field notes were then explored focusing on the descriptive elements of the ToP to stay consistent within the proposed qualitative research paradigm.

The WITS Developmental Profile (Stewart-Lord, 1980; 1998) is a non-standardized observation checklist used to evaluate and record aspects of gross motor coordination, fine motor coordination and adaptive responses such as: speech, understanding, social interaction, play, feeding, bathing, toileting and dressing. The development of children aged between 1 month and 72 months can be profiled using this screening tool. The child's functioning in each of the three major areas of functioning (i.e. gross motor coordination, fine motor coordination and adaptive responses) are described and a developmental age is determined based on the child's active responses. The Test of Playfulness, Version 4, (Skard & Bundy, 2008), and the WITS Developmental Profile (Stewart-Lord, 1980; 1998) were repeated after the intervention to determine whether progress had been made.

The intervention was recorded by describing the aims and activities of each session and a description of the child's responses. Additional data was obtained from hospital records and occupational therapy case notes. Participant observation was used to observe and record the environment, the children's expressive responses to individuals, emotions or actions and non-verbal cues such as gestures and body language (Babbie & Mouton, 2001).

The data sources thus comprised of assessment findings of the Test of Playfulness, Version 4 (Skard & Bundy, 2008) and the WITS Developmental Profile (Stewart-Lord, 1980; 1998), participant observation notes taken during the intervention, occupational therapy progress notes of the recorded interventions and the child's responses. The clinical notes from occupational therapy documentation and hospital medical notes were consulted as additional data sources.

3.5 Data Analysis

In multiple case studies, each case is first analyzed individually, and then an analysis is made across the cases (Merriam, 1998). De Vaus (2001) suggests that when using a multiple case design, each individual case is treated as a single case so that a full account of that case can be established before engaging in cross-case comparisons. The data used for analysis included: clinical progress notes of the intervention sessions and findings of the Test of Playfulness (ToP), Version 4 (Skard & Bundy, 2008) and the WITS Developmental Profile (Stewart-Lord, 1980; 1998). Qualitative analysis of the data was done manually by coding, seeking categories from the codes and then eliciting emergent themes from the categories by using Yin's (2009) analytical strategy of relying on theoretical propositions and Yin's (2009) analytical technique of explanation building. Coding was done inductively, using theoretical constructs from occupation by design (Pierce, 2001) namely coding for incidents where occupational appeal, occupational intactness and occupational accuracy were evident. Signs of playfulness were coded when the four elements of playfulness, namely perception of control, intrinsic motivation, suspension of reality or framing were evident in the data. Furthermore, all incidents where the therapists elicited engagement in play were coded. From the codes, categories were derived deductively by merging similarly occurring patterns into categories. From the categories, themes were identified across all three cases.

3.6 Procedure

The following procedure was followed for each of the three cases: the play assessment (ToP) was administered followed by the sensory-motor developmental screening test (WITS developmental profile). After scoring the play assessment and analyzing the developmental screening test an appropriate individualistic play 'enabling' intervention was developed and implemented to promote playfulness and development with each participant. The intervention took place at the Wellness Clinic at New Somerset Hospital and ThembaCare in Athlone, Cape Town for a period of two months. The children were seen once a week for fourty five minute

sessions. Throughout the intervention participant observation took place in the form of clinical notes and researcher field notes. Following the play-based intervention the play assessment (ToP) and the sensory-motor developmental screening test (WITS developmental profile) was re-administered to determine the outcome of the intervention.

3.7 Trustworthiness

In qualitative studies, the establishment of trustworthiness could be determined by evaluating whether the elements of credibility, transferability, dependability and applicability ring true for the study (Babbie and Mouton, 2001). For the purpose of this study, trustworthiness was assumed in terms of credibility through prolonged engagement in the field, persistent observation and triangulation (Babbie and Mouton, 2001). Prolonged engagement as described by Creswell (2003) increases the relationship between the researcher and the participants to ensure openness during interactions. Collection of data over a period of two months also ensured prolonged engagement. Thick description and purposive sampling (Babbie and Mouton, 2001) contributed to transferability and dependability of this study.

Elements of triangulation are applicable to this study. Data was collected over a period of time ensuring that data collection took place at various intervals over a period of two months, contributing to time triangulation as described by Dady and Rugg (2000). Green and Cooper (2000) affirm that space triangulation is another method of trustworthiness in that data collection could occur in two or more settings to investigate the consistency of the data sources across sites. In this study data collection took place at four sites. These included ThembaCare, the paediatric ward at New Somerset Hospital, the Wellness clinic at New Somerset Hospital and Nazareth House. Finally, an audit trail of data analysis contributed towards the conformability of this study (see Appendix C, p. 119).

3.8 Ethical Consideration

Ethical clearance was obtained form the Faculty of Health Sciences, University of the Western Cape (see Appendix A, p. 114) and the medical superintendent at New Somerset Hospital management. Written informed consent was obtained from caregivers by means of a consent form after explanation of the study (see Appendix B, p.115).

Ethics is described as the "science of criteria, norms and values for human action and conduct" (Medical Research Council [MRC], 2007, p. 13). The principle of ethical consideration is to preserve human dignity and to support equality, truth and justice. Medical ethics can be described as "the reflection on moral actions within the framework of health care" (MRC, 2007, p. 77). Medical ethics therefore supports promoting health, well-being, restoring health, alleviating pain and prevent suffering. Caregivers were informed of the right to voluntarily withdraw from the study at any point during the research without any given reason or negative consequences. The right to privacy was adhered to through the use of pseudonyms; at no point in time were the participants' personal details disclosed thus ensuring confidentiality. All information gathered was safeguarded in the Occupational Therapy Department. No financial incentive was given. Consent from caregivers' was also requested for the use of information in the participant's medical records. The participants' clinician or physician was informed of the intended research for consultative purposes (MRC, 2007).

3.9 Limitations

Limitations of the study included that the exploration of the intervention programme took place over a set time period and long term results were not explored. One methodological challenge was that the researcher was both the therapist and the researcher who had to simultaneously provide the intervention and investigate the efficacy thereof. On the positive side, it provided an 'insider

stance’ but on the negative side it limited the use of triangulation through multiple data sources.

CHAPTER 4: PARTICIPANTS

Three participants were selected, pseudo-named Lindy, who was 19 months old, Mhlangu who was 30 months old and Gugu, the youngest participant, was 13 months old.

4.1 Participant 1: Lindy

4.1.1 History: Medical and social background

Lindy who was a one year seven month old female diagnosed with Human Immune Virus and was on Anti-Retroviral medication at the time of the research. Lindy had allegedly been abandoned by her mother and as a result had been placed at ThembaCare. Lindy had several admissions to New Somerset Hospital from the age of six and a half weeks. These admissions were for a number of medial conditions including severe orophalangeal candida, laryngitis with stridor, gastroenteritis, painful herpes lesions with ulcers in her mouth, a severe nappy rash, wasting, pneumonia, pulmonary tuberculosis and an upper respiratory tract infection. While at ThembaCare Lindy was placed in foster care. Shortly after being placed in foster care Lindy's health deteriorated and she was placed back at ThembaCare for both nutritional and developmental rehabilitation.

4.1.2 History of intervention

Lindy was first seen by the occupational therapist when she was eight months old on her second admission to New Somerset Hospital in July 2007. During an occupational therapy screening assessment, Lindy appeared to be sad. She did not cry, smile, laugh nor seek attention from the nursing staff or the researcher. Developmentally, Lindy had good head control but was unable to sit. In terms of her occupational performance, Lindy actively reached for play objects in supported sitting and actively engaged with the environment in prone lying. Her performance in play had been compromised by poor trunk control and low tone,

exacerbated by prolonged periods of hospitalisation with limited opportunities to explore her environment and engage in play occupations. Intervention focused on play exploration to support her development and occurred twice per week for three weeks.

She was discharged to ThembaCare in late July 2007 where she received continued occupational therapy intervention by the researcher and an international final year occupational therapy student. The researcher acted mainly as a consultant in her treatment and provided clinical support and guidance to the student who saw her for approximately one hour a day for a period of two months. The aims were to improve trunk control to enable independent sitting and toy play, such as reaching for toys in various directions to encourage trunk mobility.

Lindy had progressed well at ThembaCare and after eight months in early March 2008, Lindy had developed good trunk control, was crawling swiftly and was starting to cruise along furniture, at the age of 16 months. She actively engaged in play.

When placed in foster care in March 2008, follow up intervention was scheduled once a month at New Somerset Hospital. Lindy resided with her foster mother in Khayelitsha which was more than 25km away from the hospital. In the interim students did home visits once every second week where the following findings became evident: Lindy had very little opportunities for play in her home environment due to the lack of space and play materials. Occupational therapy then focused on involving Lindy's foster mother in gaining insight into child development and the importance of play; using everyday household materials to encourage playfulness and ultimately sensory-motor development. Follow up appointments at the hospital were not kept. Lindy had therefore not been seen by the researcher until she was readmitted to New Somerset Hospital in May 2008. At this stage Lindy's health had deteriorated and she had been readmitted to hospital for nutritional rehabilitation.

4.1.3 Commencement of intervention phase of research project

Occupational therapy recommenced in May 2008 when Lindy was one year seven months (19 months) old. She was readmitted to hospital for severe dehydration and spent 11 days in hospital. Lindy had regressed developmentally as well as from a health perspective. Lindy was able to crawl and kneel with minimal assistance but had difficulty transferring from two-point kneeling to standing, which she performed with great effort. In addition she presented with global low tone and decreased playfulness. Lindy also presented with increased lethargy, although she could crawl she would only do so for short periods and would often rest thereafter placing her head on the ground, possibly as a result of not having received sufficient sources of energy through nutrition. Following re-hydration therapy, Lindy was smiling once more and attempted to engage with objects and people within the environment.

Lindy received occupational therapy once a week for a period of two months at ThembaCare, either in the play room or in an adjacent room which provided less distraction. Therapy focused on facilitating a play-based therapeutic intervention to encourage increased interaction with developmentally appropriate play objects to encourage playfulness and sensory-motor skills to facilitate the development of walking independently and become more active in her play environment.

4.1.4 Assessment Findings

Findings of the WITS Developmental Profile (Stewart-Lord, 1980; 1998) indicated that at the chronological age of 19 months, Lindy experienced a delay in all areas of her gross motor coordination (i.e. prone, stairs, jump, pull to sit, sit, stand, walk, ball kick, ball catch and ball throw); fine motor coordination (i.e. reach, hands, grasp, release, vision, cube in cup, cubes, pellets, ring on string and book), and adaptive responses (i.e. speech, understanding, social interaction, play, feeding, bathing and toileting and dressing).

In areas of gross motor development, Lindy functioned at a 10 to 11 month old level. In prone Lindy was able to crawl on her hands and knees. She was unable to crawl up stairs as she tired easily. She was unable to jump when prompted. Lindy was able pull herself up into sitting from supine independently. She was able to sit independently and reached for objects to her left and right dynamically. Lindy was able to pull herself up into standing holding onto a surface with effort. She was unable to stand independently, but stood well when supported. She was able to cruise along furniture by sliding her hands along the surface. When she attempted to walk with a push toy, she had very little control of the force and speed at which she pushed the toy. She displayed insecurity when walking with her one hand held. As she was unable to stand independently she was not capable of kicking a ball. In sitting instead of throwing a ball, she offered it to the researcher, holding the ball with two hands.

In terms of her fine motor development, Lindy was functioning at a 12 to 13 month old level. When reaching, Lindy showed preference for her right hand and would often grasp objects in this hand. Her pincer grasp was developing as she started picking up smaller objects between her thumb and index finger. Lindy loved casting objects in various directions and more so if it hit someone. In terms of vision, Lindy found objects which had rolled out of her sight. She often crawled after the object and managed to retrieve it. After demonstration Lindy was able to release a cube into a cup. Lindy was able to grasp two cubes in one hand, but was unable to build a 2 block tower successfully. When handed a pellet, she was able to grasp with a neat pincer grasp, but she was unable to successfully drop the pellet into the bottle. Although she was unable to turn the pages of a book, she enjoyed looking at the pictures.

Generally Lindy was able to transfer objects from one hand to another and used bilateral hand use when picking up larger toys such as a teddy or a ball.

Her developmental level of functioning in the area of adaptive responses (i.e. speech, understanding, social interaction, play, feeding, bathing and toileting and

dressing) was at a 10 to 15 month old level. When a bell was handed to her, Lindy grasped it and briskly rang the bell. She was able to manipulate the bell and rapidly explored it. With regards to her speech development, Lindy imitated sounds, and was able to say one word with meaning. She clearly articulated the word 'mama'. In terms of understanding Lindy comprehended the word 'no'. When asked to come towards the therapist she responded eagerly by crawling towards the therapist. In the area of social skills, Lindy often laughed when she was amused. During social play Lindy mainly enjoyed solitary play. When playing with toys Lindy was able to find toys which were hidden. Although she was able to crawl she was not entirely mobile in her play environment and therefore only played with toys which were within her crawling boundaries such as toys which were scattered on the floor or in a toy box she could easily reach in by kneeling. Generally Lindy participated in give and take play, but often required encouragement. During feeding Lindy competently finger fed, although she enjoyed holding a spoon, she was unable to successfully use the spoon. Lindy enjoyed bath time, but was rarely given the opportunity to explore and play during bath time as her caregivers had a number of children to bathe. Lindy was not potty trained and made no indication that she was wet or soiled. Lindy attempted to assist during dressing by either holding her arm or her leg out. She was unable to doff her socks but held her feet out to don her shoes when they were presented to her.

Using the Test of Playfulness, Version 4 (Skard & Bundy, 2008), Lindy's level of playfulness was determined. She was sitting on the floor with an erect back and her legs in extension playing with two fairly large bright coloured play objects with various knobs which to turn and press, the toys were brightly coloured and elicited a possible action-reaction response. When the buttons were pressed it lights up and made a particular amusing sound. Although she seemed quite content playing with the toy, no obvious signs of perceived joy were noted as she was not smiling, giggling or laughing. However, she seemed intrigued by the toy and concentrated well and continuously pressed and turned the buttons. Despite her facial expression which had not showed any obvious signs of having fun, she

seemed to be very focused on what she was doing with the play object. She continuously poked and prodded the toy intently. She could not press the buttons hard enough to elicit the sounds the play object could produce. At some point during the observation another toddler saw the potential possibilities of having Lindy's play object and suddenly attempted to take the toy from her. In response to her toy potentially being taken from her, Lindy's reaction was to protest and fight for her toy to be protected and retrieved from her playmate's hands. She suddenly weight shifted towards the right, transferred onto her knees and using both hands retrieved the toy from the toddler and continued to poke and prod it in long sitting.

Descriptive findings of the ToP revealed an imbalance between the four elements of playfulness, i.e. intrinsic motivation, internal control, freedom to suspend reality and framing. This is indicative of decreased playfulness. Lindy concentrated well during the play session, but no signs of perceived joy were observed. She decided what to play with and also decided how to play with the toy. The toy was not used in an imaginary way and when another toddler attempted to take her toy from her she automatically protested and briskly retrieved the toy from the toddler's hands.

4.1.5 Occupational Therapy Intervention

Subsequent to the assessment in May 2008, occupational therapy took place once a week for an average of 45 minutes to one hour in the playroom at ThembaCare for a period of two months. By that time, Lindy knew the researcher well and had built a trusting relationship with her. As a result, interaction between the therapist and client had been open, spontaneous, warm and fun.

Each intervention session focused on enhancing Lindy's occupational performance through the use of appropriate play and developmental techniques. The therapist elicited and prompted a sense of joy. The therapist's use of self played a major role in the therapeutic sessions and Lindy responded exceptionally

well to the therapist's attempts to elicit having fun. An example of this would be her eagerness to partake in therapy sessions in that she would be very excited to see the therapist holding a bag of toys. In an attempt to explore the contents of the bag she would crawl towards the therapist on her hands and knees, she would then pull on the therapist's pants using her right hand and make eager sounds.

4.1.6 Progress

Lindy's levels of development and playfulness after the intervention were determined through repeating the WITS Developmental Profile (Stewart-Lord, 1980; 1990) and the Test of Playfulness Version 4 (Skard & Bundy, 2008). Findings revealed that she had made some developmental gains. When reassessed in July 2008 at a chronological age of 21 months, the improvement in Lindy's gross motor development was evident in her ability to climb with agility and to attempt walking by taking a few steps. She was repeating many more words and understood simple instructions. Her development fell within the following parameters:

In areas of gross motor development, Lindy functioned at a 13 to 15 month old level. In prone Lindy crawled rather than walked. Lindy no longer enjoyed being carried or being picked up as she was more mobile within her environment and could easily access toys and other objects. She was able to crawl up two to three steps. Lindy was unable to jump as she started taking her first few steps independently. Lindy moved swiftly from supine to sitting and easily transferred from sitting to standing. Lindy was more actively engaged in her play environment, swiftly sequencing through various movement patterns (rolling to kneeling to climbing) with increase agility and control. She was able to stand independently and although she could get to her feet alone, she often fell onto her buttocks. Lindy took her first one to two staggering steps but she walked with a broad base of support with her arms flexed and held above her head. Although she was able to stand independently she was still not capable of kicking a ball. In sitting, when prompted to throw a ball, she pushed it towards the researcher.

In terms of her fine motor development, Lindy was functioning at a 15 month old level. She was able to place a circle in a shape sorter when guided by the researcher. She spontaneously scribbled with determination when she was offered a crayon. She mainly used a whole-hand grasp when scribbling. When releasing objects, Lindy was casting less and tended to hand toys over to the therapist when prompted. She was able to track a toy when swept three meters from the table. When handed a cup and cubes, she successfully placed all the cubes in the cup and was able to remove the cubes from the cup and replace the cubes once more. As Lindy abruptly extended her fingers to release an object she was only able to build a two block tower after demonstration. She was able to drop a pellet into a bottle and after demonstration she was able to shake the bottle. She attempted to turn the bottle. During eating activities Lindy was also able to pick up rice using a neat pincer grasp. Lindy started to assist turning the pages of a book, but turned several paged at a time.

Her developmental level of functioning in the area of adaptive responses (i.e. speech, understanding, social interaction, play, feeding, bathing and toileting and dressing) was at a 15 to 18 month old level. Lindy mainly jargoned but was saying at least two to six words now. In terms of understanding, Lindy comprehended simple instructions such as “come here” and “give it to me”. These commands were often followed by prompts from the therapist. In the area of social skills, Lindy often successfully played independently. She was frequently seen playing alone near the other toddlers. When playing with toys Lindy was able to take desired objects out of a box. She easily manipulated, pushed and pulled toys. Generally Lindy displayed physical restlessness. She was frequently found near infants, attempting to either place a pacifier or bottle in the mouth of an infant, indicating some imitation during play. During feeding Lindy refused to finger feed when presented with a spoon. She was able to feed herself with a spoon but this task was time consuming. When spoon feeding Lindy was exceptionally messy and the majority of the food did not end up on the spoon. The small amount of food scooped up was successfully placed in her mouth. When the therapist offered to help during feeding, Lindy refused the help. Although Lindy was still

not potty trained, she sometimes tugged at her diaper when she was soiled. During dressing Lindy was able to doff her shoes, socks and hat. She was also assisting more actively during dressing and undressing. In Table 1 Below, Lindy's developmental progress is depicted in a comparison between her developmental status at 19 months and then at 21 months.

Table 1: Lindy's progress

Area of development	**Date:** 19/05/2008 **Chronological age:** 19 months **Developmental Age:**	**Date:** 23/07/2008 **Chronological age:** 21 months **Developmental Age:**
Gross Motor Development	10-11 months Able to crawl on her hands and knees. Unable to crawl up stairs. Unable to jump when prompted. Able to pull herself up from supine to sitting. Able to sit independently and dynamically reach for objects to the left and right. Able to transfer from sitting to standing with support. Cruised along furniture. Unable to kick a ball. Offered a ball, rather than throwing it.	13-15 months Crawled rather than walked. Able to crawl up 2-3 steps. Unable to jump. Able to stand independently. Able to get to feet alone. Took 1-2 staggering steps with a broad base of support. Incapable of kicking a ball. Pushed a ball rather than throw.
Fine Motor Development	12-13 months Showed preference for her	15 months Able to place a circle in

	right hand when reaching. Developing pincer grasp. Tended to cast objects continuously. Managed to find an object which had rolled away. Able to release a cube into a cup after demonstration. Unable to build a two block tower. Able to grip a pellet, but was unable to successfully place the pellet into a bottle. Enjoyed looking at picture books.	shape sorter when guided. Spontaneously scribbled using a whole hand grasp. Casting less. Able to track an object swept off the table. Successfully placed cubes in and out of a cup. Able to drop a pellet into a bottle and shake the bottle. Started assisting turning pages of a picture book.
Adaptive Responses	10-15 months Grasped a bell and briskly rang it. Imitated sounds, and was able to say one word with meaning. Comprehended the word 'no'. Often laughed when she was amused. Mainly enjoyed solitary play. Able to find toys which were hidden. During feeding Lindy competently finger fed,	15-18 months Said two to six words. Comprehended simple instructions. Independent play observed. Physical restlessness evident. Refused to finger feed when presented with a spoon. Very messy during feeding and the majority of the food does not end up on the spoon. Tugged at diaper when

	although she enjoyed holding a spoon, she was unable to successfully use the spoon. Enjoyed bath time. Not potty trained and made no indication that she was wet or soiled. Attempted to assist during dressing by either holding her arm or her leg out. Unable to doff her socks but held her feet out to don her shoes.	soiled from time to time. Doffed shoes, socks and hat. Helped more during dressing and undressing.

During the Test of Playfulness, Version 4 (Skard & Bundy, 2008) observation in July 2008, Lindy was active and mobile moving around frequently during the observation. She moved through several transitional positions (sitting to standing to crawling). Her transfers through these positions were swift with minimal effort and good quality of movement. She hastily went for a box of toys by crawling on her hands and knees. She then sequenced into two point kneeling and took out a book from the box using her right hand while stabilizing herself with her left hand on the toy box. With the book in her right hand she then crawled towards a comfortable free space on the floor, sat down in long sitting and paged through the book. She mainly used a lateral grasp to turn the pages of the book. She was intently looking at the pictures. She made no sounds nor did she point to any of the pictures. When another toddler wanted to take her book from her she screeched in annoyance and protected her book by holding it close to her chest using both her hands. Suddenly her attention drifted away from the toddler who had annoyed her and she looked across the room and discovered another toddler playing with Lego blocks. She hurriedly let go of the book and crawled on her hands and knees towards the toddler and while on her knees she grabbed the lego

blocks from the toddler's hands using both her right and left hand. Remaining on her hands and knees she placed the blocks on top of another but failed to maintain construct. She previously generally played with wooden blocks which could easily pile on top of each other as the base was flat. In this case the Lego blocks interlocked into each other and this concept seemed a difficult for her to master. Perhaps in frustration she left the lego blocks to her play mate and hurriedly crawled over onto the therapy mat where most of the infants spend their time during the day. While on her knees she placed a pacifier into one of the infant's mouths using her right hand and pretended to pat the infant. She then spotted an action-reaction toy nearby on the mat and crawled towards it. She pushed the buttons and smiled when she heard that the toy was producing sounds. The caregivers then entered the play room with the food trolley. It was supper time. As soon as she spotted the food trolley, she hurriedly crawled towards the table and eagerly climbed on the small children's chair at the table with ease. Once seated she grabbed her spoon in her right hand using a palmer grasp and in imitating another child, started banging her spoon on the table to the beat of a chant. The assessment then ceased.

Descriptive findings of the ToP revealed that Lindy portrayed playfulness during this assessment. A balance between the four elements of playfulness, i.e. intrinsic motivation, internal control, freedom to suspend reality and framing was therefore observed. She smiled during aspects of the observation indicating elements of perceived joy. She decided what to play with and also decided how to play with the toy. She pretended to pacify an infant by placing his pacifier in his mouth and gently patted him, similarly to how the caregivers would calm the infants. She swiftly moved from one play to the next. Framing was momentarily observed when Lindy imitated another toddler who banged the spoon on the table while waiting to be served dinner. Lindy also gave cues to another toddler by screeching.

4.1.7 Conclusion of Case 1

Although Lindy's developmental level at the age of 21 months in July 2008 was not at her chronological age as there was still a 3 to 8 month lag in her development, she had made good gains in the two months of therapy. This was not only attributed to weekly play-based occupational therapy sessions but also due to good carry over by the caregivers at ThembaCare. Lindy was able to engage more actively in her play environment as she was partially able to walk independently, cruised well and clambered swiftly.

4.2 Participant 2: Mhlangu

4.2.1 History: Medical and social background

Mhlangu was a two year and six months old male toddler diagnosed with Human Immune Virus and was on Anti-Retroviral medication at the time of the research. Mhlangu was not well cared for at home and as a result was placed at Nazareth House.

Mhlangu had numerous admissions to New Somerset Hospital since June 2007. At the age of one year and eight months, Mhlangu was admitted with fever, gastroenteritis and shortness of breadth. His clinical diagnosis included kwashiorkor, lower respiratory tract infection and pulmonary tuberculosis. He also developed seborrhoeic dermatitis. His stay in hospital was for eight days. Shortly after being discharged he was once again admitted in July 2007 at age one year, ten months with bronchopneumonia and normocytic anemia. His condition improved with receiving oxygen and antibiotics and he was discharged after a week's stay. In August 2007 another readmission to hospital occurred as he developed unresolved bronchopneumonia. This hospitalisation period was only for a few days. At the end of August 2007 at age one year, eleven months Mhlangu again presented at New Somerset Hospital with the following problems: coughing, shortness of breadth, fever, gastroenteritis, and decreased appetite with

obvious weight loss. Over a short period between June 2007 and August 2007 Mhlangu had a total of four periods of hospitalisation.

4.2.2 History of intervention

At the end of August 2007 at age one year, eleven months (23 months) during his fourth period of hospitalisation at New Somerset Hospital, Mhlangu was referred to the occupational therapist for a developmental assessment. It was evident that his development was delayed. He was not babbling or talking, had very limited interaction with the environment and he only momentarily interacted with the therapist. He was able to crawl with effort and walked unsteadily when his hands were held. He had good fine motor coordination. Occupational therapy aims were to encourage playfulness, improve his gross motor coordination to the extent that he was able to pull himself into standing holding onto furniture and to improve his crawling and mobility.

Shortly after the assessment he was discharged from hospital. Occupational therapy intervention commenced as an out patient. Prior to his out patient appointment in September 2007 Mhlangu was readmitted with diarrhea and vomiting and was discharged after five days. He was therefore only seen for occupational therapy in October 2007 at 25 months of age. At this stage he had difficulty moving through transitional positions. Mhlangu initially presented as a very shy boy who did not spontaneously want to play along with the therapist. He maintained very little eye contact and when he refused to play he turned his head or cast the toys presented to him. He tended to have temper tantrums and there was very little the therapist or his caregiver could do or say to persuade him to partake in therapy. Therapy continued monthly for 30 to 45 minute sessions to include improving the quality of movement through transitional positions i.e. supine to prone to four-point kneeling to half kneeling to standing through play and interaction with age appropriate toys. His performance in play had been compromised by poor trunk stability and obvious lethargy due to his continuous respiratory problems.

4.2.3 Commencement of intervention phase of research project

Mhlangu became a research participant in May 2008 at the age of 30 months as he met the selection criteria. At this stage he was moving well through transitional positions and was able to stand independently.

Mhlangu received occupational therapy once a week for a period of two months at the Anti-Retroviral clinic located at New Somerset Hospital. Therapy focused on facilitating a play-based therapeutic intervention to encourage increased interaction with developmentally appropriate play objects to encourage gross motor coordination, fine motor coordination and increased sensory-motor skills to the extent that he is able to walk independently and become more active within his play environment.

4.2.4 Assessment Findings

Findings of the WITS Developmental Profile (Stewart-Lord, 1980;1998) indicated that at the chronological age of 30 months, Mhlangu experienced a delay in all areas of his gross motor coordination (i.e. prone, stairs, jump, pull to sit, sit, stand, walk, ball kick, ball catch and ball throw); fine motor coordination (i.e. reach, hands, grasp, release, vision, cube in cup, cubes, pellets, ring on string and book) and adaptive responses (i.e. speech, understanding, social interaction, play, feeding, bathing and toileting, and dressing).

In areas of gross motor development, Mhlangu functioned at an 11 to 13 month old level. In prone Mhlangu preferred to crawl than walk. He hesitantly crawled up two to three stairs. He was unable to jump when prompted. Mhlangu was able to transfer from sitting to standing independently by extending his arms on the ground. Mhlangu had difficulty climbing onto an adult couch and often required some pushing from the researcher or his caregiver as he would find it difficult to lift his right leg up onto the couch while pulling with both arms. He was able to briefly stand independently but he was unable to walk independently. Mhlangu

cruised along furniture and walked unsteadily with one hand held. As he was unable to stand for an extended period he was incapable of kicking a ball. He mainly threw a ball by rolling it when he was seated on the ground. Mhlangu also particularly enjoyed riding a scooter car which he rode with great confidence using both feet placed on the ground to propel forward.

In terms of his fine motor development, Mhlangu was functioning at a 15 month old level. When he was handed a shape, he effortlessly reached for it and placed it correctly in the shape shorter after demonstration and guidance. He spontaneously scribbled on paper when a crayon was handed to him. Mhlangu held a crayon using a whole hand grasp. He easily released an object when the therapist gestured that he should hand it over. In the area of vision Mhlangu was able to follow a toy swept three meters from the table. In an attempt to retrieve the toy he crawled hurriedly. When Mhlangu was handed a cup and cubes, he grasped the cubes one at a time and placed it into the cup. He was able to place the cubes back into the cup after demonstration. Mhlangu was able to build a two to five block tower with cubes. The number of cubes placed on top of each other ranged as he abruptly extended all his fingers to release the cube. When handed a pellet and bottle, Mhlangu successfully dropped the pellet into the bottle with a neat pincer grasp. Mhlangu enjoyed looking at picture books. He assisted in paging through the book, but turned several pages at a time.

During all fine motor tasks Mhlangu had a clear preference for his right hand and would often grasp objects in this hand. Even though he had reached a number of fine motor milestones there was a lot of ground still to be made in terms of his chronological age.

His developmental level of functioning in the area of adaptive responses (i.e. speech, understanding, social interaction, play, feeding, bathing and toileting and dressing) was at a 12 to 18 month old level. Mhlangu mainly jargoned but was saying three words. In terms of understanding Mhlangu comprehended simple instructions. He understood terms such as ‘where is your shoe’ and immediately

turned when he heard his own name. In the area of social skills, Mhlangu mainly engaged in solitary play although he was constantly surrounded by play mates at Nazareth House. When playing with toys Mhlangu enjoyed putting a toy in and out of a container and engaged in give and take play when prompted to do so. The fact that he was not walking or running also limited his engagement in play as he often tired during transitional movements. Generally Mhlangu displayed physical restlessness, but would require frequent breaks due to his respiratory problems. During feeding Mhlangu was able to self feed using a spoon. When drinking from a cup he was independent but spilt the contents often. Mhlangu was not potty trained and still wore diapers. According to his caregivers he seldom indicated when his diaper needed to be changed. He cooperated well during dressing and automatically assisted the caregivers in this task by putting out his arm or leg our by pulling at his jacket when it was over his head. He doffed his shoes at times.

Using the Test of Playfulness, Version 4 (Skard & Bundy, 2008), a level of playfulness was determined.

The assessment took place in a large play room at Nazareth House. The play room housed an exceptionally huge selection of play objects and ample space to play. At the time of the assessment there were no other toddlers with whom Mhlangu could play with. Solitary play was thus observed. As noted during in the WITS Developmental Profile (Stewart-Lord, 1980; 1998), Mhlangu was not walking independently as yet but during the play assessment just ten days later Mhlangu had started walking unsteadily with a broad base of support at the age of 30 months. His unsteady gait and broad base of support together with his inexperience in independent walking only allowed him to walk for short distances before he tired. Mhlangu immediately identified a mobile play kitchen in the centre of the room. He made his way over to the play set and while standing, holding onto the table top with his left hand, he chose a little pan. He then looked over to the researcher and pointed the pan in her direction holding it in his right hand. The researcher then called him over to where she was seated about five meters away from where Mhlangu stood. He slowly made his way over to the

researcher and handed her the pan with a smile on his face. The researcher praised him and encouraged him to continue playing. With a staggering gait he made his way over to the play kitchen. He then located a cup and chose to engage in imaginary play whereby he pretended to drink from the cup using both hands and standing independently. He again brought the cup over to the researcher and smiled. He then made his way back to the play kitchen once more where he flexed his trunk, held onto the cupboard door with his left hand and located a bowl and spoon. Mhlangu then pretended to eat from the bowl. He held the bowl in his left palm and fed himself holding the spoon in his right hand. Again he came over to hand the bowl and spoon to the researcher and smiled. Throughout the observation near the play kitchen no verbalization was observed. Instead of making his way back to the play kitchen Mhlangu spotted a play telephone on the floor nearby. When he immediately saw it he smiled. He squatted, lifted the handset and spoke jargon. He attempted to stand up from the position but clearly required some assistance to stand up still holding the telephone handset in his right hand.

Descriptive findings of the ToP revealed that Mhlangu was fairly playful during the observation. There was a slight imbalance in the four elements of playfulness i.e.: intrinsic motivation, internal control, freedom to suspend reality and framing. He was not completely engaged during the observation and the experience of being completely immersed in a fun activity was not observed. Although Mhlangu seemed motivated throughout the observation he often sought reassurance from the researcher. Mhlangu was motivated by the toys within the environment. He chose what to play with and how to play with the toy for short periods of time indicating that signs of internal control were briefly observed. Momentarily he was suspended from reality where he pretended to drink from the cup and eat from the bowl and even pretended to speak on the telephone. These experiences were very short lived. At his chronological age it would be expected that he would eagerly be enthusiastic about the variety of play objects which to choose from and would run towards his desired choice. Due to his poor gross motor development this was not observed. Framing was briefly observed when Mhlangu engaged with

the researcher socially during the observation by bringing the researcher toys to play with and gesturing that she should play along.

4.2.5 Occupational Therapy Intervention

Occupational therapy took place once a week for 45 minutes for a period of two months. All scheduled OT sessions had been attended. The 'house mother' often posted comments in his hospital communication book as to give input into his development and well being. By that time, Mhlangu knew the researcher well and had built a trusting relationship with her. As a result, interaction between the therapist and client had been open, spontaneous, warm and fun. Each time Mhlangu saw the researcher in the passage he raced forward on his scooter and smiled broadly. Once he was within arms length of the therapist he offered her a hug.

Each intervention session focused on enhancing Mhlangu's occupational performance through the use of appropriate play and developmental techniques. During all the sessions a constant caregiver was present. The therapist elicited and prompted a sense of joy which is the essence of play and well-being (Chandler, 1997). The therapist's use of self played a major role in the therapeutic sessions and Mhlangu responded exceptionally well to the therapist's attempts to elicit having fun. To encourage social interaction most sessions were facilitated with one other child from Nazareth House whom Mhlangu normally played with. Mhlangu was always very eager to partake in therapy especially when he was praised during the activities.

4.2.6 Progress

Mhlangu's levels of development and playfulness after the intervention were determined through re-administering the WITS Developmental Profile (Stewart-Lord, 1980; 1990) and the Test of Playfulness, Version 4 (Skard & Bundy, 2008). Findings revealed that he had made some developmental gains. When reassessed

in July 2008 at a chronological age of 33 months, the improvement in Mhlangu's gross motor development was evident in his ability to walk, attempt to run and climb with agility. He was spontaneously saying more words and followed simple instructions. He also interacted more socially with the other toddlers at Nazareth House by sharing his toys. His development fell within the following parameters:

In terms of his gross motor development Mhlangu was functioning at an 18 to 24 month old level. In prone Mhlangu was able to kneel upright without support. He was able to walk up the stairs holding onto the banister. He required frequent breaks when climbing up and down the stairs. Although he was unable to jump he attempted this sequence by lifting his heels up from the ground. Although he was not able to pedal a tricycle he maneuvered his scooter car swiftly. Mhlangu was able to seat himself to a small chair. Although he was able to climb onto a large adult chair he required a push to his buttocks at times. While standing he was able to squat to pick up a toy. Mhlangu was more actively engaged in his play environment and he was more ambulant. During chasing games Mhlangu waddled in an attempt to run. Due to the fact that Mhlangu was unable to stand on one foot, when he was requested to kick a ball he merely walked into the ball. Mhlangu was able to throw a ball without falling.

Mhlangu was climbing nursery apparatus with assistance. He was able to crawl through obstacles and climb over low obstacles but still found it difficult to climb up a ladder. During this transition he required a push to extend his trunk and reach for the upper step and would find it difficult to simultaneously lift his left foot onto the next step.

His fine motor development had also improved. Mhlangu was functioning at an 18 to 24 month old level. When he was handed a few forms he effortlessly reached for it and placed it correctly in the shape shorter after demonstration when the hole was in front of him. He still spontaneously scribbled on paper after demonstration he was able to copy a straight line. When a crayon was handed to him Mhlangu held the crayon in mid-shaft between the pad of his thumb and the

interphalanges of the first three fingers. When he released objects no casting was observed. When a daggling object was placed within his visual field he fixated on the object and watched as the toy swayed from side to side. When Mhlangu was handed a cup and cubes, he filled the cup with 10 cubes and was able to remove at least 6 cubes. Once he removed the cubes he refilled the cup. He was able to build a 5 to 6 block tower and imitated pushing a train of cubes after demonstration. When handed a pellet and bottle, Mhlangu successfully dropped the pellet into the bottle and shook the bottle with intent. He was able to unload the pellet from the container by turning the bottle over. Mhlangu was more vocal when paging through a book. He pointed to familiar pictures. He had deceased fine motor control and eye hand coordination during threading and required assistance to either hold the needle or the bead.

His developmental level of functioning in the area of adaptive responses (i.e. speech, understanding, social interaction, play, feeding, bathing and toileting and dressing) was at a 15 to 21 month old level. Mhlangu was saying two to six words with meaning in the correct context. In terms of understanding Mhlangu responded to simple commands and enjoyed nursery rhymes such as ‘ring o roses’. When he paged through a book, Mhlangu pointed at a picture and asked the question ‘what is this’. The therapist responded and Mhlangu repeated the response clearly. In the area of social skills, Mhlangu showed his toys to the therapist enthusiastically. Although he was helpful during play sessions he did not share his toys. When playing with toys Mhlangu often assisted another toddler to find her toy when it had fallen, and handed it to her. He enjoyed throwing objects such as a ball. He easily manipulated, pulled and pushed objects. Generally Mhlangu enjoyed playing with cars, especially his scooter car which he rode effortlessly. He partook well in activities which required climbing in and out of a doll house. He often cried when it was time for the play session to wrap up. He then refused to assist tidying up and displayed his dislike by folding his arms and frowning. During feeding Mhlangu displayed agility when eating with a spoon and spilt less when he drank from a cup. According to his caregivers Mhlangu had started indicating that he was soiled by pulling at his pants. He was able to doff

his jacket, hat and shoes but required some assistance when dressing. In Table 2 below, Mhlangu's developmental progress is depicted in a comparison between his developmental status 30 months and at 33 months.

Table 2: Mhlangu's progress

Area of development	**Date:** 09/04/2008 **Chronological age:** 30 months **Developmental Age:**	**Date:** 23/07/2008 **Chronological age:** 33 months **Developmental Age:**
Gross Motor Development	11-13 months Preferred crawling than walking. Hesitantly crawled up 2-3 steps. Unable to jump. Transferred independently from sitting to standing. Difficulty climbing onto an adult chair. Able to stand briefly, but unable to walk independently. Cruised along furniture and walked with one hand held. Unable to kick a ball. Threw a ball by rolling it.	18-24 months Able to kneel independently. Able to walk up stairs holding onto banister. Attempted to jump by lifting heels from the ground. Unable to pedal a tricycle but maneuvered a scooter bike. Able seat self onto a small chair. Needed assistance climbing onto an adult couch from time to time. Able to squat to pick up a toy. More ambulant in play environment. Waddled in an attempt to run. Walked into a ball rather

		than kicked it. Able to throw a ball without falling over.
Fine Motor Development	15 months Able to place one form correctly in shape sorter after guidance. Spontaneously scribbled with crayon. Whole hand grasp during scribbling. Easily released object. Able to follow a toy swept 3 meters away. Placed cubes in and out of cup after demonstration. Able to build a 2-5 block tower. Successfully placed pellet in a bottle using a pincer grasp. Enjoyed looking at picture books. Paged through book turning several pages at a time.	18-24 months Placed a few correct forms into shape sorter when the hole was at the top. Able to copy a straight line after demonstration. Held crayon in mid shaft with a developing 4-point grasp. No casting when objects are released. Fixated on a dangling object. Filled a cup with 10 cubes, removed some cubes and refilled the cup. Able to build a 5-6 block tower. Imitated pushing a train of cubes. Successfully placed pellet in bottle and turned bottle over to empty. Vocal when paging through a book and he pointed to familiar pictures.

Adaptive Responses	12-18 months Mainly jargoned but saying 2-3 words. Understood simple instructions. Mainly engaged in solitary play. Enjoyed placing a toy in and out of a container. Engaged in give and take play. Displayed physical restlessness. Able to self feed with a spoon. Spilt contents when drinking from a cup. Not potty trained. Assisted during dressing. Doffed his shoes.	15-21 months Said 2-6 words with meaning. Responded to simple commands and enjoyed nursery rhymes. Pointed at pictures when paging through a book. Repeated responses clearly. Gladly showed his toys to the therapist. Helpful during play sessions. Enjoyed playing with cars. Agility displayed during feeding. Started to indicate that he was soiled. Able to doff his jacket, hat and shoes.

During the Test of Playfulness, Version 4 (Skard & Bundy, 2008) in July 2008, Mhlangu was active and mobile, sequencing through various movements throughout the observation. He moved through several transitional positions (sitting to crawling to standing to climbing). His transfers through these positions were swift with minimal effort and good quality of movement. There were a number of toys which Mhlangu could choose from with the added benefit of

playmates whom he could play with. He immediately started interacting appropriately with the toys.

He initially walked over to a large car with good balance and control. He then picked up his right leg and placed it on the right side of the car and slowly lowered himself so that he sat on top of the car without the use of his hands. While sitting on the car he used his legs to push himself back and forth. While moving on the car he scanned the room and saw one of the toddlers playing with blocks. He competently got off the car and helped the toddler gather some more blocks. He was able to hold three blocks in the left arm while gathering the rest with his right hand. Shortly thereafter, he found something else to do. He located a small toy car nearby and swiftly reached for it. While on his knees, he used his right hand to push the car along the carpet and he pretended to hoot and said "peep, peep, peep, peep". He played with the car for a few minutes without bothering any of the other playmates. He pushed the car while on his hands and knees to a nearby Barney toy that was lying on the floor. He left the car and moved into kneeling. He picked up the Barney toy with his right hand. While kneeling he hugged the Barney toy and started to recite the popular Barney song. The only words that could clearly be deciphered were "I love you". Once he had completed his version of the Barney song he placed the toy down and lay on the floor in prone and paged through a story book lying nearby. Easily distracted, he saw one of the toddlers playing with a bucket and without saying anything he tugged at her bucket while still lying on the floor in an attempt to acquire her play object. The little girl protested and he let her be. Clearly not knowing what to do next he alternated between crawling and bum shuffling. He tugged a toy and pulled it along the length of the mat. The play observation then ceased.

Descriptive findings of the ToP revealed that Mhlangu portrayed playfulness during this assessment. A balance between the four elements of playfulness, i.e. intrinsic motivation, internal control, freedom to suspend reality and framing was therefore observed. Mhlangu was motivated by toys and other children's play. Although these were extrinsic motivational factors he still chose what he wanted

to do during the observation. He showed significant signs of interest and engagement during play as he was continually engaged. The perception of control was evident as Mhlangu chose what toys to play with and with which children to play with. Mhlangu pretended to hoot the car while he was pushing it. When he found the Barney toy he also sang the Barney song as it is usually done the programme. In the area of framing, as Mhlangu mainly played on his own with toys the only observation noticed where he headed another child's cues was when he tugged at a child's bucket in an attempt to retrieve it and she protested indicating that he could not have it. Mhlangu read her cue correctly and found another toy to play with.

4.2.7 Conclusion of Case 2

Although Mhlangu's developmental level at the age of 33 months in July 2008 was not at his chronological age as there was still a 9 to 18 month lag in his development. He had made good gains in the two months of therapy. This was not only attributed to weekly play-based occupational therapy sessions but also due to good carry over by the caregivers at Nazareth House. After each session the researcher would describe and demonstrate the activities which would developmentally benefit Mhlangu. These messages were also relayed in writing to his "house mother". Mhlangu was able to engage more actively in his play environment as he was able to walk, partially able to run and climbed well. His interaction with toys and playmates were also more interactive.

4.3 Participant 3

4.3.1. History: Medical and social background

Gugu was a one year one month old male diagnosed with Human Immune Virus and was on Anti-Retroviral medication at the time of the research. Gugu had allegedly been neglected by his parents and as a result had been placed at Nazareth House.

Gugu had a number of prolonged periods of hospitalisation during early infancy. In May 2007, at two months of age, Gugu was admitted to New Somerset Hospital with the following medical problems: failure to thrive, marasmus, enterococal sepsis, bronchopneumonia, normocytic anemia and rickets. During his stay in hospital he was on oxygen and after two weeks was discharged. Eight days later he was readmitted with diarrhea and vomiting. He subsequently developed a bacterial infection and it was felt that he would spend a prolonged period in hospital. Gugu spent two months at New Somerset Hospital and on discharge he had gained weight. In August one month after his recent discharge Gugu was once again admitted to New Somerset Hospital at the age of six months. His admission was on the basis that he was not feeding well, had severe oral thrush, was coughing and his weight had remained constant. At this stage he was diagnosed with human immune virus and started on anti retroviral medication in September 2007. Gugu was discharged in October 2007 at the age of eight months.

4.3.2. History of intervention

Gugu was first seen by the occupational therapist when he was four months old during the latter part of his second admission to New Somerset Hospital in June 2007. During an occupational therapy screening assessment it was evident that Gugu was irritable as he cried profusely during the initial OT sessions. During crying he screamed and extended his body completely. He was only consoled when he was given a bottle or when he sucked his fingers. He usually placed four fingers in his mouth. Developmentally Gugu had poor head control observed during prone lying and when pulled to sit. He was not grasping and reaching for objects presented to him even when a toy was placed in the palm of his hand. Occupational therapy intervention and interaction from the therapist was limited as he cried immensely and was very restless during his stay in hospital. Despite the limited sessions with Gugu by July 2007, Gugu had gained some head control evident during pull to sit as his lag was moderate. Gugu also started bringing his hands towards the midline. Due to the fact that he was readmitted to New Somerset Hospital in August 2007 no occupational therapy appointments had

been attended as Gugu was ill. In late August 2007 occupational therapy recommenced and it was evident that Gugu regressed developmentally. Occupational therapy was focused on correct positioning to facilitate development. A total of seven occupational therapy sessions were attended during this prolonged period of hospitalisation. When discharged at the age of eight months Gugu was developing good head control. Occupational Therapy continued at New Somerset Hospital once a month for 45 minutes. Gugu had made good gains and at twelve months was able to sit independently. At thirteen months he attempted creeping in prone lying.

4.3.3 Commencement of intervention phase of research project

Gugu became a research participant as he met the selection criteria in April 2008 at the age of 13 months. At this stage he was progressing developmentally and medically in that he had been on anti retroviral medication for six and half months and had no major medical concerns.

Gugu received occupational therapy once a week for a period of two months at the Anti-Retroviral clinic located at New Somerset Hospital. Therapy focused on facilitating a play-based therapeutic intervention to encourage: increased interaction with developmentally appropriate play objects, gross motor coordination, fine motor coordination and increased sensory-motor skills. The main goal of occupational therapy was to facilitate independent crawling and walking with support. Gugu's caregivers were actively involved during the intervention sessions as to ensure continuity at home.

4.3.4 Assessment Findings

Findings of the WITS Developmental Profile (Stewart-Lord, 1980; 1998) indicated that at the chronological age of 13 months, Gugu experienced a delay in all areas of his gross motor coordination (i.e. prone, stairs, jump, pull to sit, sit, stand, walk, ball kick, ball catch and ball throw); fine motor coordination (i.e.

reach, hands, grasp, release, vision, cube in cup, cubes, pellets, ring on string and book) and adaptive responses (i.e. speech, understanding, social interaction, play, feeding, bathing and toileting, and dressing).

In areas of gross motor development Gugu functioned at an 8 month old level. In prone Gugu mainly used a reciprocal creep and arm pull to move around. He momentarily maintained four-point kneeling when placed in this position. He was able to pull himself into sitting with some assistance. He was able to sit independently for at least ten minutes maintaining good balance. When reaching for an object he mainly used arm support to prevent falling. He maintained full weight in his lower limbs in supported standing. His primitive reflexes were fully developed.

In terms of his fine motor development, Gugu was also functioning at an 8 month old level. He persistently reached for objects and actively adjusted his posture to reach. For example when reaching for an object placed out his immediate reach he weight shifted towards the left, placed his left hand on the ground for support, rotated his trunk and reached with his right hand. He mainly poked and prodded objects. During grasping, he mainly grasped objects using a whole hand grasp. His pincer grasp was not fully developed and therefore found it difficult to pick up small objects such as beads. Although he had difficulty in this area he repeatedly attempted to grasp the object with the tips of his fingers. His release of objects was not fully controlled. When he opened his hand the object dropped out. When he was handed a cup and cubes, he merely held the cup and cube. When he was handed two cubes he excitedly banged the cubes together. He was unable to pick up a pellet. When given a ring and string, he firmly held the ring in one hand and the string in the other hand.

Gugu's developmental level of functioning in the area of adaptive responses (i.e. speech, understanding, social interaction, play, feeding, bathing and toileting and dressing) was at an 8 month old level. When he was handed a bell, he held it firmly and shook the bell. In an attempt to communicate Gugu made noises and

imitated two syllable sounds such as ‘dada’ and ‘baba’. In terms of understanding Gugu responded to the term ‘no’. Socially, he was reserved with strangers but responded well to his regular caregivers and the researcher whom he became familiar with. When playing with toys he often bit and chewed toys. He imitated clapping his hands excitedly from time to time. Gugu was able to finger feed when eating. He mainly finger fed when offered snacks such as biscuits, chips and fruit cut into large cubes. Gugu could also hold his bottle during feeding. According to Gugu’s caregiver when bathing him, he tended to place his arms in front of his face to avoid washing.

Using the Test of Playfulness, Version 4 (Skard & Bundy, 2008), a baseline level of playfulness was determined.

Although at a chronological age (13 months) Gugu was a toddler, developmentally it had been more suitable to have him together with infants. The room where the infants spent most of their time is brightly coloured and is a very inviting environment. There were approximately eight infants in the room. Gugu was the most mobile of the infants as he was actively creeping. He mainly crept using his upper limbs. He managed this task at quite a speed. When placed on the floor the caregivers immediately showed him one of his favourite toys. This was a musical mat. On first sight of the mat he hastily crept towards the sound of the music, following his usual creeping pattern. In the process of creeping and the excitement of his toy he clambered over some of the infants in his attempt to satisfy his curiosity. He hastily lifted both arms up placed his forearms down and lifted his body forward. When he clambered over another infant he placed his forearms on top of the infant and lifted his body over the infant causing her to whine. In no time he was at the musical mat. When at the musical mat he banged his fists simultaneously while in prone, eager to hear the sounds he was producing. At this point Gugu smiled a great deal. He then proceeded to transfer into sitting. He quickly half rolled towards the right and used his right hand to assist him in propping up. This task seemed to require effort. Once seated he mainly used his right hand to hit the mat. He again weight shifted towards the left

and used his left hand for stability and banged the mat with his right hand. While in this position the smiling had stopped and Gugu seemed very serious. Shortly thereafter he hastily transitioned into prone and crept towards some nearby toys. He then picked up one toy at a time and persistently either poked, threw or kicked each toy. Even though there were a number of other infants in the room Gugu only interacted with play objects.

Descriptive findings of the ToP revealed that Gugu portrayed decreased playfulness during this assessment. An imbalance between the four elements of playfulness, i.e. intrinsic motivation, internal control, freedom to suspend reality and framing was therefore observed. Gugu showed signs of intrinsic motivation and was motivated by toys. His caregiver initially chose what he was required to play with by collecting his favourite toy, the music mat. He showed eager interest and engagement during play as he smiled and excitedly hit the play mat. Signs of joy were only noted while he played on the play mat. The perception of control was briefly observed when he tired of the play mat and crept towards some nearby toys. No sings of the ability to suspend reality were noted. Gugu had very little regard for the other infants in the room as he clambered over them while creeping towards his play object, despite the fact that the infants screeched as he climbed over them. Framing was therefore not observed as no social cues were taken into account.

4.3.5 Occupational Therapy Intervention

Occupational therapy took place once a week for an average of 30 to 45 minutes at the Anti-Retroviral clinic at New Somerset Hospital. Each intervention session focused on enhancing Gugu's occupational performance through the use of appropriate play and developmental techniques. The therapist elicited and prompted a sense of joy which is the essence of play and well-being. The therapist's use of self played a major role in the therapeutic sessions and Gugu responded exceptionally well to the therapist's attempts to elicit having fun. An example of this would be his eagerness to partake in therapy sessions especially

when presented with bright coloured noisy toys. He responded more to play objects than interaction with the therapist. This is also age appropriate at his developmental level.

4.3.6 Progress

Gugu's levels of development and playfulness after the intervention were determined through repeating the WITS Developmental Profile (Stewart-Lord, 1980; 1998) and the Test of Playfulness, Version 4 (Skard & Bundy, 2008). Findings revealed that he had made some developmental gains. When reassessed in July 2008 at a chronological age of 16 months, the improvement in Gugu's gross motor development was evident in his ability to clamber with agility and to cruise along furniture. His development fell within the following parameters:

In areas of gross motor development, Gugu functioned at an 11 to 12 month old level. Gugu was more actively engaged in his play environment, swiftly sequencing through various movement patterns (rolling to kneeling to climbing) with increase agility and control. In prone Gugu crawled on his hands and knees, lifting his abdomen off the surface. From time to time he tended to bear walk. He was able pull himself up into sitting from supine independently. He was able to sit independently and reached for objects to his left and right dynamically. Gugu was able to pull himself up into standing holding onto a surface with minimal effort. He moved from half kneeling to standing and let himself down again. He was unable to stand independently, but stood well when supported. He was able to cruise along furniture by sliding his hands along the surface. As he was unable to stand independently he was not capable of kicking a ball. In sitting instead of throwing a ball, he rolled the ball to the researcher.

In terms of his fine motor development, Gugu was functioning at a 12 to 15 month old level. When reaching, Gugu showed preference for his right hand and often grasped objects in this hand. His pincer grasp was developing as he started picking up smaller objects between his thumb and index finger. His was able to

release now and enjoyed throwing objects around the room. In terms of vision Gugu glanced in the correct direction where his toy had fallen. When handed a cup and cube he was able to place the cube in the cup after demonstration. Gugu attempted to build a tower but was unsuccessful in his attempt. When he placed the cubes on top of another he held the cubes above the table and stabilized both on top of each other in mid air. Gugu was able to grasp the pellet and was successful in placing the pellet in the bottle. Gugu enjoyed looking at pictures in a book with interest.

His developmental level of functioning in the area of adaptive responses (i.e. speech, understanding, social interaction, play, feeding, bathing and toileting and dressing) was at an 11 to 13 month old level. He was able to say one word with meaning and he imitated sounds. Gugu understood simple commands and immediately turned his head when his name was called. When playing with toys, Gugu enjoyed placing objects in and out of a container. Generally he engaged in give and take play. During feeding Gugu enjoyed holding a spoon but had difficulty using it. Gugu cooperated during dressing and according to his caregivers he held out an arm or leg at times. In Table 3 Below, Gugu's developmental progress is depicted in a comparison between his developmental status at 13 months and 16 months.

Table 3: Gugu's progress

Area of development	**Date:** 09/04/2008 **Chronological age:** 13 months **Developmental Age:**	**Date:** 23/07/2008 **Chronological age:** 16 months **Developmental Age:**
Gross Motor Development	8 months Reciprocal creep using arms. Able to pull self to sit. Good sitting balance. Weight bears on lower	11-12 months Crawled on hands and knees. Bear walked at times. Able to pull self up into sitting and standing.

	limbs in supported standing. Fully developed reflexes.	Sat independently, good dynamic sitting balance. Able to pull self up into standing. Moved from half kneeling to standing. Cruised along furniture. Unable to stand independently. Rolled ball rather than throw.
Fine Motor Development	8 months Persistently reached for toys. Prodded and pried objects with his index finger. Unsuccessful inferior pincer grasp. Object automatically fell out of his hand when released. Held cube and cup. Hit two cubes together. Unable to pick up pellet. Held ring with effort in right hand and string in his left hand.	12-15 months Showed clear preference for his right hand. Developing pincer grasp. Able release objects. Glanced in direction where the toy fell. Placed a cube in a cup. Unsuccessful in building a two block tower. Successfully placed a pellet in a bottle. Enjoyed looking through picture books.
Adaptive Responses	8 months Grasped bell and shook it. Made noises to attract attention and imitated two syllable sounds.	11-13 months Said one word with meaning and imitated sounds. Understood simple

	Responded to 'no'. Reserved with strangers. Interacted with familiar people. Bit and chew toys. Imitated clapping. Finger fed. Placed arms in front of face to avoid washing.	commands. Enjoyed placing toys in and out of a container. Engaged in give and take play. Enjoyed holding a spoon but had difficulty using it. Cooperated during dressing, held out his arm or leg from time to time.

During the Test of Playfulness, Version 4 (Skard & Bundy, 2008) in July 2008, Gugu was active and mobile moving around frequently during the observation. He moved through several transitional positions (sitting to crawling to standing). His transfers through these positions were swift with minimal effort and good quality of movement. He played amongst other toddlers but did not engage with them. He was sitting on the mat at the time prodding some puzzle pieces with his right index finger. He then shifted weight towards the right and reached for some other toys using both hands. He then spotted some blocks and swiftly crawled towards the blocks carefully not distracting anyone. As he kneeled and was about to engage with the blocks it was pinched by another toddler. This did not bother him and he crawled along to the cupboard about one and half meters away. He sequenced into kneeling and using his right hand, opened the closed the cupboard doors without losing his balance. He spent a minute at this task. He then closed the door and crawled over to a couch nearby where he eagerly climbed onto the chair and stood for a while watching is playmates. Another couch stood right next to him and he then turned around facing the window and placed his right leg onto the seat of the couch and using his right hand pulled him over and stood there for some time. He spotted some of his playmates paging through a book and he hurriedly turned around and clambered off the chair. While facing the chair he

lowered himself into kneeling and crawled towards where the toddlers were paging through the book. He was distracted and quickly crawled towards the kitchen area. He spotted a play telephone and smiled when he saw it. He sat next to the telephone picked up the handset with his right hand and started prodding the buttons with his left index finger. Shortly thereafter he dropped the handset and crawled over to a car and in crawling started to push the car with his right hand along the passage. The assessment then ceased.

Descriptive findings of the ToP revealed that Gugu portrayed playfulness during this assessment. A balance between the four elements of playfulness, i.e. intrinsic motivation, internal control, freedom to suspend reality and framing was therefore observed. Gugu showed signs of intrinsic motivation and was motivated by toys. He remained engaged throughout the observation and swiftly moved from one position to the next. Gugu chose was to play with and how to play with the toy indicating internal control. He pretended to use the toy telephone and to ride a car. Hence, some signs of the ability to suspend reality were noted. Framing was observed when Gugu carefully moved around in attempt not to disturb any other child. When he saw a toddler paging through a book he was interested in joining but he was distracted.

4.3.7 Conclusion of Case 3.

Although Gugu's developmental level at the age of 16 months in July 2008 was not at his chronological age as there was still a 1 to 4 month lag in his development. He made good gains in the two months of therapy. This was not only attributed to weekly play-based occupational therapy sessions but also due to good carry over by the caregivers at Nazareth House. Gugu was now able to engage more actively in his play environment as he crawled, clambered and cruised swiftly.

CHAPTER 5: FINDINGS – PRESENTATION

Findings are presented as themes that emerged from the categorized data from the three case studies. Two main themes, 'playful enablement – the therapist' and 'engaging, playing and development – the child' emerged from the categories. The themes and categories are depicted in Table 4, and are then elaborated upon below:

Table 4: Themes and categories

Theme 1: Playful enablement – the therapist	5.1.1. Use of self 5.1.1.1. An enabling attitude 5.1.1.2. Eliciting engagement in play 5.1.1.3. Intensively engaged and 'hands-on' 5.1.1.4. Encouraging language and communication 5.1.2. Awareness of the illness effects 5.1.2.1.Therapy with rests 5.1.2.2. Ensuring safety 5.1.3. Using what is available 5.1.3.1. Therapy in the most natural environment 5.1.3.2. Therapy with natural occurring items 5.1.3.3. Using normal routines therapeutically 5.1.4. Collaborating with caregivers
Theme 2: Engaging, playing and developing – the child	5.2.1. Doing: 5.2.1.1. Being productive, moving and fully engaged 5.2.1.2. Guiding and controlling play 5.2.2. Feeling 5.2.2.1. Enjoyment 5.2.2.2. Persistence and Determination 5.2.2.3. Tasks and activities that held special appeal 5.2.3. Being: 5.2.3.1.Gains in sensory-motor development

	5.2.3.2. Incidents of playfulness evident 5.2.4. Pretending 5.2.5. Cueing

5.1 Theme 1: Playful enablement – the therapist

The first theme depicts the therapist's actions, attitudes and behaviour in terms of three main categories – the therapist's use of self, her awareness of the illness experience and the use of natural occurring objects and situations.

5.1.1 Use of self

5.1.1.1. An enabling attitude

The attitude of the therapist in facilitating play and playfulness emerged from the data. The therapist adopted an enabling attitude of warmth, friendliness and demonstrative of encouragement and praise. A variety of techniques were indicative of the enabling attitude such as verbal encouragement, employing intonation of voice, physical and affective guidance, employing games and using creative spontaneous reactions. Through the use of self and by adopting a playful manner, the therapist endeavored to establish firm, loving and fun-filled relationship with the participants.

Verbal encouragement was provided to prompt participants to engage in occupations that would elicit such adaptive responses as reaching, crawling, climbing, playing with blocks while kneeling and eliciting other dynamic transitional positions through play. Lindy was continuously encouraged to maintain engagement during a task. The therapist cheered her on during crawling, climbing and standing activities when she either tired or had difficulty in the task.

> *She was unable to climb up onto the small couch unaided. During this activity the therapist made sounds and amused Lindy to encourage*

continuous play and give increased positive reinforcement. (Lindy, 19/05/2008)

Similarly Mhlangu was verbally encouraged to continue engaging in play on the play gym when he had difficulty placing his leg over the ledge.

He required assistance in climbing over the ledge and climbing the ladder. His gross motor coordination was evidentially the problem. He had been encouraged by the therapist and his caregivers by cheering him along. (Mhlangu, 07/05/2008)

As a result of the therapist's verbal encouragement Mhlangu could continue the obstacle course and engage in play with the other toddler's during the session.

Employing intonation of voice was used to engage the participants in play. The therapist used verbal sounds as encouragement to enact sounds of familiar animals while playing with Lindy. The therapist chased her up a pretend pillow mountain making barking sounds in order to assist her to climb the pillow mountain faster.

Although she was not as quick, she managed the task well and at times clambered over the cushions rather than crawled. To engage her more during play the therapist pretended to be a dog and chased her up and down the "mountain". (Lindy, 16/07/2008)

As a result, Lindy became more engaged in the task. She crawled faster and giggled continuously.

She engaged well during the task giggling all along and moving more quickly. This was repeated a few times. (Lindy, 16/07/2008)

The therapist also encouraged the participants to use their own voices playfully during play sessions. This was adopted during play with Mhlangu as he was required to enact various animals physically and verbally during gross motor play.

> *The toddlers were required to make animal sounds as they crawled along the passage.* (Mhlangu, 21/052008)

The therapist maintained a positive and a playful disposition throughout the intervention programme. This disposition was characterized by an attitude of playfulness on the one hand and on the other hand by an attitude and demonstration of warmth, friendliness and encouragement. Praise was used frequently to ensure that the child remained content and engaged during sessions. The therapist employed an encouraging disposition by praising the child for skillful participation and accomplishment during therapeutic play.

The therapist's disposition of encouragement was often employed when the child required further attempts at mastery or when the child needed to maintain engagement during activities. For example, when the therapeutic aim for Lindy was to encourage independent standing, the following scenario demonstrates the therapists' use of encouragement:

> *The therapist then sat on the chair supporting Lindy in standing between the therapist's legs to encourage increased stability and control during standing. The therapist then provided less support to encourage independent standing. Lindy stood with a wide base of support placing both hands on the therapist's lap. The therapist then removed Lindy's hands from her.* (Lindy, 10/05/2008)

Encouragement and praise were combined to elicit adaptive responses. The child would be guided, prompted and encouraged to continue to engage in the task and was then rewarded with verbal praise:

The therapist praised him each time he handed a block to her and encouraged him to get another. (Gugu 18/06/2008)

The use of praise was evident in therapeutic sessions with Mhlangu as he faced many mobility challenges during gross motor tasks. To ensure that he continued to partake in a variety of movement transitions to improve his gross motor coordination the therapist praised him after successfully climbing up the staircase. The following scenario displays the therapist's positive disposition:

The toddlers were then required to climb the staircase holding onto the banisters. Mhlangu climbed sideways rather than facing forward. When he got tired, he 'bear' walked up the stairs rather than crawled. When he reached the top we would all clap hands and praise him. (Mhlangu, 21/05/2008)

When Mhlangu was required to construct a simple foam puzzle, he required a lot of assistance:

An immense amount of positive reinforcement was given throughout the session in an attempt to encourage and motivate Mhlangu. Each time he does an activity well he was praised. (Mhlangu, 23/04/2008)

The therapist's positive disposition was also demonstrated through her use of verbal prompts. One example is cheering the child on, to encourage active movement transitions. This was evident in a session with Lindy to encourage her to crawl. As Lindy responded well to the therapist's voice, she crawled faster when the therapist called her name.

Lindy was required to chase the therapist while crawling on her hands and knees. The therapist kept the play object in her hand and encouraged Lindy to retrieve the toy by slowly running away from her. While running

the therapist kept on looking to the back and called Lindy's name. Lindy crawled halfway around the room. (Lindy, 19/05/2008)

Encouragement in the form of positive reinforcement and praise during gross motor tasks provided Mhlangu with additional motivation during play.

An immense amount of positive reinforcement was given throughout the session in an attempt to encourage and motivate Mhlangu. Each time he did an activity well, he was praised by the therapist, the caregiver and other children who are in the treatment area at the time. (Mhlangu, 23/04/2008)

As a result of the positive reinforcement provided to Mhlangu his motivation increased to the extent that he engaged more enthusiastically during play.

Positive reinforcement was important in encouraging Gugu to continue to partake in the activity.

The caregiver together with the therapist would praise Gugu and in an amusing way. Gugu loved this. (Gugu, 07/05/2008)

When Gugu was praised, he persevered in the task at hand and displayed signs of complete engagement and increased motivation during the play based sessions.

As with Lindy, encouragement through the use of positive reinforcement was also employed to prolong her active engagement during play. Lindy progressed developmentally throughout the play based intervention programme. As a result of her engagement in play Lindy took her first independent step. After her first attempt she tumbled over. The therapists together with the caregivers in the play room chanted her name in a playful manner and as a result she attempted to stand once more.

After three steps she fell but preserved through the task again as everyone in the room cheered her on. (Lindy, 28/06/2008)

Thus, the therapist's attitude of warmth, encouragement and the use of praise and verbal prompts were strategies employed to facilitate development.

5.1.1.2. Eliciting engagement in play

Physical and affective guidance also encouraged participants to partake in play. Employing games assisted participants to engage more during play. Encouragement was offered in the form of a chasing game to develop Mhlangu's gross motor skills in running. When the therapist chased Mhlangu he engaged enthusiastically in the tasks and continuously smiled and looked behind to see if the therapist was still chasing him.

They were then requested to run towards the staircase. As Mhlangu's gross motor coordination was not fully developed he required a lot of encouragement to run as this was a skill he has not yet mastered. During running he would not lift his feet high enough from the ground but would rather run with a very small base of support shuffling his feet along. The therapist pretended to chase him. (Mhlangu, 21/05/2008)

Creative and spontaneous reactions were facilitated with Mhlangu when playing the nursery rhyme 'Ring o Roses'. Mhlangu particularly enjoyed the nursery rhyme. He especially enjoyed the part of the game where he was required to 'fall down' and jump up again. During this game he held the hand of the people on either side of him and side stepped in a circle. Although he enjoyed the jumping part the most he was unable to jump and merely lifted his heels off the ground. He spontaneously sat down after jumping without any prompting from the therapist.

Mhlangu loves playing 'Ring o Roses' especially the part when it is time to fall down and jump up again. He attempts to jump but mainly lifts his

heels when his hands are held. He also displays decreased agility when getting up after having fallen down. He would automatically know what to do when we stood in a circle holding hands. (Mhlangu, 11/06/2008)

After sitting down he then spontaneously stood back up and held the hand of the people next to him and this was an indication that he wanted to continue.

5.1.1.3. Intensively engaged and 'hands-on'

This category describes the intensity of the therapist's engagement with the toddlers that emanated from the data and revealed how the therapist played with the children and how she provided 'hands-on' facilitation through touch and assisting movement.

For example, in order to engage Gugu in transferring from sitting to standing, which he initially disliked, the therapist was required to be creative in her approach. When Gugu transferred from sitting to standing, dissociation at the hips was not apparent as he mainly used a gross movement pattern to aid the transition. The therapist encouraged him to stand by holding a noisy toy just out of reach. As Gugu responded well to sensory input, in this case tactile input, the therapist tickled him when he was standing and as a result he fell onto his buttocks. The toy was used once more to encourage him to stand. During this transition the therapist supported his lower limb to encourage dissociation at the hips. When he stood once more the therapist yet again tickled him and he fell onto his buttocks. The sensory input through tickling was continued several more times and as a result, Gugu automatically sat down after standing as he heeded the therapist's attempt to develop a fun game.

Each time Gugu stood up the therapist tickled him so that he sat down again and would then have to stand up again. Gugu's transitional movements had improved as he was starting to automatically transfer from two-point kneeling to one point kneeling to standing. (Gugu, 21/05/2008)

During therapeutic play with Lindy at feeding time, the therapist developed an impromptu game. Lindy had difficulty feeding independently with a spoon. To stimulate independence in feeding, the therapist guided her hand and made amusing sounds:

> *While bringing the food to her mouth she flexed her neck to get closer to the spoon and then placed the spoon awkwardly in her mouth. To encourage increased control during feeding through facilitation the therapist devised a game. The therapist gently held her hand over Lindy's hand and made an airplane sound when scooping the food and bringing it to her mouth. Lindy responded well as she giggled and in this way facilitation of feeding was encouraged. Lindy finished her meal.* (Lindy, 19/05/2008)

The therapist also adopted imaginative pretend play during intervention sessions to promote increased engagement during the sessions. This was particularly effective to encourage agility in transitions with the children. During a session with Lindy, she was encouraged to crawl up a 'pillow mountain' created with a number of cushions stacked on top of one another. The task was challenging as the pillows offered resistance. To encourage vigor in the activity and further enhance her crawling abilities, the therapist pretended to chase her over the mountain. Lindy responded well to the therapist's pretend play and she crawled quicker with excitement and control.

> *Although she was not as quick she managed the task well. At times she clambered over the cushions rather than crawled. To engage her more, the therapist pretended to be a dog and chased her up and down the 'mountain'. She engaged well during the task giggling all along and moving more quickly.* (Lindy, 16/07/2008)

Through the use of self a strong therapeutic relationship was developed with Lindy. Through this effective interpersonal relationship with Lindy, the

therapist's presence was sometimes more appealing than the use of play objects. Lindy's enthusiasm towards the therapist stimulated active transitions when she saw the therapist approaching her. This was evident when Lindy was hospitalized and the therapist provided therapeutic play in Lindy's ward.

> *Lindy responded very excitedly when she saw the therapist by smiling. She attempted to transfer from long sitting to standing in the cot. She managed the transition awkwardly. She transferred into four-point kneeling and crawled a few steps towards the edge of the cot. Once near the side rail of the cot Lindy moved into two-point kneeling by extending her arms on the bed. Once in two-point kneeling Lindy held onto the rails of the cot and slowly lifted herself up. Once standing holding on the rails with both hands it was obvious that this had been a familiar face to her. She immediately reached out with her hands to the therapist placing her body against the cot rail for stability.* (Lindy, 28/05/2008)

An aspect of the use of self in positioning was revealed by the data. The therapist positioned herself, the child and toys to promote active transitions to ensure that the therapeutic aims were met. Gugu was encouraged to play with a toy which he was required to retrieve from the therapist's held up high as to facilitate transferring from sitting to standing.

> *The therapist sat on the floor with Gugu and held a noisy toy up high. The therapist verbally prompted him to reach for the toy and as Gugu was interested in the toy he automatically set out to reach for it.* (Gugu, 21/05/2008)

Once he retrieved the toy the therapist gently took it from him and verbally encouraged him to once more reach for the toy. Gugu moved swiftly into standing using the therapist as support and engaged in the task several times and displayed eagerness to play along despite the fact that the therapist took the toy from him and encouraged him to reach for the toy again and again.

Many of the gross motor activities proved to be particularly challenging for both Lindy and Mhlangu. To encourage continuous engagement in play and to elicit a sense of independence, the therapist subtly assisted the children during transitions, allowing the child continued engagement. In a session with Mhlangu, he was required to engage in an obstacle course to improve his gross motor coordination. He had difficulty climbing onto a bench. To ensure that he was able to continue engaging in the task the therapist gave him a hand.

> *He required assistance climbing onto the bench and thus lacked coordination during this specific aspect of the activity. He easily climbed onto the chair but needed a push to his buttocks to climb onto the bench*. (Mhlangu, 28/05/2008)

Gugu particularly disliked being placed in four-point kneeling. When the therapist facilitated the motions of crawling using a towel, he resisted movement. In order to distract his attention from the uncomfortable position the therapist encouraged his caregiver to position a toy in the air a slight distance away. Gugu became intrigued by the toy and as a result he attempted to propel forward in four-point kneeling while the therapist held him in the required position with a towel.

> *The therapist held the ends of the towel and guided him through the motions. This proved to be uncomfortable for Gugu as he groaned. His caregiver gladly assisted by utilising a play object to gain his attention and encourage him to move forward. He participated for a short period*. (Gugu, 23/04/2008)

The therapist was determined to engage the children during sessions and ensure that the therapeutic sessions were fun. In making the sessions fun the therapist was eliciting participation and enjoyment from the children. By making use of her personality, insight and creativity throughout the therapeutic play sessions the therapist's use of self became a therapeutic tool.

5.1.1.4. Encouraging language and communication

Communication with the children was a key aspect in maintaining a therapeutic relationship with the child and in facilitating social and language responses from them. Verbal and non-verbal communication, such as prompting and cueing ensured that learning and understanding were stimulated.

Stimulating emerging language skills was especially evident in interaction with Mhlangu as he understood fairly simple instructions. Mhlangu enjoyed communicating even though it was difficult to understand what he was saying at times. During a story book activity, the therapist aided his language and communication skills by prompting verbal responses. Mhlangu was particularly interested in the pictures. When the therapist pointed towards a picture and articulated the name of the animal clearly, Mhlangu repeated the word after the therapist.

> *Mhlangu seemed very intrigued by pictures and was often amazed when paging through a book. He pointed at the picture and either smile or jargoned while pointing. During this activity the therapist allowed Mhlangu to page and then point at different pictures asking questions such as "who is this?, what is this?, etc". The therapist naturally gave him the correct answers. As Mhlangu's vocabulary was not diverse at that stage he repeated the words after the therapist clearly. In some instances he was able to recall animals such as a dog and a cat.* (Mhlangu, 14/05/2008)

5.1.2 Awareness of the illness effects

5.1.2.1 Therapy with rests

As the children in the study were HIV positive, the therapist was mindful of the illness condition. The secondary complications related to the condition resulted in decreased physical strength and endurance. As a result of compromised endurance levels the children required frequent rest periods following a

demanding gross motor activity. Mhlangu was particularly affected by poor endurance levels.

> *Mhlangu experienced shortness of breadth during the gross motor tasks. According to his doctor this was not concerning.* (Mhlangu, 28/05/2008)

According to his physician this was not particularly alarming. The fact that he develops shortness of breadth should be taken into account during intervention sessions.

When the children displayed signs of exhaustion, the therapist often diverted the activity to a more relaxing task such as desk-top activities to promote restoration and facilitate a balance during the therapeutic play sessions.

> *Finally once it was evident the toddlers were exhausted, they then sat at the table and attempted to thread large colourful beads with the assistance of a thick plastic 'needle'.* (Mhlangu, 07/05/2008)

5.1.2.2. Ensuring safety

Many of the therapeutic activities facilitated with the children in the study required supervision to maintain safety. The therapist therefore was responsible in maintaining safety at all times. In maintaining safety, the therapist ensured that the children were not susceptible to unnecessary harm or fear which may set them back from a health and developmental perspective. The therapist was particularly aware of the children's safety when participating in such tasks as using a therapy ball or a push toy. If the child fell, injury was bound to occur.

The therapist maintained safety by initially slowly guiding the child through the desired movement. When the child was comfortable with the object the therapist then allowed the child to independently engage with the toy. The therapist stayed

close by in the event that the child required stability or a safety net. Maintaining safety with Lindy safety was evident in the following excerpt:

> *The therapist knelt down at the back of the therapy ball and encouraged Lindy to crawl towards the ball. Once Lindy was standing with her hands held on top of the ball she was encouraged to push the therapy ball along the length of the room. She placed both hands on the top of the ball and the therapist stood behind her and initially slowly pushed the ball forward. Lindy walked as the ball moved forward still keeping her hands firmly placed on the ball .When Lindy was more comfortable at the ball the therapist stopped pushing the ball and allowed Lindy to push the ball on her own*. (Lindy, 11/06/2008)

5.1.3. Using what is available

5.1.3.1. Therapy in the most natural environment

As the toddlers were institutionalized, either in a hospital or a care facility, the therapeutic sessions were provided in settings as close as possible to natural play environments. The therapist selected venues for intervention that would contribute to facilitating play. The intention was to create approximate natural settings to counteract aspects of the clinical setting. Lindy, for instance, was seen in the play room while she was at ThembaCare to ensure that the environment aided the achievement of therapeutic goals. The environment also ensured that naturally occurring play items were used which could easily be utilized by the caregivers to stimulate sensory-motor development.

> *During the treatment session which occurred at ThembaCare, Lindy had been required to scribble onto the wall during supported standing…She was able to support herself by holding on the wall with her left hand and scribbling with her right hand...Other tasks during the session included play between two cubes placed a short distance from one another…The other activity which always proved to be a winner with Lindy included*

pushing a small children's chair with some support from the therapist. (Lindy, 04/06/2008)

Therapy with Gugu and Mhlangu took place in the waiting room at the ARV Clinic at New Somerset Hospital. Although this was not the natural setting of the children the environment was normalized by using the waiting area where the children who visited the clinic usually played prior to seeing the doctor. An alternative area at New Somerset Hospital was utilized during the latter therapeutic sessions as the space was large enough to engage Mhlangu in group activities. The Volunteer room at New Somerset Hospital was very similar to the play room at Nazareth House in that it was large and had similar play items which caregivers could easily access stimulate sensory-motor development.

The therapy session took place in a different location today. The therapist decided to take the group upstairs to the volunteer room which was much larger than the area usually utilised. (Mhlangu, 21/05/2008)

Despite this not being Gugu and Mhlangu's natural environment they responded positively throughout the therapeutic play sessions. This was evident in the fact that they enjoyed the session and displayed a positive affect. The following excerpt demonstrates Mhlangu's experience of having fun:

The screeching and laughter in the play area persisted and it was so obvious that they were having fun. (Mhlangu, 21/05/2008)

The use of space within the environment was also evident in achieving an aim with the children. Such spaces included for instance floor space, a wall or the length of the room. This was observed during a session with Lindy. To promote dynamic standing balance in preparation for independent standing, the therapist facilitated scribbling on the wall, an intriguing activity for toddlers. As Lindy's fine motor coordination was not fully developed as yet, it was expected that her crayon would fall from her hand several times. As a result of this Lindy moved

through the transition from standing to squatting to standing repeatedly in an attempt to pick-up her crayon. The wall was thus used as a canvas for scribbling and as a source of stability during her active transition.

The use of space in achieving an aim is demonstrated in the following excerpt:

> *Lindy had been required to scribble onto the wall during supported standing... She was able to support herself by holding on the wall with her left hand and scribbling with her right hand…So when her crayon dropped out of her hand it was no surprise to the therapist... During this transition Lindy slowly moved her left hand lower down the wall, bent both knees and maintained the squatting position while picking the crayon up with her right hand...She dropped her crayon numerous times and as a result she picked the crayon up each time it fell.* (Lindy, 04/06/2008)

5.1.3.2. Therapy with natural occurring items

Some of the therapeutic aims were achieved by using what was naturally present in the situation in which the child was living and in which the therapy occurred. These included toys, furniture, therapeutic equipment, and the therapist positioning these objects in such a manner that developmentally appropriate movements and transitions were elicited. For instance, during a session with Gugu the following scenario demonstrates how Gugu was positioned on the floor and the use of a towel to facilitate movement:

> *To promote crawling in four-point kneeling a towel placed under his axilla and trunk was used facilitate the action of crawling. The therapist held the ends of the towels and guided him through the motions.* (Gugu, 23/04/2008)

Naturally occurring items in the environment such as toys were positioned to promote developmentally appropriate movements and positions.

> *Reaching for a toy in the therapist's hand which is held high enough to reach when he is standing proved to be quite a good exercise. The therapist sat on the floor with Gugu and held a noisy toy up high… as Gugu was interested in the toy he automatically set out to reach for the toy. He transitioned into kneeling, placed both hands on the therapist and pulled at her clothing to lift him into standing.* (Gugu, 28/05/2008)

An obstacle course constructed from available furniture was often utilized for Lindy and Mhlangu. During the obstacle course the children were encouraged to move through transitions from crawling to kneeling to standing to climbing and to running.

> *During the gross motor task Lindy partook in an obstacle course which included crawling through a tunnel, transferring from sit to stand in order to climb onto a small couch, holding the therapists hand in order to walk the length of the couch and then attempt to jump down from the little couch…Lindy mainly enjoyed the crawling and walking on the couch aspects of the task. Her agility in moving through transitional positions has improved significantly. She maintained entertained and enthused during gross motor activities.* (Lindy, 28/06/2008)

The use of furniture to facilitate gross motor coordination was also effective in therapy with Gugu. To prepare Gugu for independent walking, activities in kneeling were encouraged. Gugu was required to push a chair while kneeling. He was very active during this transition and displayed signs of enthusiasm and persistence.

> *The therapist slowly guided him into kneeling and then pushed the chair slightly encouraging him to "kneel walk" closer to the chair. Pushing a small chair in kneeling was the highlight of the session for Gugu. The more he pushed the chair the louder the noise he made. This seemed to intrigue him the most.* (Gugu, 14/05/2008)

5.1.3.3. Using normal routines therapeutically

Therapeutic activities facilitated during routine times such as meal times or time for changing a nappy was evident in sessions with Lindy. These situations arose unintentionally but were used for play-based intervention facilitated for a number of reasons. In one instance Lindy was soiled at the time the therapist arrived at ThembaCare. To stimulate independence and engagement in activities of daily living, the therapist encouraged Lindy to assist during dressing through verbal and non-verbal prompts. Lindy responded by assisting during dressing, which is demonstrated in the following excerpt:

> *Lindy delightfully smiled as she assisted in the task by bringing a limb out to be undressed and dressed when the garment was presented to her.* (Lindy, 28/06/2008)

During another therapeutic session, the therapist arrived just before meal time. Lindy immediately stopped playing when she noticed the food trolley and crawled towards the table. Once seated on the chair and her food was placed on the table, it was obvious that she had difficulty feeding herself with a spoon. As a result the therapist used this opportunity to engage her in activities of daily living to prepare her for independent feeding with a spoon.

> *When her food was presented to her Lindy grasped the spoon with the tips of her index finger and thumb, she held the spoon at the tip. This was an awkward position as the spoon did not look stable in her hand. As a result the therapist had guided feeding with a spoon using a hand over hand technique.* (Lindy, 19/05/2008)

5.1.4. Collaborating with caregivers

Evident in this theme was also the importance of collaborating with the caregivers during the intervention. The caregivers were encouraged to partake during

sessions to ensure that carry-over of therapy also occurred at home or in the places of care when the therapist was not present. Caregiver collaboration was evident with Gugu and Mhlangu where they were active participants in the intervention session.

> *His caregiver gladly assisted by utilising a play object to gain his attention and encourage him to move forward.* (Gugu, 23/04/2008)

> *Therefore each time he stood the caregiver together with the therapist praised Gugu.…* (Gugu, 07/05/2008)

Another benefit of the collaboration was that the caregivers also informed the therapist of gains made at home and any other concerns they faced at home.

> *According to his caregivers Mhlangu now climbed up the staircase at Nazareth House which he previously avoided.* (Mhlangu, 14/05/2008)

> *His caregivers reported that they are concerned that Mhlangu is not running as yet.* (Mhlangu, 21/05/2008)

5.2. Theme 2: Engaging, playing and developing – the child

The second theme, 'engaging, playing and developing – the child', depicts the responses of the children to the intervention in five categories. The categories demonstrate the child's response in terms of what the child was doing, feeling, being, pretending and cuing.

5.2.1 Doing:

5.2.1.1. Being productive, moving and engaged

Original sub-categories of productivity, movement and engagement were condensed into the category of 'doing' (see Appendix C, p. 119. The category of

'doing' represents the child's responses during the play-based intervention when it was evident that there was a productive behaviour, movement or transition when the child was engaged in an activity and when the child seemed to be in control of the activity, game or playing. Productive behaviours and movement were codes that frequently appeared in the analyzed data. When the child was productive they successfully engaged in playing during the therapeutic sessions and moved through a variety of movement transitions.

Lindy proved to be productive when playing with a push toy. The therapist attracted her attention to the toy by pressing a button which echoed a sound. Lindy was immediately appealed by the toy and swiftly crawled towards the push toy. She then successfully transferred from sitting to standing holding onto the toy and played with the toy. When the therapist guided her to walk with the toy, Lindy walked with increased control and coordination.

> *She immediately transitioned into standing and placed both hands on the push toy's handles while the therapist held the toy firmly. She held the handles tightly and when she was able to maintain her balance she lifted her right hand and pushed the button with her right index finger. She looked towards the therapist and smiled in delight. She repeated this activity a number of times. The therapist then provided less support at the push toy and Lindy was encouraged to walk along with the push toy. She still held onto the handles tightly and managed to walk down the corridor with less force than when pushing the therapy ball in session five.* (Lindy, 21/06/2008)

During another session productive behaviour was evident when Lindy was encouraged the walk up a 'pillow mountain'. During this activity Lindy transferred from sitting to standing and walked over the mountain with her hands held. Although the task was challenging Lindy persisted.

She stood up easily holding the therapist's hands. While her hands were held by the therapist Lindy was encouraged to walk over the 'mountain'. This activity required physical strength, coordination and endurance. Lindy progressed well but often fell if she did not lift her leg high enough to step over the pillows. Despite falling Lindy stood up and continued to climb the mountain eagerly. (Lindy, 16/07/2008)

The following excerpt displays Lindy's productive behaviour during sit to stand transfers. Lindy was attracted by the bright coloured play object and automatically transferred to reach the toy held up high by the therapist. Once she successfully obtained the toy it was hard for the therapist to retrieve it as she held the toy tightly. Active engagement was evident as Lindy performed the task successfully and persisted in playing following prompts from the therapist.

The therapist used a brightly coloured toy to encourage her to reach. Lindy initially reached out with her right hand and soon realised that she was unable to reach the toy. Lindy hastily transitioned from sitting to two point kneeling. She then placed both hands on the therapist's lap and forcefully pulled herself up into standing. She held onto the therapist with her left hand and using her right hand obtained the toy… the therapist placed her in sitting in a playful manner and retrieved the play object from her hands with some force as she gripped the toy tightly... This continued five times. (Lindy, 19/05/2008)

Mhlangu displayed productivity, movement and engagement during an obstacle course activity. As the task was challenging he engaged by actively using his upper limbs to aid the transition. He partook in all the obstacles on the course successfully and only required assistance from the therapist once. He actively moved from standing to climbing up the ladder to standing on the ledge to sitting above the slide and actively sliding down the board.

> *Mhlangu did very well during the task. In order to perform the activity confidently Mhlangu utilised his hands as stability during climbing.* (Mhlangu, 07/05/2008)

Mhlangu's productivity and engagement was also evident during a desk-top fine motor activity. Mhlangu was actively able to manipulate the shape sorter pieces in the holes. The therapist initially indicated where the shape should be placed. Thereafter he managed the task by trial and error. Mhlangu successfully placed all the shapes in the shape sorter.

> *Mhlangu was able to manipulate the pieces into the spaces with the assistance…He mainly used a tripod grasp to manipulate the shapes... By trial and error he was able to manoeuvre the shape into the correct space…all the shapes were correctly placed.* (Mhlangu, 14/05/2008)

During another gross motor task Mhlangu actively crawled and walked over a 'pillow mountain'. Despite the many challenges he faced he persevered and continued playing.

> *Mhlangu managed this task with ease. They were then encouraged to bear walk up the mountain where they climbed up with extended arms and legs. …Mhlangu partook in the task with less agility than when he crawled. They held hands and marched up the mountain….As Mhlangu hands was held it was easier to perform the task. To end the session a 'pillow fight' was initiated. Mhlangu tumbled over a number of times but it caused no tears.* (Mhlangu, 25/06/2008)

5.2.1.2 Guiding and controlling play

Guiding and controlling play did not feature as it would in typically developing children during natural play situations as the participants where in a situation where play was facilitated by the therapist. However, instances of the children

choosing how to play revealed their own guiding and controlling of the play situation. Guiding and controlling play was particularly evident when the child decided what to play. The child actively persisted to overcome barriers and engaged in the activity for pure pleasure. This was specifically evident in play with Lindy.

> *She was very intrigued when she glanced at the brightly coloured play objects…She smiled broadly and eagerly made sounds of excitement…Free play took place in order to allow her to choose intriguing play objects and to allow her to spontaneously engage in play. While seated Lindy attempted to build a tower using rubbery stacking blocks. She was able to grasp the blocks in one hand using a whole hand grasp. She grasped the blocks one at a time and when she attempted to build a tower she overshot and as a result was unable to place the brightly coloured rubber blocks on top of one another. She attempted this five times. She then weight shifted and reached for an action-reaction toy with her right hand. She then realised that the toy was too heavy to grasp with one hand. She weight shifted some more and using both hands she retrieved the toy. She placed the toy on the floor between her legs and while sitting pushed and prodded the buttons of an action-reaction play object using her right index finger.* (Lindy, 28/05/2008)

Mhlangu also displayed the control during an active rhyming game. His control was evident in a game which he often played with the therapist, and hence he knew the actions and some of the words to the rhyme.

> *Mhlangu loved playing 'Ring o Roses' especially the part when it is time to fall down and jump up again. He attempted to jump but mainly lifted his heels when his hands were held...He automatically knew what to do when we stood in a circle holding hands.* (Mhlangu, 11/06/2008)

5.2.2. Feeling

The category of feeling represents the child's response to the therapeutic play-based intervention evident in the fact that they exuded feelings of pleasure, fun and enjoyment. During these interactions the child displayed persistence, determination and enthusiasm.

5.2.2.1. Enjoyment

The toddlers' behaviour often revealed that they were having fun and were experiencing enjoyment. Lindy, for instance displayed enjoyment whilst engaged in play through vocalisation.

> *She smiled broadly and eagerly made sounds of excitement.* (Lindy, 28/05/2008)

> *She looked towards the therapist and smiled in delight.* (Lindy, 21/06/2008)

Mhlangu's display of enjoyment was revealed as follows:

> *Throughout the session Mhlangu smiled and giggled.* (Mhlangu, 23/04/2008)

Mhlangu, who enjoyed playing with other children and liked to interact socially, displayed how enjoyment with others loudly:

> *The screeching and laughter in the play area persisted and it was so obvious that they were having fun.* (Mhlangu, 21/05/2008)

During solitary play, Mhlangu became engrossed and demonstrated that he was having fun.

He loved this activity as this was clearly seen through the smile on his face and the way he giggled when the pins fell down. (Mhlangu, 11/06/2008)

Gugu displayed enjoyment through boisterous participation and at other times through laughter:

He banged hard and loud and smiled when he heard the loud noise he had made. (Gugu, 14/05/2008)

Gugu tended to giggle throughout the task. (Gugu, 11/06/2008)

Enjoyment and having fun featured frequently during the sessions

5.2.2.2. Persistence and Determination

All three children at times displayed their persistence and determination in activities that they engaged in. If the activity proved to be fun and engaging, it prompted the children to persevere and repeat the activity or movement pattern.

Mhlangu displayed his persistence and determination modeled on observation of his playmates:

Mhlangu seemed to tire very easily but persevered when he saw the other group members still partaking. (Mhlangu, 18/06/2008)

Success acted as a stimulus for persistence:

Once all the shapes were correctly placed Mhlangu was praised and he then wanted to continue playing. (Mhlangu, 14/05/2008)

Gugu displayed his persistence and determination during activities that elicited movement and vestibular stimulation:

When the therapist stopped the movement Gugu would then continue persistently reiterating the movement pattern. (Gugu, 23/04/2008)

5.2.2.3. Tasks and activities that held special appeal

The data revealed that each child found specific activities especially appealing. The high appeal of these activities elicited continuous active engagement in play. The appeal ranged from persons to sensations. The following inserts demonstrate the exact appeal to each of the three children.

Lindy was particularly energized and motivated by the presence of the therapist. Whenever Lindy became aware of the therapist's arrival, she reacted joyfully and excitedly, anticipating playing.

Lindy responded very excitedly when she saw the therapist by smiling and attempted to transfer from long sitting to standing in the cot. (Lindy, 28/05/2008)

Food and eating was also particularly appealing to Lindy.

When the therapist met Lindy at ThembaCare it was feeding time. When Lindy noticed the food trolley she left her play objects behind and crawled towards the table. She was able to transition to standing with minimal effort but was unable to transfer herself onto the chair. The therapist therefore assisted her. When seated Lindy could not wait for her food and she continuously looked towards the caregiver who was handing out the food. She had a very excited look on her face. When her food was presented to her Lindy grasped the spoon with the tips of her index finger and thumb and held the spoon at the tip. This was an awkward position as the spoon did not look stable in her hand. (Lindy, 11/06/2008)

Gugu seemed particularly attracted to activities during which vestibular, proprioceptive, tactile or auditory stimulation were elicited. Gugu appeared to be sensory seeking and he sought out play activities, such as noisy toys, that provided sensory input.

> *Gugu enjoyed activities which provided vestibular and proprioceptive input. He seemed sensory seeking at times. This could also be a direct result of prolonged and frequent hospitalisation with limited sensory experiences. Gugu was placed on the therapy ball. The therapist provided support at his pelvis and he automatically initiated the activity on his own mainly using is trunk muscles. He was giggling a great deal. Throughout the activity the therapist made amusing sounds to keep him engaged. The latter part of the activity involved encouraging increased anterior and posterior flexion of the trunk. Again the therapist provided support at his pelvis ensuring that his hands were free and guided him through the movements (backwards and forwards). When the therapist stopped the movement Gugu would then continued persistently reiterating the movement pattern.* (Gugu, 23/04/2008)

Mhlangu enjoyed social interaction with other toddlers. Placing him in groups or providing opportunities for social playing, appealed to him.

> *Mhlangu interacted well in a group and actively participates. He interacted more when he saw another toddler playing along and vocalised jargon…During the obstacle course activity Mhlangu seemed to tire very easily but persevered when he saw the other group members still partaking. The activity proved to be a real fun game for Mhlangu as he seemed to smile, giggle and partake with determination.* (Mhlangu, 18/06/2008)

5.2.3. Being

In the category 'being', incidents from the data are described where the therapeutic goals for the children's developmental progress were achieved and where evidence occurred that therapeutic outcomes were met. Gains in sensory-motor development and gains in playfulness were noted. Lindy and Gugu made progress in terms of their sensory-motor development and playfulness. Mhlangu made progress in terms of the quality of movement in terms of sensory-motor development and playfulness.

5.2.3.1. Gains in sensory-motor development

The following series of excerpts from the data demonstrates the development of Lindy's sensory-motor progress over the two-month period of the intervention, illustrating her progress from crawling to walking. In some instances, her playfulness is revealed:

> *Lindy crawled effortlessly*. (Lindy, 19/05/2008)

> *She transitioned into two-point kneeling and then placing both hands on the couch she stood up and attempted lifting her right leg up onto the couch. She was unable to climb up onto the small couch unaided.* (Lindy, 19/05/2008)

> *During this transition Lindy slowly moved her left hand lower down the wall, bent both knees and maintained the squatting position while picking the crayon up with her right hand.* (Lindy, 04/06/2008)

> *Lindy only maintained independent standing for a few seconds before she fell.* (Lindy, 11/06/2008)

Lindy walked as the ball moved forward still keeping her hands firmly placed on the ball. (Lindy, 19/06/2008)

Lindy was now able to stand independently for longer than five seconds and could transfer from sitting to standing with minimal effort. (Lindy, 19/06/2008)

She still held onto the handles tightly and managed to walk down the corridor with less force than when pushing the therapy ball in session five. (Lindy, 21/06/2008)

She then awkwardly climbed onto the couch. She placed both hands on the couch, lifted her right leg onto the couch and using both arms pulled the rest of her body onto the couch. (Lindy, 28/06/2008)

Following the activity she took her first tiny independent step when unengaged in therapy. (Lindy, 28/06/2008)

Lindy seemed to be taking more independent steps but still often fell down. (Lindy, 16/07/2008)

Gugu's sensory-motor progress is presented in the following excerpts that illustrate his progress from resisting four-point kneeling though crawling to standing and cruising.

…actively swiftly creeping in prone. Gugu maintained four-point kneeling for a short period…He attempted to propel forward in four-point kneeling… (Gugu, 23/04/2008)

…actively crawling on his hands and knees (Gugu, 07/05/2008)

He was able to transfer from sitting to standing by pulling himself up holding onto an object and lifting both legs simultaneously. (Gugu, 07/05/2008)

…he maintained independent kneeling. (Gugu, 14/05/2008)

Gugu's transitional movements had improved as he was starting to automatically transition from two-point kneeling to one point kneeling to standing. (Gugu, 21/05/2008)

The session proceeded to encourage him to reach for the play object while cruising along a bench. Gugu quickly side steeped along the bench lifting his hand up from time to time in an attempt to reach the toy. (Gugu, 28/05/2008)

In an attempt to stimulate improved coordination and balance in standing Gugu had been encouraged to reach for play objects placed on cubes scattered a short distance apart. He partook hastily in this activity and was eager to collect the play objects. To reach the next cube he was required to reach out beyond his base of support which he managed. (Gugu, 11/06/2008)

Gugu now stood well with one hand held. (Gugu, 18/06/2008)

Mhlangu's progress is illustrated in improved quality of movement. He was already walking but gained increased coordination, agility and speed:

He actively participated and was walking independently. He required some support at times. (Mhlangu, 28/04/2008)

Mhlangu was walking slightly more confidently requiring less support that seen last week. (Mhlangu, 07/05/2008)

According to his caregivers Mhlangu was now climbing up the staircase at Nazareth House which he previously avoided. (Mhlangu, 14/05/2008)

During running he did not lift his feet high enough from the ground but rather ran with a very small base of support shuffling his feet along. (Mhlangu, 21/05/2008)
He attempted to jump but mainly lifted his heels when his hands were held. (Mhlangu, 11/06/2008)

Mhlangu waddled in an attempt to run. (Mhlangu, 11/06/2008)

5.2.3.2. Incidents of playfulness

Lindy's playfulness is presented in the following excerpt where signs of active engagement for shear pleasure are noted and the perception of control is evident:

The therapist presented Lindy with a push toy with a number of buttons to push and knobs to turn on the tray. When the therapist pushed one of the buttons which made a sound Lindy smiled and quickly crawled on her hands and knees to where the therapist stood. She immediately transitioned into standing and placed both hands on the push toy's handles while the therapist held the toy firmly. She held the handles tightly and when she was able to maintain her balance she lifted her right hand and pushed the button with her right index finger. She looked towards the therapist and smiled in delight. She repeated this activity a number of times. (Lindy, 21/06/2008)

Mhlangu's playfulness is presented in the following excerpt where signs of active engagement for shear pleasure are noted and the perception of control is evident:

The therapist together with a caregiver initially demonstrated the game to the toddlers. The toddlers were eager to partake. They showed their

enthusiasm by smiling broadly. Mhlangu quickly walked over to his push toy and happily pushed it at a pace towards another toddler. He maintained a smile on his face. The screeching and laughter in the play area persisted and it was so obvious that they were having fun. This task required control and speed from the 'pusher' as the push toy has wheels and was no as rigid as pushing the chair as previously. Mhlangu did well but found it difficult to control his speed... (Mhlangu, 21/05/2008)

Gugu's playfulness is presented in the following excerpt where signs of active engagement for shear pleasure are noted and the perception of control is evident:

Based on the fact that he so much enjoyed noisy play objects the session was boisterous. Gugu was encouraged to play with blocks while kneeling. He was very active as he continuously banged the blocks together holding one block in each hand and simultaneously he maintained independent kneeling. He banged hard and loud and smiled when he heard the loud noise he had made. Thereafter the therapist encouraged him to hand over the blocks and while holding his hands encouraged him to stand up. The transition had improved since the previous session but it was evident that he required more practice. While holding his hands the therapist guided him towards a small chair and he was encouraged to hold the back of the chair. He automatically held the chair with both hands as he was unstable with one hand supported. The therapist slowly guided him into kneeling and then pushed the chair slightly encouraging him to "kneel walk" closer to the chair. Pushing a small chair in kneeling was the highlight of the session for Gugu. The more he pushed the chair the louder the noise he made. This seemed to intrigue him the most. (Gugu, 14/05/2008)

5.2.4. Pretending

As the children in the study were very young, few instances of the ability to suspend reality were observed. The therapist often used pretend play as a

therapeutic tool to engage and encourage the child. Pretend play was also used by the therapist to make to the activity more fun and intriguing especially when the children were presented with challenging tasks.

Gugu's play revealed the ability to suspend reality when he was playing with blocks in an unconventional way. He enjoyed this activity as he received proprioceptive input when engaging with the blocks. He repetitively engaged with the blocks in this way and while doing so he seemed much immersed in the activity.

> *Based on the fact that he so much enjoys noisy play objects the session was boisterous…He was very active as he continuously banged the blocks together holding one block in each hand…He banged hard and loud and smiled when he heard the loud noise he had made.* (Gugu, 14/05/2008)

5.2.5. Cuing

The cues given by the children were limited to verbal utterances, resistance and signs of disinterest in an activity as the children were not communicating verbally as yet. The therapist read the children's cue and made adaptations to the activity to ensure continued engagement.

The cues the children demonstrated to the therapist indicating how the therapist should play were revealed when Lindy disliked being assisted during feeding and displayed her dislike:

> *Lindy was very strong willed and determined which was expected at her chronological age. Lindy obviously refused the therapist's help during feeding by making irritated sounds and by pulling her hand away from the therapist's hand.* (Lindy, 19/05/2008)

Gugu gave cues about likes and dislikes to the therapist, indicating how he wanted the playing to be. The following two excerpts demonstrate how he cued dislikes:

> *Gugu would not want to maintain the position as he most likely felt restricted due to the fact that he is unable to propel forward*. (Gugu, 23/04/2008)

> *As he disliked being in two-point kneeling, he repetitively wanted to stand.* (Gugu, 07/05/2008)

Mhlangu was the eldest of the three toddlers and he was at the stage where he understood prompts and commands. Taking into account his ability to follow verbal and non-verbal instructions, the therapist often demonstrated tasks to further develop his cognitive understanding and awareness. In demonstrating activities to him before hand, the therapist also created excitement around the activity. As result of the excitement created, Mhlangu automatically engaged enthusiastically in the activity and there was evidence that he was having fun.

> *The therapist together with a caregiver initially demonstrated the game to the toddlers. The toddlers were eager to partake. They showed their enthusiasm by smiling broadly. Mhlangu quickly walked over to his push toy and happily pushed it at a pace towards another toddler. He maintained a smile on his face. The screeching and laughter in the play area persisted and it was so obvious that they were having fun.* (Mhlangu, 19/05/2008)

In some instances the children also read the therapist's cues and responded positively by heeding the therapist's cues.

> *Mhlangu found this difficult and the therapist then assisted. By trial and error he would was to manoeuvre the shape into the correct space. Once*

all the shapes were correctly placed Mhlangu was praised and he then wanted to continue playing. (Mhlangu, 14/05/2008)

In conclusion, the data revealed that the therapist used herself as a therapeutic tool and employed an enabling attitude to elicit play and playfulness. Furthermore, the data revealed that the toddlers responded to the intervention though active engagement, movement, having fun and showing enjoyment.

CHAPTER 6: DISCUSSION

6.1 Discussion

The aim of the study was to explore how a play-based intervention with toddlers with HIV would enhance their play and development. Theoretical frameworks of occupation by design (Pierce, 2001) and playfulness as a disposition of play (Bundy, 1997) informed the study inductively. Two themes emerged from the data. The first theme described the therapeutic behaviours adopted by the therapist to facilitate play, playfulness and development whereas the second theme described the children's responses to the intervention.

Cole and McLean (2003) define the terms therapeutic use of self as the therapist's obvious attempt to enhance their interactions with clients. Punwar and Peloquin (2000, p. 285) describe the therapeutic use of self as the "therapist's planned use of his or her personality, insights, perceptions, and judgments as part of the therapeutic process". The therapist's behaviour was characterised, by intensive engagement with individual toddlers to encourage, elicit or enable play and playfulness in achieving such aspects of therapeutic aims such as movement transitions. The therapist's attitude was enabling and the attitude of enablement was characterised by a disposition of warmth, friendliness, playfulness, encouragement and praise. Lane and Mistrett (2008, p. 414) emphasize the importance of the therapist's ability to "validate the importance of play, embrace play as worthy of their time and energy, and address it as an important goal in and of itself." Hence, by being intensively engaged in play the therapist acknowledged the value of play and became a player herself. As a result of this, the therapist ensured that the children were completely engaged in play to improve their development, learning and playfulness.

The therapist's enabling attitude assisted in encouraging the children to engage in play despite the physical challenges they faced. Warmth and encouragement was utilised in assisting a child when they persevered to partake in a task that

challenged their physical capabilities. Praise and cheering assisted the children to continuously engage and persist in a task in which they were already doing well or trying hard. The therapist used verbal prompting, singing, and physical prompting to guide movement transitions and play. Nursery rhymes such as singing 'ring o roses' were used to achieve goals in a fun creative way as supported by Fazio (2008). Fazio (2008) suggests that there are many neglected forms of play which therapists can use to create fun therapeutic experiences for children in order to reach the therapeutic goals.

The therapeutic use of self manifested in the therapist adopting a playful disposition marked by fun, creativity, imaginativeness, and demonstrativeness. This playful disposition allowed the therapist to create a game based on the child's response to an activity, using the current play objects with which the child is playing and the therapist herself became a therapeutic tool in the game. The therapist playful disposition hence supports humour as a valuable therapeutic tool in client-centered practices (Leber & Vanoli, 2001) and is essential in building good therapeutic relationships (Devereaux, cited in Leber & Vanoli, 2001).

The therapist engaged in certain actions to ensure that the children were fully engaged in play. To improve their sensory-motor development the therapist at times became physically engaged in the session by giving a hand to assist the child in an activity such as climbing. This is recognized by Keilhofner (2002) as an occupational therapy strategy identified as physical support, which enables the therapist to engage with the client during occupations. When the child was experiencing discomfort in a position necessary to elicit a movement transition, the therapist made adaptations to the task to ensure that the child was comfortable or she used an intriguing play object to distract the child's attention.

In order to stimulate language and communication skills and ensure that a good therapeutic relationship was maintained with the child, the therapist maintained verbal and non-verbal communication throughout the therapeutic play-based intervention programme. This was ensured by explaining to the child what was

expected verbally and non-verbally through demonstration, gestures and sounds. The noted language and communication delay in HIV positive children could also be a direct result in frequent periods of hospitalisation, being placed in institutions where their natural home language is not spoken and being separated from the parents, specifically a maternal figure who is the child's main source and tool to promote communication and language.

The therapist considered a number of factors which may have had an influence on the therapeutic play-based intervention programme. As HIV positive children often have respiratory problems or based on the fact that they are often sick their, energy and endurance levels fluctuated from time to time. With a constant awareness of these factors, frequent rest periods were included, when for instance the children became tired after gross motor tasks. Restful activities were then included to provide a balance in the session, such as playing with dough, threading beads, puzzles or engaging in activities on the floor such as identifying pictures in a story book.

Another major factor considered by the therapist for this population was safety. As identified, HIV positive children spend a large portion of their developing lives in hospitals due to the extensive opportunistic infections and secondary complications of the disease. It was therefore one of the key priorities for the therapist to ensure safety of the children to avoid injury and further hospitalization. As HIV is known to be contracted through body fluids, the therapist and other caregivers were always cautious regarding contact with blood and other body fluids and took precautions such as wearing gloves and frequently washing toys and equipment. By including rest periods and through constant awareness of safety issues, the therapist ensured that occupational intactness (Pierce, 2001) was achieved.

Some of the other factors considered during the therapeutic play-based intervention programme included the use of space, objects and time to ensure that

the child engaged sufficiently to improve their sensory-motor development and playfulness and hence targeting the therapeutic goals.

The use of space was utilized to either ensure that the child engaged in therapy in their natural environment or to ensure that the space utilized was as near to the natural environment as possible, linking to Pierce's (2001) concept of occupational intactness. This was important to guarantee that the child was immersed in the session, to ensure that the new environment was not too over stimulating or daunting that the child did not engage completely. Finally utilizing the appropriate spaces ensured that the caregivers were then able to engage the child in play at home based on what was facilitated during therapy. Based on the fact that HIV positive children are often hospitalized and are in institutions, providing the opportunity to engage in play in a natural setting or near natural setting affords the opportunity for them to be taken out of the typical clinical environment, allowing the child to engage more.

Occupational intactness (Pierce, 2001) was also evident in the therapist engaging the child in play using naturally occurring items which could easily be accessed in the majority of homes. Using naturally occurring items such as chairs, tables, couches, cushions, spoons and towels afforded the child the opportunity to engage with a familiar item. This also ensured that caregivers were able to engage the child in therapeutic play at home using what was already in the household. Bearing in mind that a large majority of the children who are infected by HIV/AIDS are from lower socio-economic households, parents may not be able to afford to purchase play-equipment to promote their children's sensory-motor development and playfulness using household items is encouraged.

The therapist also made therapeutic use of normal routines to engage the child in therapeutic play, again revealing occupational intactness. This was easily used during meal times and changing time. In engaging the child in an activity during the using routine 'any time' is 'play time' and hence playfulness and sensory-

motor development is continuously fostered and is automatically accepted as the child's natural waking occupation.

In terms of occupational accuracy (Pierce, 2001) therapeutic play-based intervention programme aligned play with achievement of therapeutic goals. This was revealed by improved development of sensory-motor skills, that the children were more playful, and were engaging spontaneously during sessions. The improvement in their sensory-motor development was evident across all domains of development (gross motor coordination, fine motor coordination, perceptual development and communication skills).

Improved playfulness was demonstrated during play when the children were happy, enthused, engaged and captivated. The four elements of play (Skard & Bundy, 2008) were revealed. Intrinsic motivation was revealed in persistence in engagement in play. Perception of control was illustrated when the children selected toys or games. Suspension of reality was both demonstrated by the children and elicited by the therapist. The fact that the children could use cuing to indicate like and dislikes, revealed that framing was present. They spontaneously played, responded well to cues, were in control of their play, engaged in social play and heeded the therapist's attempts in engaging them in pretend play. Active engagement was evident throughout the play-based intervention programme as the children actively moved through various transitional movement patterns, interacted well with others, and displayed extensive signs of excitement and pleasure.

The theory of the 'occupation by design' approach (Pierce, 2001) was applicable and demonstrated in the data by illustrating the therapeutic power of play via Pierce's three elements of occupation by design namely, occupational appeal, intactness and accuracy. Occupational appeal (Pierce, 2001) was evident in instances where playing, with toys or the activity was appealing to the child. Occupational intactness (Pierce, 2001) was demonstrated for this population when the activity took place in the child's natural environment or natural spaces and

with natural occurring objects. Occupational accuracy (Pierce, 2001) was revealed when therapeutic goals were achieved and developmental or other gains were made by the toddlers.

The therapeutic power of play manifested through occupational appeal (Pierce, 2001), when the children showed preference for or excitement in engaging in activities that appealed to them. For example, activities which offered sensory input such as noise or vestibular and proprioceptive stimulation appealed to Gugu. Brightly coloured toys and interaction with other toddlers appealed to Mhlangu. In Lindy's case, the pleasure of the interpersonal relationship developed with the therapist was appealing. When the activity was appealing for the child, the engagement was spontaneous and prolonged. Occupational intactness (Pierce, 2001) was revealed in providing therapy to the child in an environment as natural as possible. This element of the occupation by design approach is of particular significance for this population as toddlers with HIV are frequently hospitalized or institutionalized. In the case of Lindy, Mhlangu and Gugu, the institutions where the intervention took place had play rooms equipped with child-sized furniture, toys and therapeutic equipment. However, playing and playfulness was elicited anywhere at any time, while waiting to see the doctor, at meal times or at nappy changing times. The data revealed that therapeutic aims could be achieved in any setting and was it was not dependent on having access to a fully equipped therapeutic playroom. In a setting of constrained resources as often found in South African in informal settlements, peri-urban and rural areas, therapists and caregivers could use naturally occurring environments and naturally existing objects to facilitate, play and development

Bundy's theory (1997) of playfulness as a disposition of play was the other theoretical construct that framed the study and that was used inductively in coding. Elements of playfulness, as described by Bundy's (1997) were identified as being an integral part of the play-based intervention used in the study and was demonstrated when children displayed signs of internal motivation, perception of control, the ability to suspend reality and framing (Skard and Bundy, 2008).

Internal motivation Bundy's (1997) model was revealed when children were actively engaging in play, and when they persisted during challenging gross and fine motor activities. Internal motivation was further observed when the children were playing for the pure pleasure of play and by showing positive affect through smiling, giggling and laughing.

The children displayed perception control (Bundy, 1997) by deciding what to play with, who to play with and how to play. Only a few instances of suspension of reality (Bundy, 1997) were noted in the data, and only when the therapist facilitated such play as pushing a chair and making car-sounds. It was postulated that play containing elements of suspension of reality such as pretend play featured less frequently in this population owing to decreased play opportunities. Decreased play opportunities could have emanated from often being sick and in hospital coupled with lack of play resources and lack of insight into the value of play in their home environments. Furthermore, the children were very young and pretend or fantasy play only starts to emerge at this age. The therapist often engaged the children in pretend play to stimulate their creative play abilities.

Finally, in terms of framing (Skard and Bundy, 2008), evidence of children giving cues about their participation and engagement in play was evident in the data. The children gave cues by pointing, gesturing, verbal utterances, non-verbal cues and expressions of emotion. Although young, the children were able to read cues the therapist gave when they were encouraged to continue playing and responded optimistically by heeding the therapist prompts.

6.2 Implications for occupational therapy practice

Occupational therapy for this population requires a therapist that is able to intensively and engagingly play with children. This requires the therapist to be flexible, creative, spontaneous, fun and appealing to children. The therapist should have the ability to design appealing, intact and accurate interventions to ensure that the play-based intervention is meaningful and effective. Therapists should

take into account the fact that this population of children is often sick, in hospitals, institutions or cared for by a secondary caregiver. Interaction and collaboration with the child's caregiver is essential to ensure that the intervention is understood to be valuable, appropriate and meaningful for the child (Daunhauer & Cermak, 2008). In interacting with caregivers specific mention of the ability to make use of natural setting and everyday household objects can be an effective way to facilitate sensory-motor development and playfulness. Furthermore, Daunhauer and Cermak (2008, p. 414) asserts that "practioners must come to grips with the fact that in early intervention the parent is the primary agent of change, not the practioner". Therefore, providing caregivers with the necessary skills to engage with their children in the home with natural occurring items, increases engagement in play significantly (Daunhauer & Cermak, 2008, Ramugondo, 2004, 2005).

As this is a marginalized group of South African children, an occupational justice perspective should inform practice to reach the maximum number of toddlers living with HIV and would derive benefit from a play-based intervention. Occupational justice could serve as a platform to shift the view from an individual intervention approach as described in this study, to a population based intervention approach in order to meet the needs of more South African toddlers with HIV. It is postulated that out of the estimated 429 000 children infected with HIV (Department of Health, 2010) in South Africa, the majority of children do not have access to occupational therapy to improve their sensory-motor development, learning and well-being. A strong need for policy change and advocacy for this group is therefore required to include improved opportunities for these children at institutional, community and population levels to ensure that their play and developmental needs are met.

Links between occupational engagement, in this case play, and well-being are reported. Polatajko et al. (2007) refer to the link between occupational engagement and wellbeing and describe the outcomes as feelings of mastery and

achievement, experiencing sense of well-being, experiencing pleasure and fun and relaxing and restoring energy levels.

UNICEF (2002) supports the view that play is one of the basic human rights. Children who do not play are considered being at risk of occupational alienation and occupational deprivation. The two occupational risk factors are an injustice to a developing child. It deprives the child of the opportunity to grow, develop and fulfil a meaningful purpose in life. Prolonged, blocked access to occupational engagement in play can lead to occupational deprivation (Polatajko et al., 2007). Occupational deprivation can relate into stunted growth and ill health (Polatajko et al., 2007). Being part of a vulnerable and marginalised group, these children who are infected by HIV/AIDS cannot speak for themselves and they experience social injustice on a large scale. Social justice relates to a number of issues which include equality, empowerment, equity and accessibility (Braveman & Suarez-Balcazar, 2009). The lack of fair and equal opportunities to play threaten these children's play skills and development and therefore they may experience occupational injustice. "Occupational justice reflects the belief that societies should provide opportunities for people to engage in meaningful occupations that allow them to develop their potential and participate in their communities" (Braveman & Suarez-Balcazar, 2009, p. 15).

Townsend, Cockburn, Letts, Thibeault and Trentham (2007, p. 184) state that "occupational therapy should enable a just and inclusive society so that all people may participate to their potential in the daily occupations of life". Townsend et al. (2007) view enablement as a core competency in occupational therapy.

Occupational therapy at a population level requires a strategy of social enablement. Enabling social changes at a macro level targets social structures, systems, culture, and the environment. Strategies for social enablement include such approaches as client participation, visions of possibility, enabling community and community change, implementing social justice and collaborative power sharing (Townsend, 2007). Although the focus of this study was on Lindy, Mhlangu and Gugu, the

need for occupational justice for all South African children is highlighted, particularly those in vulnerable and marginalised groups such as children with HIV infection.

Through occupational engagement people develop and maintain health (Baum & Law, 1998). Furthermore Mandich and Rodger (2006) assert that enabling clients to engage in occupations assists them in fulfilling their human need for occupation and allows them to achieve their occupational potential. Findings of this study revealed that the participants in the study were engaged in play occupations which allowed them to develop and be more playful within their environments and interactions with others. Play was therefore used as a vehicle to elicit motor and participative responses.

CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

7.1 Conclusion

In conclusion, this study reported the findings of an investigation of which the aim was to explore play as intervention to enhance sensory-motor and play development in three children who were HIV positive. The objectives were to explore how the therapist implemented the intervention and how she facilitated playfulness, how the children responded to the intervention and how playfulness manifested in the children. The data revealed the therapist's characteristics, attitudes and techniques of how she engaged with the children and what factors she kept in mind during therapy. The data further revealed that the children played actively and appropriately when facilitated, that they displayed signs of playfulness and that they made significant gains in sensory-motor, social and other aspects of development. The thesis also highlighted the child's positive response to the therapeutic play-based intervention programme demonstrated by the children's evident developmental gains. Adopting a playful disposition aided the therapist to best engage with the children to ensure that they playfully engaged during sessions. Play facilitation in occupational therapy with HIV positive children can be used as a means and as an ends (Ramugondo, 2004) during therapeutic interventions to ensure that developmental therapeutic goals are met. Finally, the thesis confirmed the presence of Pierce's (2001) three aspects of occupation by design and Skard and Bundy's (2008) four elements of playfulness as a disposition of play.

7.2 Recommendations

Young children infected by HIV/AIDS should have access to active play and suitable play environments in order to facilitate their sensory-motor development. In South Africa, where there are limits to the resources for health care provision, it is unlikely that all children with HIV/AIDS would have access to occupational therapy. The implication here is that change is needed at policy level by

acknowledgement that play helps in the development of children with HIV/AIDS. Training of parents, caregivers and community health workers in the facilitation of play to aid sensory-motor development may be more realistically attained in a developing country such as South Africa.

Recommendations at policy level:

- All Anti Retroviral and Wellness Clinics should employ occupational therapists to address and prevent play and sensory-motor delays in children infected by HIV/AIDS.
- Formal training sessions on development, play and playfulness may benefit parents and caregivers. Parents and caregivers should be empowered with skills to identify developmental delays. The skill to utilise every day objects within their natural environment to enhance their child's play should be emphasised.
- Occupational therapists should lobby and advocate for the rights of children infected with HIV to have access to play based intervention as part of the course of their intervention.

Recommendations for occupational therapists:

- Occupational therapists should adopt a playful disposition during play with children who are HIV positive to ensure that the therapist engaged intensely with the child to promote playfulness.
- The occupational therapist should adopt a positive, warm and enabling attitude to completely immerse the child in therapeutic sessions.
- In order to elicit adaptive responses, playfulness should be promoted simultaneously in order for play to manifest as a means and ends of occupational therapy.
- All children infected by HIV/AIDS should be assessed by an occupational therapist as early as at 2 months of age when sensory motor developmental delay can already be detected.

- It is suggested that occupational therapists intervene with children infected by HIV/AIDS as early as a diagnosis of HIV/AIDS or clinical picture of the condition is identified.

Recommendations for further research:

- Further research should be considered in the area of early identification and prevention of developmental delay with children who are infected by HIV/AIDS to determine whether delays may be prevented.
- Prolonged research is also recommended with children infected by HIV/AIDS to determine the effectiveness of occupational therapy in assisting these children to catch up with typically developing children.
- As only 3 participants were assessed and treated in this study, further research may be indicated over a larger sample size to determine whether similar results are achieved.
- Evaluation of intervention provided by trained caregivers, parents and community rehabilitation workers should be undertaken to determine its effectiveness.

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APPENDIX A

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20 October 2010

To Whom It May Concern

I hereby certify that the Senate Research Committee of the University of the Western Cape has approved the methodology and the ethics of the following research project by: Ms G Symonds (Occupational Therapy)

Research Project: Play to promote development of learning in children infected with HIV: Case studies of five children

Registration no: 08/1/24

Peter Syster
Manager: Research Development Office
University of the Western Cape

APPENDIX B

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DEPARTMENT OF OCCUPATIONAL THERAPY

PARTICIPANT INFORMATION SHEET (PIS)

Play to promote development and learning in children infected with Human Immune Virus (HIV)

Dear Parent,

I am a master's student in the Department of Occupational Therapy at the University of the Western Cape (UWC) currently conducting research into play as a method of improving child development. Your child has been selected as a potential research participant because we believe that play during therapy could promote development and learning in your child. I am hereby asking your permission for you and your child to participate in the study. Please read the following information pertaining to the research study and feel free to contact me at the details provided below if you have any questions or comments.

During my work at Somerset Hospital I have come across many children who are HIV positive and who often have developmental delay. The purpose of the study is thus to

explore the use of play with children who are HIV positive to facilitate occupational well-being, health and development. The length of the study will be four to five months. My plans are to firstly have an interview with you; secondly I will look how your child plays and how your child is developing. The big part of the research project will be treatment through playing with your child. I will then check to see if your child's development has improved.

I am asking your permission to speak to your child's Doctor and look at your child's medical records about the medical condition. To gain a better understanding of your child's medical condition I would need to consult your child's medical records and speak to his/her Doctor. I am also asking your permission to tape-record the interview so that no information is lost. You have the right to read the document made of the tape recording to make sure that you agree.

It is your choice to be involved in the research study or not. You are free to make this choice. You are free to withdraw at any stage. If you want to speak to somebody about your problems I could arrange counseling for you with the hospital social worker or psychologist.

Confidentiality

Your and your child's identity will be protected.

This study is in partial fulfillment of a Master's thesis undertaken by the researcher at the Department of Occupational Therapy, UWC. This project is supervised by Dr. V. Janse van Rensburg (see contact details below). The

project does not carry any funding and is funded by the researcher. The researcher is an Occupational Therapist and is registered with the Health Professions Council of South Africa (HPCSA). She is thus required to work within the ethical and professional framework as outlined by this body.

Researcher: Miss Gené Symonds
Ph: 083 412 26 36

Supervisor: Dr. V. Janse van Rensburg
Ph: 082 924 68 89

Yours sincerely

Gené Symonds

CONSENT FORM

Researcher: Miss Gené Symonds
Ph: 083 412 26 36
Supervisor: Dr. V. Janse van Rensburg

Research Title:

Play to promote development and learning in children infected with Human Immune Virus (HIV)

Please initial each statement.

1. I confirm that I have read and understand the information sheet dated _____ for the above study and have had the opportunity for questions.
2. I understand that my child's identity will not be disclosed.
3. I understand that my child's participation is voluntary and that I am free to withdraw at any time, without given reason, without my medical care or legal rights being affected.
4. I **give/do not give** permission to have my child's medical notes to be utilized. **(Please circle the relevant section).**
5. I agree to have my child participate in this research study.

_____	_____	_____
Name of Participant	Signature	Date
_____	_____	_____
Name of Researcher	Signature	Date

One copy of this information sheet and one signed copy of the consent form are to be retained by all the participants

APPENDIX C

Coding

Objectives: how the therapist facilitated play; how the child responded to the intervention; how playfulness manifested as a facilitatory strategy; and, how playfulness manifested as a response. New Key/Codes : occupational appeal (attractiveness of activity to child, good developmental fit), occupational intactness (therapy takes place in natural environment of with natural occurring items, or an activity occurring at usual times) , occupational accuracy (therapeutic gains to be achieved), therapist eliciting engagement in play, perception of control (decides, safe, modifies, interacts with objects, transitions, negotiates, social play, extent), source of motivation (engaged, extent, intensity, process, persists, affect) , suspension of reality (mischief, teases, pretends, extent, skill, clowns and jokes, creativity), framing (gives cues, reads cues) **Session** **Age** **Intervention**	**Progress**
1 19/05/2008 19 months While sitting on the ground Lindy had been required to reach for play objects placed on the therapists lap and on a small chair. Each time she had been encouraged to reach for the play object she was required to transfer from sitting to two-point kneeling and then ultimately pull herself up into standing. The therapist used a brightly coloured toy to encourage her to reach. Lindy initially reached out with her right hand and soon	Both activities Lindy absolutely enjoyed although obvious signs of lethargy were present Lindy crawled effortlessly but seemed to have some difficulty with climbing up onto the small couch. This could be a sign of decreased muscle

realised that she was unable to reach the toy. Lindy hastily **transitioned from sitting to two point kneeling**. She then **placed both hand on the therapist's lap** and forcefully **pulled herself up into standing.** She held onto the therapist with her left hand and using her right hand **obtained the toy.** Once she had **obtained the toy** the therapist placed her in sitting in a playful manner and retrieved the play object from her hands with some force as she **gripped the toy tightly**. **Lindy laughed throughout the session** as she obviously thought it had been rather **amusing to** be placed on her buttocks after she had **retrieved the play object**. **This continued five times**. The **task at hand was thus targeted at the 'just right level'** to promote occupational engagement. Thereafter to promote increased gross motor coordination the **therapist created an obstacle course** whereby Lindy had been **required to chase the therapist** while crawling on her hands and knees. The therapist kept the play objects in her hand and **encouraged Lindy to retrieve them by slowly running away from her**. **Whilst running the therapist kept on looking to the back and called Lindy's name**. Lindy **crawled halfway around the room** and was then **encouraged to climb up** onto a little couch. Lindy **required plenty of positive reinforcement** to encourage her to climb up onto the couch. When at the couch she **transitioned into two-point kneeling** and then **placing both hands on the couch she stood up and attempted lifting her right leg up** onto the couch. She was unable to climb up onto the small couch unaided. During this activity the **therapist made sounds** and **amused Lindy** to **encourage continuous play and give increased positive**	strength and a contributing factor of her lethargy. The day after the intervention session Lindy had been admitted to New Somerset Hospital for severe dehydration and gastro.

Developing Categories

Objectives: how the therapist facilitated play; how the child responded to the intervention; how playfulness manifested as a facilitatory strategy; and, how playfulness manifested as a response. New Key/Codes : occupational appeal (attractiveness of activity to child, good developmental fit), occupational intactness (therapy takes place in natural environment of with natural occurring items, or an activity occurring at usual times) , occupational accuracy (therapeutic gains to be achieved), therapist eliciting engagement in play, perception of control (decides, safe, modifies, interacts with objects, transitions, negotiates, social play, extent), source of motivation (engaged, extent, intensity, process, persists, affect) , suspension of reality (mischief, teases, pretends, extent, skill, clowns and jokes, creativity), framing (gives cues, reads cues) **Session** **Age** **Intervention**	**Category** **Occupational Accuracy (therapeutic gains to be achieved)** **Ensures that the application is clearly targeted on treatment goals Therapeutic gains must be achieved.**
1 19/05/2008 19 months While sitting on the ground Lindy had been required to reach for play objects placed on the therapists lap and on a small chair. Each time she had been encouraged to reach for the play object she was required to transfer from sitting to two-point kneeling and then ultimately pull herself up into standing. The therapist used a brightly coloured toy to encourage her to reach.	**1Aim: reaching for an object held up high therefore transitions from sit to stand required** **1Bright coloured toys used to encourage her to stand** **1Aim reached: As she was interested in the toy she**

Lindy initially reached out with her right hand and soon realised that she was unable to reach the toy. Lindy hastily transitioned from sitting to two point kneeling. She then placed both hand on the therapist's lap and forcefully pulled herself up into standing. She held onto the therapist with her left hand and using her right hand obtained the toy. Once she had obtained the toy the therapist placed her in sitting in a playful manner and retrieved the play object from her hands with some force as she gripped the toy tightly. Lindy laughed throughout the session as she obviously thought it had been rather amusing to be placed on her buttocks after she had retrieved the play object. This continued five times. The task at hand was thus targeted at the 'just right level' to promote occupational engagement. Thereafter to promote increased gross motor coordination the therapist created an obstacle course whereby Lindy had been required to chase the therapist while crawling on her hands and knees. The therapist kept the play objects in her hand and encouraged Lindy to retrieve them by slowly running away from her. Whilst running the therapist kept on looking to the back and called Lindy's name. Lindy crawled halfway around the room and was then encouraged to climb up onto a little couch. Lindy required plenty of positive	**immediately moved from sitting to two point kneeling. Lindy transferred from sit to stand holding onto the therapist and she obtained the toy** **1Aim reached: Lindy gripped the toy tightly indicating that she was interested in playing with the toy. Lindy laughed as she enjoyed being placed on her buttocks and hence engagement in the activity was achieved.** **1Aim: increased GMC (crawling)** **1Aims reached: through an obstacle course being created. Lindy was able to crawl and chase the therapist. Aim also reached through therapist using toys to maintain her attention and engagement** **1Aim: Improved GMC (crawling, and climbing onto furniture)** **1Aim reached: Lindy was engaged throughout the activity and crawled the entire time.** **1Therapist made activity more appealing by encouraging her** **1Aim: climbing to promote transfers from sit to stand** **1Aim reached: Lindy transferred from sit to stand.** **1Lindy was unable to climb up onto the couch, therapist assisted to continue engaging her. The therapist made**

Category:Gugu
Occupational Appeal

According to Munier, Myers and Pierce (2008)
In Play in OT for children (Chapter 7)

The appeal of the therapeutic occupation is the attractiveness of the activity to the child. Appeal depends on the experience of productivity, pleasure and restoration during engagement.
For children the interaction is usually the most valued aspect of the experience, emanating from sensations, fun, play, and novelty. Another appeal of an activity is its developmental fit to the child, or the degree to which the activity fits the current abilities and social identity

1Appeal: sensory activity
1Appeal: play equipment providing sensory input
1Good dev fit: movement automatically initiated
1Appeal: positive affect evident
1Appeal: therapist engaged in pretend 1play to maintain his engagement
1Appeal: sensory activity
1Appeal: therapist ensuring safety to allow continuous engagement
1Good developmental fit: movement automatically continued
1Appeal: encouragement for therapist received
1Appeal: therapist used towel to make position more comfortable
1Appeal: Toy used by caregiver to district his attention
1Good dev fit: maintained 4 point kneeling and reiterated crawling movement patter for a short period

P1Good dev fit: swiftly creeps, maintains 4 point kneeling short time
P1Appeal: pleasure and fun experienced
P1Good dev fit: attempts at propelling forward in 4 point kneeling

2Good dev fit: mobile object play
2Good dev fit: crawling on hands and knees
2Good dev fit: able to engage in mobile object play
2Good dev fit: able to engage in mobile object play
2Appeal: sound of pushing car along the ground while actively crawling (mobile in environment)
2Good dev fit: able to engage in mobile object play
2Appeal: short period for restoration supported
2Appeal: practice standing
2Appeal: noisy toys, toys provide proprioceptive input
2Good dev fit: sit to stand transfers elicited
2Good dev fit: sit to stand transfers elicited
2Good dev fit: sit to stand transfers elicited
2Appeal: activity to promote standing

From these Codes:
The following Categories emerged:

Therapist	**Playfulness**	**Appeal**	**Intactness**	**Accuracy**
Positive reinforcement	Positive affect	Productivity	Natural spaces	Application targeted at on therapeutic goals
Use of self	Engagement	Motion movement	Using natural occurring items	Therapeutic gains achieved
Bond	Social play	Social interaction	Activity at usual times	
Assisting with transitions	Active transitions	Good developmental fit (development evident)		
Positioning	Decides what to do	**Behaviours that showed appeal:**		
Rejuvenation	Pretending	Positive emotions		
Safety	Cuing	Persistence		
		Engagement		
		Motivation/ Determination		

Final list of categories:

<u>Child</u>

Doing:
- Productivity
- Motion
- Engagement
- Perceived control

Feeling:
- Positive affect
- Persistence/Determination
- Motivation

Being:
- Therapeutic goals met
- Development evident

Reality
Framing

Therapist

Provided positive reinforcement
Use of self
Bond with therapist
Therapist assisted with transitions
Therapist positioned (self/objects/toys)
Therapist encouraging language and communication
Therapist encouraging rejuvenation
Therapist ensuring safety
Therapy in natural environment
Therapy with natural occurring items
Activity occurring at usual times

Two themes emerged:

Theme 1
Playful enablement – the therapist

Theme 2
Engaging, playing and developing – the child