A LONGITUDINAL STUDY OF THE OCCUPATIONAL ASPIRATIONS AND

PERCEPTIONS OF NINE TO TWELVE YEAR-OLD SOUTH AFRICAN

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**SUMMARY**

Despite the acknowledgement of the developmental nature of careers, little attention has been focused on identifying shaping influences during childhood. This noticeable deficiency in the literature marked the start of the current longitudinal study which was designed to provide information on the career development of nine to twelve-year old South African children. In South Africa research focusing on preadolescent career development is limited with existing research indicating the need to further explore how children's career choice process initially develops. The study aimed to explore and describe the changes that occur, if any, over a four-year period in terms of occupational interest typology, occupational status levels, occupational gender stereotypes and occupational gender traditionality.

Both developmental and career developmental theories were used to provide a context for exploring this process of preadolescent career development. It was decided that quantitative research methods would provide the necessary structure needed to conduct the research. Although semi-structured interviews and biographical questionnaires were used to record the verbal data, the data obtained was transposed into nominal data for analysis. Participants responded to questions within a semi-structured interview that focused on four broad areas of questioning. These questions explored participants' occupational aspirations, how many occupations they knew about, how much they knew about the identified occupation, and the extent to which they held gender-role stereotypes about certain occupations. After the data was

captured it was coded according to Holland's (1985) classification system of occupational interest types. The occupational aspirations expressed by the participants were also coded in terms of their status levels. The coded data was then further analysed using descriptive statistics in the form of frequency counts and percentages.

Results from the study support both child and career development theory which view childhood as a time of rapid growth with critical development in various competency areas (including occupational aspirations and perceptions). Although the current study found that most children aspired to Social occupations, the popularity of this typology decreased with increasing age as more children aspired to Investigative, Artistic, and to a lesser extent, Realistic typologies at age twelve. Furthermore, it appears that children, like adults, are aware of status differentials among occupations and that this awareness subsequently influences occupational aspirations. Lastly, the findings broadly provide support for both national and international research in that it was established that an increase in age reflects a decrease in gender-stereotypical perceptions of occupations.

The present study gained valuable insight into how the process of career development occurs in preadolescent children. It is clear that there exists a need for the implementation of credible and sustainable career education programs in schools across South Africa in order to encourage and facilitate career exploration during the developmental stage of childhood.

Key words: career development, children, longitudinal research, occupational aspirations

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# CHAPTER 1

## Introduction

Being satisfied with one's career is one of the most important aspects of an individual's personal happiness (Sharf, 2002). Occupations structure a large part of people's everyday reality and serve as a major source of personal identity and self-evaluation (Bandura, Barbaranelli, Campara, & Pastorelli, 2001). In light of the recognition that personal identity is often shaped by and around occupational behaviour, it is no surprise that individuals increasingly invest considerable time and effort in identifying career paths that integrate personal, societal, and larger political expectations. At best, this situation facilitates an integral view towards the co-existence of personal and work life. The resultant dynamic interplay of social, personal, and career development issues make career exploration a rich yet complicated and challenging task (Chen, 2001; Stead, 1996).

It is no surprise then that the process of choosing a career is considered tentative in that practically every choice involves some doubt about the credibility of the chosen career and the possibility that workplace changes may make it obsolete (Zunker, 2006). The opportunity to choose is also a responsibility to choose wisely, with this choice being increasingly seen as the measure of who an individual is in society (Gottfredson, 2005). The career counselling process attempts therefore to unite career and personal concerns and to integrate them to better evaluate how all life roles are interrelated, especially since understanding individuals as members of a complex social system has only

recently become acknowledged as the cornerstone of effective career counselling (Zunker, 2006).

Explaining why and how individuals make career and work-related life decisions and assisting clients while making such decisions have been fundamental activities of career counselling professionals for more than a century (Spokane & Cruza-Guet, 2005). The process of career development is said to occur throughout a person's life and therefore calls for practitioners to use interventions to facilitate age- and situation appropriate career behaviours across the lifespan (Herr, 2001).

Despite the acknowledgement of the developmental nature of career choices, little attention has been focused on identifying significant influences on the occupational aspirations and perceptions of children. This noticeable deficiency in the career literature marked the start of the current longitudinal study, which was designed to provide information on the career development of nine to twelve-year old South African children with a particular interest in their occupational aspiration and occupational perception development.

The need for longitudinal career development research in South Africa has recently been described as critical, especially considering that earlier international longitudinal career research has resulted in career education programmes that have successfully enhanced the career awareness of children (Olivier, 2004). This need becomes more critical if one considers that, despite recent attempts being made to address the lack of career intervention programmes in South African schools, research on the occupational aspirations

of adolescents has established that most of their occupational aspirations remain unrealistic and not market-related (Watson, Foxcroft, Horn, & Stead, 1997). The importance of career counselling or at least career intervention programmes is thus recognised, particularly as it, according to Zunker (2006, p. 3) "touches all aspects of human life, for it has involved political, economic, educational, philosophical, and social progress and change". Zunker believes that to think of the career counselling movement as merely another educational event is a gross misinterpretation of its broader significance for social progress.

In the transition or social progress from Apartheid to a democratic society in South Africa after the first democratic national election in 1994, the government has promised to provide equal opportunities for education to all racial groups and geographic regions (Republic of South Africa, 1996a, 1996b). The inevitable pressure of producing a new curriculum and the need to adapt instruction in schools to the establishment of the National Qualifications Framework (NQF) led to the development of the outcomes-based Curriculum 2005 for Grades one to nine during 1996 and 1997 (Nakabugo & Siebörger, 2001). Curriculum 2005 has since been renamed Curriculum 21, that is, a curriculum for the 21st century.

An outcomes-based education (OBE) system has been said to have the potential to succeed at enhancing student learning in schools but, given historical and situational constraints, its potential for successful implementation and enhancement of student learning is limited (Todd & Mason, 2005). This view is supported by Yamauchi (2005) who suggested that, given the clustered spatial

distribution of racial groups in the country, it is not difficult to infer why variations in educational opportunities exist among children across different population groups. The aims of OBE notwithstanding, the legacy of Apartheid and, more particularly, the organizational environment, the lack of management capacity, and the scarcity of resources in schools has seriously erode the possibility of the success of this policy initiative (Todd & Mason, 2005).

It might appear as if the focus of the present study has shifted away from an exploration of career development towards educational reform. However, the link between education and careers is complex. A key feature of Curriculum 21 was the development of learning outcomes, which refer to what learners can actually do with what they know and have learned, and they reflect learner competence in using content, information, ideas, and tools successfully. In this regard, outcomes-based education aims to reconcile the divide between education and training and seeks to balance the two in an education system that enables learners to apply what they have learned. The field of career education was one of the recent re-introductions into the Life Orientation learning area of the new curriculum which aims to broaden children's career exploration. However, despite recent policy decisions related to the inclusion of career education as one of the foci in school curricula, there is an absence of such career interventions at the South African primary school level, with poor delivery at the secondary school level (Swartz, 2000).

Clearly, the implementation of Curriculum 21 has been confronted with numerous challenges that have influenced public perception in a mostly negative

manner. The implementation of career education programmes as part of the new curriculum thus remains unsatisfactory due to the numerous logistical problems as well as the lack of research relating to the career development of children (Cox, 2004). The current study aims therefore to provide valuable insight into the career development of South African children as a means of assisting career curriculum development. For such research to be relevant and sensitive to the unique context that South African children develop in, it has to be accountable in terms of the research process it follows.

According to Magnusson, Bergman, Rudinger, and Törestad (1991), the career development of individuals cannot be adequately and effectively studied without using longitudinal research strategies. The present study aims to explore and describe the changes that occur (if any) over a four-year period in terms of children's occupational interest typology, their occupational status levels, their occupational gender stereotypes and occupational gender traditionality. Historically, research focusing on career development has utilized cross-sectional designs and has primarily focused on adolescent and adult samples. The current study, however, adopts a longitudinal approach and focuses on the career development of a sample of primary school children over a period of four years. Longitudinal research on life-span career development is rare and it has been called for in order to expand on the limited information available concerning the career development of children (Savickas, 2002b; Silbereinsen, 2002).

Verdonik and Sherrod (1984) state that minimum criteria for a longitudinal research design are that the information should be collected during at least two

time points over a span of at least one year and have an attrition rate that is low enough to maintain the longitudinal quality of the study. Both these criteria were met in the present study as the same participants were evaluated on four occasions over a four-year period. The sample, which was fairly homogenous in terms of socio-economic status, was expected to respond to questions from a semi-structured interview that contained four broad areas of questioning. These questions explore the children's occupational aspirations, how many occupations they knew about, how much they knew about identified occupational aspirations, and the extent to which they held gender-role stereotypes about certain occupations.

Although the earliest theories of career development largely ignored childhood and adolescence, the importance of early developmental processes has gradually and increasingly been acknowledged in the career development literature (Wahl & Blackhurst, 2000). When compared to the vast amount of research and theory related to adult career development, the roles of childhood and adolescence in the career development process remain relatively unexamined (Trice, Hughes, Odom, Woods, & McClellan, 1995). This view is supported by Bandura et al. (2001) who state that, although occupationally relevant choices play a key role in setting the course of lifestyle trajectories with diverse impacts across the lifespan, this area of personal development has received surprisingly little attention in developmental psychology. Research therefore highlights the need for career exploration to begin in the early

elementary grades, when important initial impressions are being formed (Trice & King, 1991; Trice & McClellan, 1993; Trice, McClellan, & Hughes, 1992).

In South Africa research focusing on preadolescent career development is limited with existing research indicating the need to further explore how children's occupational aspirations initially develop. The challenge in the present study was to create a theoretical context (utilizing primarily Westernized theories) that would still allow the researcher to critically evaluate the research findings within the uniqueness of the South African context. To accomplish this aim a range of human and career development theories were scanned for suitability for the present study. These theories are discussed further in Chapter 2 and provide the foundation for understanding the career development of the present sample of nine to twelve year-old children. Child and career developmental theory share certain basic foundational principles and it is important to understand the influence of the one on the other.

The outline and structure of the present treatise is as follows. The current chapter aims to provide a general overview and motivation for the study and highlights the main objectives of each chapter. Chapter Two describes both the developmental and career developmental theories used to provide a context for exploring the career development of preadolescent children. As will be seen in Chapter Three, existing research on the career development of children is limited. This chapter describes and integrates research findings from international and national career researchers over the last few decades. The methodology used for the present study is described in Chapter Four, with a

specific focus on the method, sampling and participants, measures, and the procedures implemented. A description of the data coding and subsequent analysis also forms an integral part of this chapter. The results chapter, Chapter Five, reports on the quantitative data and interprets the findings within the context of developmental and career developmental theory as described in Chapter Two. Finally, in Chapter Six, a summary and discussion of the findings is provided in addition to concluding statements that would serve as a reference for future research. The limitations of the study are also outlined in this final chapter in order to assist future researchers in identifying potential pitfalls if they wish to replicate the study.

# CHAPTER 2

## Theoretical Framework

It is essential to conceptualize the present study within the precincts of developmental psychology. Developmental psychology and its theorists attempt to describe human development over the entire lifespan of individuals (Sharf, 2002). Craig (1999) proposes that development reflects the changes over time in the body and in thinking or other behaviour that are due both to biology and to experience. The basic assumption of human development theories is that the lifespan of human beings can be divided into clearly identified life stages (Craig, 1994; Salkind, 1985), with each stage requiring the development or attainment of specific and unique characteristics, tasks or skills. The present research focuses on the career development of children within this broader framework of human development.

The career development of children is considered a critical aspect of the overall development of the child (Helwig, 2004). Career development, according to Sharf (2002), refers to the process of developing beliefs and values, skills and aptitudes, personality characteristics and knowledge of work at different life stages. The tasks associated with these life stages affect subsequent career choice and life fulfilment (Dean, 2001). Despite this awareness of the career development theory of children over the past half century (Ginzberg, Ginsberg, Axelrad, & Herma, 1951; Gottfredson, 1981, 1996, 2005; Super, 1957, 1990; Super, Savickas, & Super, 1996), few longitudinal research studies have been documented. Savickas (2002b) stresses that longitudinal studies are the only

form of research that can truly examine career development and that one of the future goals of psychology should be to focus more on longitudinal research. However, at present there is still a lack of such research despite the fact that it is widely accepted that career development is a lifelong process (Hartung, Porfeli, & Vondracek, 2005; Super, 1990; Super et al., 1996), beginning in childhood and continuing through to adulthood.

Clearly, the dual recognition of identifiable life stages and successfully dealing with the specific developmental tasks of such stages constitutes the link between human and career developmental theories. It is for this reason that it is essential to explore the influence of the one set of theories on the other. Human development impacts on career development and it is important to consider child development theory as a broader focus of the present study. The theories of Jean Piaget (1971, 1977) and Erik Erikson (1963, 1993) will be used as the basis for understanding children's development from a cognitive as well as from a psychosocial perspective, respectively. In addition, Super's (1957, 1990; Super et al., 1996) life-span, life-space theory will be used to contextualize career development as a lifelong process, while Gottfredson's (1981, 1996, 2005) theory of circumscription and compromise will be described in order to gain specific insight into the career development of children.

**Child Development Theory**

*Jean Piaget*

According to Salkind (1985, p.185), "no other psychologist has had as profound an impact on the understanding of the developing child's acquisition

and use of knowledge as Piaget". Piaget's (1971, 1977) analysis of the stages of human intellectual development emerged from a more over-arching endeavour, which was to understand the nature, structure and evolution of knowledge (Wood, 1998). Piaget theorized that the difference between children and adults was not confined to how much they knew but also included the way in which they acquired knowledge (Craig, 1994). According to Wood (1998, p. 23), "this framework led him to analyse and interpret children's development in terms of systems of logical operations that are taken to be the basis for rational understanding of the physical world and of mathematical systems for representing reality". As human beings develop, they use more complex schemes to organize information and understand the outside world. The cognitive-developmental perspective thus recognizes that development occurs in an ordered sequence of qualitatively distinct stages and is characterized by increasing complexity.

Piaget's (1971, 1977) notion of stages reflects and emphasizes the structural transitions that take place during different developmental periods rather than providing a simple description of different behaviours at different times (Salkind, 1985). Development therefore occurs through the process of progressing through a set of qualitatively distinct yet interrelated stages of cognitive development (Craig, 1994; Piaget, 1970; Salkind, 1985). Piaget described four stages of cognitive development, namely the sensorimotor stage (lasting from birth through to age two), the preoperational stage (lasting from age two to age seven), the concrete operational stage (lasting from age seven to age

twelve) and the formal operational stage (lasting from age twelve through to adulthood). While the concrete operational and the formal operational stages are the most relevant stages for the purpose of this study, a brief description of the two earlier stages will also be provided.

Piaget (1971, 1977) viewed the *sensorimotor stage* as the start of development. During this stage the child, through physical interaction with his or her environment, builds a set of concepts about reality and how it works and differentiates himself/herself from objects. This is the stage where a child needs to move towards developing object permanence. Hereafter follows the *preoperational stage* where the child is not yet able to conceptualize abstractly and needs concrete physical situations. Children learn to use language and to represent objects by images and words. Their thinking, however, is still egocentric and they have difficulty accepting the viewpoint of others (Atherton, 2004). The focus now shifts to describing the stages relevant to the current research, the concrete operational stage and the formal operational stage.

The *concrete operational stage* represents a transition between the preoperational and formal operational stages (Craig, 1994; Phillips, 1981; Salkind, 1985). During this stage, children begin to use logic in their thinking (Craig, 1994), thus marking a dramatic transition from illogically to logically based thought (Salkind, 1985). According to Salkind (1985), the concrete operational child can perform certain operations and conquer a variety of cognitive tasks that the preoperational child cannot. The child is now a sociocentric being who is

aware that others have a perspective of the world different from their own (Craig, 1994; Phillips, 1981; Salkind, 1985).

The *formal operational stage* covers the age range of 11 to 15 years and is the final stage of cognitive development in Piaget's (1971, 1977) theory. At this point, children can explore all the logical solutions to a problem, imagine things contrary to fact, think realistically about the future, form ideals, and grasp metaphors that younger children cannot comprehend. In addition, children in this stage are more aware than younger children that events can be interpreted in many different ways and that there is no definitive form of truth (Salkind, 1985; Wood, 1998). Children have now developed a mature system of thought which allows for the mastery of complex systems of literature, mathematics and science and, more importantly, makes it possible to plan future goals and integrate past and present into a realistic self-identity (Craig, 1994; Salkind, 1985).

Although Piaget's (1971, 1977) cognitive development theory does not specifically refer to career development, Piaget does maintain that intellectual development is necessary to make successful career decisions (Dean, 2001). As Piaget's developmental theory focuses on cognitive development, it is important to consider a child development theory that focuses on other developmental perspectives. One theorist who has contributed much to the understanding of child development is Erik Erikson. Erikson's theory (1963, 1985, 1993) will be described in the following subsection in order to gain further insight into child development from a psychosocial perspective.

*Erik Erikson*

Often considered as the first true lifespan developmental psychologist, Erik Erikson (1963, 1993) with his psychosocial theory has had a significant impact on the understanding of the developmental process across the entire lifespan (Salkind, 1985). As with Piaget's theory, Erikson recognizes development as a process that can be divided into several stages, many of which correspond to Freud's psychosexual stages (Craig, 1994). Erikson extended Freud's theory of psychosexual development to include what he referred to as "psychosocial development" (Craig, 1994, p. 59), believing that personality arises from the manner in which social conflicts are resolved during key interaction points in development. Psychological development, according to Erikson (1993), results from the interaction between maturational processes or biological needs and the societal demands and social forces encountered in everyday life.

In Erikson's view, everyone experiences eight crises or conflicts in development. Erikson (1963, 1993) postulates the existence of a series of stages of development governed by underlying maturational forces and the presence of a conflict at each one of these eight stages. These eight psychosocial stages begin during infancy and progress through to old age with unique developmental tasks presenting themselves in terms of two opposing poles to which individuals must adjust. Development takes place through the successful resolution of these crises at the respective developmental stages (Craig, 1994; Erikson, 1993; Salkind, 1985). Although each conflict is critical at only one developmental stage, conflicts remain present throughout life.

Two of Erikson's psychosocial stages, stages 4 and 5, are relevant for the purpose of this study, namely the latency stage (ages six to eleven years) and the puberty and adolescence stage (ages twelve to eighteen years). During the *latency stage*, characterized by the conflict between industry versus inferiority, children develop numerous competencies in school, at home, and in the outside world of their peers (Craig, 1994; Salkind, 1985). According to Erikson (1963, 1993), this time of development is crucial for the child's sense of industry which is seen as the ability to master the social skills necessary to compete and function successfully in the society in which the child lives. Comparison with peers becomes increasingly important and it is during this stage of development that cultural expectations take precedence over other needs (Craig, 1994; Salkind 1985). In addition, the preadolescent invests an enormous amount of energy inwards toward the development of such skills as industriousness and the self-help aspects of growth (Salkind, 1985). Erikson (1963, 1993) describes a child who makes such an investment as industrious as opposed to a child who is not given the opportunity to master his/her own world,  leading to a sense of inferiority or lack of worthiness. Inferiority results from the child's perceived lack of importance or inability to deal with the demands of his/her world.

Stage five of Erikson's (1963, 1993) psychosocial theory, the *puberty and adolescence stage*, starts at age twelve and carries through to age eighteen, describing a period of development when some of the most drastic changes occur in all spheres of life. Of particular interest to this study is that, according to Salkind (1985), Erikson's puberty and adolescence stage marks a period when

adolescents are expected to begin defining their interests in terms of career choice. This period is seen as one of great change and excitement, and it is also when an individual develops an identity or a definition of self. Before adolescence, children learn a number of different roles and it is essential that these roles be sorted out and integrated into a consistent identity (Craig, 1994; Erikson, 1963, 1993). The conflict that Erikson proposed as central to this stage is that of Ego Identity versus Ego Diffusion or Role Confusion. A successful resolution of the demands placed on the individual at this stage results in ego identity, while failing to integrate a central identity or failing to negotiate conflict between two major roles with opposing values could lead to ego diffusion (Craig, 1994; Salkind, 1985).

In conclusion, the developmental theories of Piaget (1971, 1977) and Erikson (1963, 1985, 1993) both emphasize the importance of resolving age specific developmental tasks associated with life stages in order for growth to take place. The integration of these developmental considerations within a career developmental context is of paramount importance considering that child and career developmental theory share certain basic foundational principles such as dual recognition of identifiable life stages and the resolution or accomplishment of associated tasks. It is therefore of central importance to understand the influence of the one on the other. In order to acquire a more specific understanding of child career development, Super's (1957, 1990; Super et al., 1996) and Gottfredson's (1981, 1996, 2005) theories of career development will be discussed in the next subsection.

**Career Development Theory**

Recently, the adaptation of existing theories to accommodate changes in the field of career psychology has increasingly become a focus of interest (Savickas, 2002a, 2005). One such theory is that of Donald Super and his career developmental approach. Super's (1957, 1990; Super et al., 1996) influential life-span life-space theory has now been redefined as career construction theory (Savickas, 2002a, 2005) with a change in emphasis towards a more post-modern description of career development. Career construction theory asserts that individuals construct their careers by imposing meaning on career behaviour and experience (Savickas, 2005).

Any discussion of career development theory should start with a clear definition of the word "career" as there are so many variants used within the literature (Stead & Watson, 1999). From an academic perspective the word "career" remains an elusive concept and, like the changing nature of the work environment, it has undergone changes in meaning (Stead & Watson, 1999). The word career has been defined as "a sequence of occupations, jobs, and positions…throughout a person's working life" (Super, 1957, p.131), the "combination and sequences of roles played by a person during a course of a lifetime"(Super, 1980, p.282), and a "series of lifelong work-related experiences and personal learnings" (Hall, 1996, p.1). These definitions imply that change is inevitable and that change maintains a central function in shaping career behaviour. For the purpose of this study the meaning of the word career will encompass previous definitions and be viewed as a combination and sequence

of roles that are guided by lifelong work-related experiences and personal learnings. Furthermore, to understand what gives an individual's life structure meaning, it is necessary to consider his or her involvement in a variety of life roles including, but not limited to, the worker role (Stead & Watson, 1999). However, before the focus shifts to the discussion of the career development theories used in this study, a broader understanding of career theories is needed.

According to Watson and Stead (in press a), there are many theories that attempt to explain career behaviour and choice, with each theory reflecting the perspectives and philosophical assumptions on which it chooses to focus. These theories provide parameters within which we can understand and hypothesize about career behaviour and choice. Personality in relation to career choice is another core construct described in many career theories (Stead, 2004) such as those of trait-factor theory (Brown, 1996), Holland's (1997) theory, and Super's theory (Super et al., 1996), among others. Of particular interest to the current research are career theories that recognize career development occurring over the lifespan. These theories concern the growing and changing ways that an individual deals with career issues over the entire lifespan (Sharf, 2002).

Despite the widespread acceptance of the notion of life-span theory, the span of life relating to the career development of children (i.e. those under 14 years of age) has received little theoretical attention (Tracey, 2001; Wahl & Blackhurst, 2000; Whiston & Brecheinsen, 2002). This view is supported by Vondracek (2001) who states that, while much attention has been focused on studying and synthesizing knowledge about child development, the career

development of children has been inadequately addressed. There is little doubt that career development begins early in children's lives and that children as young as three years report occupational preferences (O'Keefe & Hyde, 1983; Vondracek & Kirchner, 1974).

It is with this in mind that Super's influential life-span, life-space theory is used as a broad basis for understanding career development in nine to twelve year-old South African children. In addition, the inclusion of Gottfredson's developmental theory of occupational aspirations was considered essential as it provides a more specific theory of career development in childhood. Gottfredson (1981, 1996, 2005) has articulated a life-stage theory of career development in childhood and adolescence that "emphasizes the important part that gender roles and prestige play in making choices" (Sharf, 2002, p. 173). Grounding the present research within an understanding of these two career theories is thus critical if the aims of the study are to be theoretically conceptualized.

*Donald Super*

According to Super (1994; Super et al., 1996), a career is the changing pattern of life roles which decrease and increase in importance depending on the developmental tasks that need to be accomplished and the ways chosen to do this. Historically career development has been viewed from two perspectives, firstly, the 'individual differences' view of occupations and secondly, the 'individual development' view of careers, one focusing on career behaviour and the other on its development (Savickas, 2002a). One of the major contributions Super made to the field of career psychology was the movement away from

conceptualizing career choice as a one-off event towards viewing it as an ongoing process (Watson & Stead, in press b). Super's constructs of career development, e.g. career maturity and career adaptability, helped to shift the focus from occupational choice to career development as a lifelong process (Stead & Watson, 1999). Super's life-span theory represents the cumulative result of empirical research, conceptual reflection and practice over a sixty-year period (Langley, 1999). During this period Super helped to transform career psychology from an expert driven profession to incorporate the importance of viewing career development within a social and cultural context (Savickas, 1994). Ultimately, Super described career development as the process of developing and implementing a self-concept (Langley, 1999; Sharf, 2002).

*Self-Concept*

Self-concept, how individuals view themselves in relation to their life context, has been at the centre of Super's developmental theory. A self, according to Savickas (2002a), consists of symbolic representations that are personally constructed, interpersonally conditioned, and linguistically communicated. Super described the self-concept as a combination of biological characteristics, the social roles individuals play, and evaluations of the reactions other individuals have to the person (Sharf, 2002; Super, 1957, 1990). According to Sharf (2002), this sense of self begins to emerge in late childhood or early adolescence. A formative self-concept therefore can be viewed as a collection of percepts that is neither integrated nor particularly coherent.

Subsequent to Super's initial description of the self-concept came the recognition that an individual has more than one self-concept and that the self-concept system is the image the person has of self in various roles and situations (Savickas, 2002a; Super et al., 1996). Within their multidimensional self-concept system, individuals have conceptions of self in each life role they enact. The development of a self-concept appears to be critical in the period of childhood with the child drawing on a disjointed repertoire of attributes and fragmented selves as needed in different situations (Savickas, 2002a). This rapid adjustment to the self-concept in different social contexts could provide an explanation for a child's changing interests and ambitions. Super explained these changes occurring over time both as a consequence of development and changing circumstances. Considering the developmental nature of the self it is clear that matching the self with an occupation becomes an activity that continues throughout an individual's lifespan.

As has already been mentioned, Super viewed the development of a self-concept as critical to his theory of career development. This is because career choice for Super is the implementation of the self-concept, work is a manifestation of self-hood, and career development is a continuing process of improving the match between self and environmental factors (Langley, 1999). Super's theory thus encompasses the lifespan by including a developmental approach which suggests that development occurs according to a linear, predictable progression, in normal but not invariable sequence and at approximate stages and ages of occurrence (Super, 1990). These stages are:

Growth (birth to age 14 or 15 years), Exploration (ages 15 to 24 years), Establishment (ages 25 to 44 years), Maintenance (ages 45 to 64 years) and Disengagement (ages 65 years onwards). Each of these stages is characterized by a series of vocational tasks and behaviours that society expects an individual to accomplish. The Growth stage is the central focus of this study as this stage covers the ages from birth to about fourteen years of age.

Explicit in this description of life stages is a normative perspective in that individuals' progress can be assessed in terms of their career readiness to make an appropriate choice for a particular life stage (Watson & Stead, in press b). The readiness and resources for coping with current and anticipated tasks of career development constitute career adaptability (Savickas, 2002a). Super (1957) and other theorists of career development recognize that maturational changes occur in people as they progress through their career development, but Super's particular contribution was the formalization of stages and developmental tasks over the lifespan.

*Stages of Development*

*Growth*

While this life developmental stage has been the focus of many psychological studies, only a select few have been incorporated into conceptual models of career development (Savickas, 2002a). The life stage of *Growth*, according to Super (1990) and Super et al. (1996), includes four major developmental tasks: becoming concerned about the future, increasing personal control over one's own life, convincing oneself to achieve in school and at work,

and acquiring competent work habits and attitudes. The *Growth* stage inevitably also refers to the physical and psychological growth of an individual and is further divided into substages associated with various ages (Sharf, 2002). These substages are: curiosity (birth to four years), fantasy (four to seven years), interests (seven to eleven years) and capacities (eleven to fourteen years). When categorized according to these substages of Super's career development theory, the participants of the present research would be in either the interest or capacities substages of the *Growth* stage.

Role models play a critical role in children's career development during the *Growth* stage as children seek role models who can help them achieve their goals (Lockwood & Kunda, 1997). According to Sharf (2002), adults are important role models for children learning about the world of work and the development of their own self-concept. Furthermore it is important for these key figures to encourage children's emerging interests as it is helpful in the development of their career maturity (Sharf, 2002). These key figures are usually parents, teachers, public figures, and people with whom children come in contact in their own community.

In what Savickas (2002a, p. 162) views as a "very important career choice", children choose role models who portray solutions to their problems in growing up. Savickas explains this statement further by saying that "as children imitate desirable qualities of their models for self-construction, they rehearse relevant coping attitudes and actions, form values about and interests in certain activities, and exercise abilities and skills as they engage in these activities" (p.

62). However, the role of adults is not only to act as prominent figures in children's lives through modelling behaviour, but also to play a critical role in the facilitation of the child's developing self-concept.

As has already been mentioned, a sense of self begins to emerge in late childhood or early adolescence. It is said that if children have the opportunity to talk about those aspects of their life that are exciting, more often than not facilitated by an adult, this could be helpful in future career planning. Career adaptability in the developmental stage of *Growth* is measured to a large extent by the child's ability to develop a sense of self and an ability to plan. According to Sharf (2002), "to plan, children must have sufficient information, motivation in terms of interests and activities, a sense of control over their own future, and an idea of what the future will be (time perspective)" (p. 171). Following the *Growth* stage is the time-period Super termed the Exploration stage (ages 14 to 24) and it concerns "fitting oneself into society in a way that unifies one's inner and outer worlds" (Savickas, 2002a).

*Exploration*

According to Watson and Stead (in press b), the major developmental task facing adolescents and young adults is to crystallize, then specify and finally implement a career choice during the *Exploration* stage. The development of a meaningful and rewarding career often begins in adolescence as part of this process of self-exploration and crystallization of identity (Felsman & Blustein, 1999; Super, 1980). What is required of an individual is to actively make attempts to acquire information about the self and about occupations in order to make the

matching choices that construct a career (Savickas, 2002a). However, few studies have examined how factors such as interests, values, and motivation interact with contextual factors to yield occupational awareness during childhood and adolescence. Little research has attempted to determine, for example, whether or not and to what extent preadolescent children employ the more sophisticated form of exploration involving the union of inner and outer world factors or when the shift to this form of exploration occurs (Hartung et al., 2005). The remaining stages of Super's career development theory are described briefly in the next section.

*Establishment, Maintenance and Disengagement*

The years of career establishment (ages 25 to 45 years) involve the implementation of a self-concept in an occupational role (Savickas, 2002a) and include the tasks of stabilizing, consolidating, and advancing (Sharf, 2002). This period marks the start of working life. This is followed by the Maintenance stage in which individuals do not advance but rather maintain their status in work. Major developmental tasks that make up this stage (ages 45 to 65 years) are holding on, updating, and innovating (Sharf, 2002; Watson & Stead, in press a). Individuals in this stage often re-evaluate work experiences and revise their career self-concept accordingly (Savickas, 2002a). One of the main objectives of this stage is to sustain oneself in an occupational role and to preserve one's self-concept.  Finally, the career stage of disengagement (ages 65 years and older) involves the developmental tasks of decelerating, retirement planning, and retirement living (Savickas, 2002a; Sharf, 2002; Watson & Stead, in press b).

In conclusion, Super's life-span theory has been an influential career theory for decades and was used in this study because it broadly describes the career development of children and places this developmental stage within the context of career development over the lifespan.  Furthermore, research broadly supports Super's description of the Growth Stage, particularly in South Africa (Cox, 2004; Dean, 2001; Olivier, 2004). Recently Super's theory has been reinterpreted as Career Construction theory (Savickas, 2002a, 2005) and explains the interpretive and interpersonal processes through which individuals impose meaning and direction on their career behaviour (Savickas, 2005). Savickas comments on this reinterpretation by stating that career construction theory incorporates Super's (1957) innovative ideas into a contemporary vision of careers by using social constructionism as a metatheory with which to reconceptualize central concepts of career development theory.

Another theory that more specifically examines the career development of children is that of Linda Gottfredson. Gottfredson's (1981, 1996, 2005) theory of circumscription and compromise is discussed in the next section.

*Linda Gottfredson*

Gottfredson (1981, 1996, 2005) has articulated a life-stage theory of career development in childhood and adolescence that emphasizes the importance that sex roles and prestige play in occupational aspiration development. This focus on gender and social class is generally not an active part of other career development theories (Sharf, 2002) and represents a strong sociological perspective. Gottfredson's theory of circumscription and compromise

describes how individuals' occupational aspirations develop over time (Watson &
Stead, in press a) and, in addition to this, seeks to explain the cognitive career
decision-making process within the context of development (Blanchard &
Lichtenberg, 2003). Gottfredson's theory differs from other career theories in the
emphasis she places on the barriers that may inhibit an individual's occupational
aspirations and opportunities (Sharf, 2002; Stead & Watson, 1999). In a recent
chapter that presented an overview of career theories (Watson & Stead, in press
a), Gottfredson's theory was recognized as a theory that attempted to interrelate
established constructs of career theory such as the self-concept, developmental
stages, the matching of individuals and work environments, and occupational
aspirations.

Essential to Gottfredson's theory are four stages of cognitive development
that provide a way of perceiving oneself in the world (Gottfredson, 1981, 1996,
2002). These stages are progressive in that each successive stage introduces a
new dimension that must be incorporated into the development of the self-
concept. Furthermore, each new dimension further limits or circumscribes an
individual's range of acceptable occupational options (Watson & Stead, in press
a). As is indicative of circumscription, the range of acceptable occupational
alternatives narrows with each stage of development (Blanchard & Lichtenberg,
2003).

*Circumscription and Compromise*

Circumscription and compromise are two processes by means of which
individuals narrow life choices and begin to take certain paths in life rather than

others (Gottfredson, 2002). *Circumscription* is a process of eliminating unacceptable occupations from a range of possibilities, thereby creating a zone of acceptable alternatives. When an individual finally makes a career decision, it is because the option chosen has been deemed the most acceptable when considered against all other options (Blanchard & Lichtenberg, 2003; Gottfredson, 1981, 1996, 2002). Whereas circumscription is the process by which individuals reject alternatives they deem unacceptable, *compromise* is the process by which they abandon their most-preferred alternatives (Gottfredson, 2002). For example, when considering a preferred occupational choice, individuals may encounter barriers that would inhibit them from achieving that goal successfully. When individuals abandon their initial preferences for less desirable yet more achievable alternatives, this is known as compromise (Blanchard & Lichtenberg, 2003). Gottfredson's four stages are briefly described in the following subsection.

*Stages of Development*

      *Orientation to size and power.*

In Gottfredson's first stage (occurring between the ages of three and five years), children's primary orientation is to size and power (Gottfredson, 2002; Helwig, 2004). In this stage, children's thought processes are concrete; they begin learning about occupations and they begin to grasp the idea of becoming an adult by orientating themselves to the size difference between themselves and adults. In brief, this stage helps describe how occupational aspirations develop from a fantasy level to more realistic goals (Watson & Stead, in press a).

*Orientation to sex roles.*

In the second stage, ages six to eight years, Gottfredson's (2002) theory suggests that children choose occupations based on gender role differences and their perceptions of the world of work (Helwig, 2004). Children become aware that men and women perform different roles and work and, according to Helwig (2004), children choose occupations consistent with their gender. Occupational aspirations centre on what children deem appropriate for their own sex, ruling out other occupations that do not meet this criterion.

*Orientation to social valuation.*

In the third stage, approximately nine to thirteen years, children become aware of the social value and status differences that exist around them (Gottfredson, 2002). It is during this stage that prestige becomes an important factor in occupational aspiration development. According to Watson and Stead (in press a), occupational aspirations are expressed which correspond with the individual's own social background. Consideration is given to how well an occupational aspiration fits with one's abilities and social status. As individuals incorporate considerations of social class and ability into their self-concepts, they reject occupational alternatives that seem inconsistent with those newly recognized elements of self (Gottfredson, 2002). In addition, individuals also ignore options that seem too difficult to obtain with reasonable effort or that pose too high a risk of failure. These perceptions then lead children to set a "tolerable-effort boundary" (Gottfredson, 2002, p. 98) which is shaped by the individual's self-conceptions of ability and competitiveness. Gottfredson (1981, 1996, 2002)

suggests that by the end of this stage, the individual's career options have narrowed significantly. The current study primarily focused on describing the career development of children that, because of their age, fell within this developmental stage.

*Orientation to internal unique self.*

During the fourth stage (fourteen years and older), adolescents become more introspective and develop greater self-awareness and perceptiveness towards others (Gottfredson, 2002; Sharf, 2002). Individuals choose occupations consistent with their internal, unique selves (Gottfredson, 2002; Helwig, 2004). In addition to sex roles, abilities, and social status, personal interests and values become important variables in this fourth stage of the circumscription process (Blanchard & Lichtenberg, 2003; Gottfredson, 2002). According to Blanchard and Lichtenberg (2003), it is also during this stage that the course of compromise is initiated, whereby preferences for particular occupations are determined additionally by the obstacles and opportunities surrounding the individual.

## Conclusion

With much influence from a sociological paradigm, Gottfredson (1996) presents a theoretical tenet that is parallel to Super's notion of self-concept (Chen, 2001). Career developmental theorists such as Super and Gottfredson often overlap in their description of career behaviour when compared with each other. The potential influence of constructs such as aptitudes, needs, values, security and role in society occupies considerable space within both theories despite the limited and age-specific focus of Gottfredson's theory of

circumscription and compromise. Furthermore, the concept of exploring career choices first through childhood play or through imitation of role models is another major component of both Super's and Gottfredson's theory.  According to Sharf (2002), "What do I really want to do with myself" is a question reminiscent of both Gottfredson's and Super's theories of how career choice must allow expression of a person's self-concept and underlines the importance of viewing career development as a lifelong process beginning in childhood. Super's theory provides for a broad base for explaining the career stages that individuals move through, while Gottfredson's theory provides a more specific and detailed theoretical context for understanding the development of occupational aspirations in childhood and adolescence (Olivier, 2004).

According to these two theories the participants of this study should be becoming aware of the social value and status differences that exist around them. It is expected that these participants should begin to incorporate considerations of social class and ability into their self-concepts, rejecting occupational alternatives that seem inconsistent with those newly recognized elements of self.

The focus of this chapter was to conceptualize the present study within the precincts of both developmental and career developmental psychology. An overview of two developmental and two career developmental theories was provided. The developmental approaches used, those of Piaget (1971, 1977) and Erikson (1963, 1993), attempted to describe human development, while the career theories of Super (1957, 1981, 1996) and Gottfredson (1981, 1996, 2002)

were used to understand the growing and changing ways that an individual deals with career issues over the lifespan. Important career developmental tasks are often grounded within human development and cannot be viewed in isolation. These include the development of a self-concept, more complex and abstract thinking abilities, and the formation of gender role identity (Dean, 2001). The focus now shifts towards the identification of research that has been conducted in recent years within these areas. As will be discussed in the next chapter, career research related to occupational aspirations and perceptions of children is limited both nationally and internationally.

# CHAPTER 3

## Research Review

The aim of this chapter is to provide an overview of international and national research as it pertains to career development. The focus will shift from a broader overview of career research to a more specific focus on research that addresses the career development of children. Within this narrower focus the determinants of occupational aspirations and perceptions, which are most relevant to the present study, will be examined.

### Overview of Career Development Research

Career development theory has had a relatively short history and has evolved in recent decades from the trait-factor theories that predominated in the early 1900s towards a more developmental perspective (Patton & McMahon, 1999). Key career theorists such as Super (1957, 1990; Super et al., 1996), Gottfredson (1981, 1996, 2002), and Holland (1985), and earlier theorists such as Ginzberg et al (1951) have been at the forefront of researching career behaviour and its development. Historically, career research has focused primarily on exploring occupational aspirations and their influence on career choice (Pohlman, 2003). Such research has focused on a variety of topics including the role of occupational aspirations in career compromise and circumscription (Lapan & Jingeleski, 1992; Leung, 1993), the effectiveness of early occupational aspirations in predicting later career choice and attainment (Holland, Gottfredson, & Baker, 1990), the influence of occupational aspirations in the pursuit of educational and career opportunities (Lent, Brown, & Hackett,

1996), and the impact of variables such as gender (Davey & Stoppard, 1993) and culture (Arbona & Novy, 1991) on occupational aspirations.

Little of this research, however, has focused on the career development of children. Extant career literature reflects a prevailing research bias towards adolescent and adult career behaviour and a failure to adequately consider and make linkage to childhood dimensions of lifespan career development (Vondracek, 2001). An overview of research on children's career development by Watson and McMahon (2005) demonstrates the skewed focus of such research in several ways. For instance, the latter authors examined seventy-six research articles and seven previous reviews within a meta-framework of learning with more than eighty percent of these articles describing North American children.

In addition, Hartung et al. (2005) conducted a comprehensive review of empirical career literature that addressed early-to-late childhood. The authors reviewed a total of nearly 200 articles, monographs, and chapters and sorted them according to dominant themes. Of particular interest to this research is Hartung et al.'s review of literature on children's occupational expectations and aspirations which have remained the major research focus for the last three decades (Helwig, 1998; Sellers, Satcher, & Comas, 1999; Tracey, 2001). It was found that few studies have used a longitudinal design and thus most research in this field confounds age and cohort by relying on cross sectional age differences. The review of the research literature demonstrated that the stability of children's occupational aspirations increases with age and that these may be influenced by the popularity or prestige of the occupation, with more popular occupations

exhibiting more stability across age groups (Hartung et al., 2005). These findings will serve as a valuable comparison to the findings of the present study with much attention being given to exploring the occupational aspirations of children over a four year period.

Despite increasing interest in researching aspects of children's career development, it needs to be reiterated that most of this research is international and fails to recognize the importance of exploring occupational development of children in the unique context of a developing country. Internationally a variety of topics have been examined that has focused on children's career development processes. According to Olivier (2004), such research has included the potential influence of age and school grade on the development of children's occupational aspirations and perceptions (Borgen & Young, 1982; Helwig, 1998a; Trice et al., 1995; Trice & King, 1991; Trice & McClellan, 1993; Vondracek & Kirchner, 1974; Walls, 2000), the influence of gender on children's occupational aspirations (Helwig, 1998b, 1998c; Liben, Bigler, & Kroch, 2001; McMahon, Gillies, & Carrol, 1999; Phipps, 1995), children's occupational gender stereotyping (Bobo et al., 1998; Gregg & Dobson, 1980; Helwig, 1998a; Henderson, Hesketh, & Tuffin, 1988; Levy, 2000; Liben et al., 2001; Lupaschuk & Yewchuk, 1998; Philips, Cooper, & Johnson, 1995; Sellers et al., 1999; Wahl & Blackhurst, 2000), the influence of culture and socioeconomic status on children's occupational aspirations and expectations (Bobo et al., 1998; Dillard & Perrin, 1980; Phipps, 1995; Sellers et al., 1999; Wahl & Blackhurst, 2000), and the influences on or sources of children's occupational aspirations and perceptions (Helwig, 1998b;

Riley, 1981; Seligman, Weinstock, & Heflin, 1991; Trice et al., 1995; Trice & Knapp, 1992; Trice et al., 1992; Wright, Huston, Truglio, Fitch, Smith, & Piemyat, 1995). Some of these findings are described later in this chapter. Clearly, international research has covered a wide range of topics, all of which has added great value to a better understanding of children's career development.

However, the research cited above is international in nature with South African research on career development being limited largely to secondary and tertiary students (Horn, 1995; Stead & Watson, 1999). A question that could be asked is why is it so important to conduct locally based research? Overviews of career research (Stead & Watson, 1998, 2002; Watson & Stead, 2002) have indicated that the multicultural context of South Africa is an important factor in understanding career development, one which has received insufficient attention in career research to date. De Bruin and Nel (1996) further emphasise the limitations in previous South African research by commenting on the prevailing bias towards using white, high school learners as research participants. Ethically, the responsibility of establishing a locally constructed knowledge base for understanding the career development of children resides with researchers. The paramount importance of ongoing career development research cannot be over emphasised. If possible these studies should be conducted using a longitudinal design as Savickas (2002b) has suggested that longitudinal research is one of the major ways in which the study of careers can be reinvigorated.

The present study wishes to expand on the longitudinal research conducted by Dean (2001), Cox (2004), and Olivier (2004) through exploring the

possible stability and variability of the occupational aspirations and perceptions of a sample of South African children over a four-year period. Given the lack of longitudinal career research on South African children, Dean (1998) initiated an exploration of the occupational aspirations and perceptions of South African pre-school children. These findings have been reported internationally (Watson, Foxcroft, & Dean, 1999) and nationally (Watson, Foxcroft, & Dean, 2000). The findings of the pilot study stimulated additional research by Dean (2001), Cox (2004), and Olivier (2004). Dean assessed the current sample from the ages of five to eight, Cox (2004) from ages six to nine, while Olivier (2004) focused on eight to ten-year olds. These studies all appear to provide support for child development and career development theories by confirming childhood as a time of critical development, including the development of occupational aspirations and perceptions.

*Summary*

The overview of research provided above alerts researchers to the prevailing bias existing in career development research towards studying adolescent and adult samples. This is despite the fact that recent research suggests that children from as early as three years of age start expressing career preferences. The few studies that have focused on the preadolescent years have attempted to describe the potential influence of age and school grade on the development of children's occupational aspirations and perceptions, the influence of gender on children's occupational aspirations, children's occupational gender stereotyping, the influence of culture and socioeconomic status on children's

occupational aspirations and expectations, and the influences on or sources of children's occupational aspirations and perceptions. These studies constitute the bulk of research conducted in this field. In conclusion, since few of these studies utilized longitudinal designs the current research attempts to incorporate recent suggestions made that recognize longitudinal research as a means of reinvigorating the study of careers. The following subsection will now provide an overview of both international and national research on children's occupational aspirations.

**Overview of Children's Occupational Aspiration Research**

As the primary focus of the current research is on exploring the occupational aspirations of children and describing early occupational perceptions and their influence on future career choice, an overview of occupational aspiration research is provided. Similar research trends to those identified in the previous section were found, with much of the research being conducted internationally and few studies at a national level. In addition, international and national research has been further limited by primarily utilizing high school and college participants (Cook, Church, Ajanaku, Shadish, Kim, & Cohen, 1996; McNulty & Borgen, 1988; Pohlman, 2003; Rainy & Borders, 1997; Rojewski & Yang, 1997; Tittle, 1981; Wall, Covell, & Macintyre, 1999).

Despite the fact that the majority of research is still focused on adolescent and adult samples, children's occupational aspirations have increasingly become a research focus. Some of the topics that have formed the basis of these research endeavors include: the influence of socioeconomic status on children's

occupational aspirations (Sellers et al., 1999), parental influence on children's occupational aspirations (Lavine, 1982; Morrow, 1995; Santrock, 1993), occupational preferences (Gottfredson, 1981, 1996, 2002; MacKay & Miller, 1982; Siegel, 1973; Stockard & McGee, 1990; Trice et al., 1992), age and gender differences in the development of children's occupational reasoning (Nelson, 1978) and gender-role stereotyping (Archer, 1984; Hageman & Gladding, 1983; Stockard & McGee, 1990). Findings from these studies will be discussed later in this chapter. Although substantial progress has been made in establishing the nature and determinants of occupational aspirations (Rojewski & Yang, 1997), there is still much to be learned about their possible antecedents and their role in career behaviour (Pohlman, 2003). One such antecedent is the context in which children's career development takes place.

Hartung et al. (2005) have developed a considerable body of research that explores the influence of contextual factors on the career development of children. The processes identified by Hartung et al. (2005) suggest that children first employ intrapersonal and interpersonal strategies in order to explore the world-of-work and in order to develop early occupational aspirations and goals. Thereafter, children demonstrate a developmental shift in their exploratory behaviour wherein more generalized exploration gives way to conscious, concerted, and goal- and affective-directed exploration of the world-of-work and careers, thus supporting the traditional view of adolescence as a time of more focused career exploration (Pohlman, 2003).

In social-structural terms, the transition from primary - to middle school appears to be associated with a shift from vocational to career exploration, a process that begins as an orientation to the world-of-work and becomes an examination of the self within the world-of-work coupled with overt behaviour in support of this process. Lastly, although preadolescent children appear less goal directed in their occupational exploration, they clearly explore the world-of-work much earlier than theorists and researchers have typically assumed and this process of exploration yields occupational interests, values, and aspirations that serve as starting parameters for adolescent career development (Hartung et al., 2005). Hartung et al. conclude their description of this process by relating their observations back to Gottfredson's (1981, 1996) theory and stating that perhaps a child's career exploration circumscribes his or her adolescent career exploration along dimensions such as gender, socioeconomic status, parental education, and community standards.

As with most research identified in this chapter, the majority of studies have focused on describing occupational development in that part of the population that falls outside the age parameters of the present study. In addition, few studies have been conducted utilizing South African samples which emphasize the need for national research in this field. It has been acknowledged that the influence of socioeconomic status and parental influence on children's occupational aspirations, occupational preferences, and age and gender differences in the development of children's occupational perceptions have been the most frequently studied aspects. Consequently, the influence of social factors

on the development of occupational aspirations and perceptions has not received adequate attention, although such influence is critical in understanding the career developmental process.

To date, Cox (2004), Dean (1998, 2001), Grobler (2000), and Olivier (2004) are the only national studies that have research the career development of preadolescent children. Both Cox and Dean followed the same sample of children over a number of years in an attempt to track their occupational aspiration development. These studies found both support for and incongruence with career developmental theories. For example, Dean (2001) found discrepancies between the results of her study and Gottfredson's (1996) theoretical proposition that preschool children are influenced to a greater extent by paternal figures as they are orientated to size and power. The participants appeared to aspire more to maternal figures, thus providing support for Super's (1996) theoretical proposition that children in the Growth stage of development obtain information from key figures which they choose to imitate. This finding was also supported by Cox (2004) and Olivier (2004).

In addition, Grobler (2000) conducted a study to investigate the occupational aspirations and perceptions of five year old South African children. This sample consisted of 87 children from two cultural groups, namely black and white. The results of this study suggest differences in occupational aspirations and perceptions between cultural groups in South Africa, with more black children aspiring to social type occupations (e.g., nurse, teacher, police officer).

The following section describes in greater detail occupational aspiration research and will shift from an intrapersonal level (e.g., the development of a self-concept) towards an interpersonal level, i.e. a recognition of a social level of influences (e.g., culture and socioeconomic status) on children's career development.

*Intrapersonal Factors*

The effect of certain personal characteristics on the career choice of adolescents and adults (e.g. individual's preferences, interests, aptitudes, motives, values, self-concept and feelings of competence) is well established (Beane, 1991; Dorr & Lesser, 1980). However, when considering the limited research that has focused on the influence of these characteristics on children it is of paramount importance to increase research within this field. The next section describes existing career research focusing on the development of intrapersonal factors such as self-concept and self-efficacy in children.

*Self-concept and Self-efficacy*

Career development begins much earlier in the life span than generally assumed, and what children learn about work and occupations has a profound effect on the career choices made as adolescents and young adults (Hartung et al., 2005). The few studies that have attempted to identify and examine dynamic exploration in preadolescent children reveal that children often use personal interests, beliefs, and values to explore the world-of-work and to develop initial, tentative occupational goals (Hartung et al., 2005). In a study conducted by Goldstein and Oldham (1979), first, third, fifth, and seventh-grade children were

asked to describe the job-search process. The emphasis of their responses shifted from citing the mechanics of finding a job in the earlier grades (e.g., looking at help wanted signs, in classified ads, or asking friends and relatives) to the process of matching personal interests and abilities to current job opportunities during the fifth and seventh grades (Goldstein & Oldham, 1979). This seems to indicate that children start to develop a career self-concept during these early years of development, something that has not been acknowledged until recently.

There is a rapidly growing body of research on the role of perceived career self-efficacy in the career choice and development of young adults, but little information is available on how children develop this sense of career self-efficacy and how this affects the career choices they make (Cox, 2004). Tracey (2001) noted that theory widely supports the interest-competence link, suggesting that children are more likely to develop interests in activities in which they feel competent. Children's competence beliefs and interests have also been found to relate reciprocally over time in that self-perceived ability to perform an activity predicts level of interest in that activity and vice versa (Tracey, 2002).

Bandura et al. (2001) conducted a prospective longitudinal study to examine the multifaceted socio-cognitive origins of children's emerging beliefs about career self-efficacy and its determinant impact on career-related choices at a critical educational transition in their lives. Using a conceptual model of career self-efficacy, Bandura et al. proposed that children's perceived self-efficacy and academic orientations shape their perceived efficacy for different types of career

pursuits which, in turn, plays a role in the careers they choose. Consequently, Bandura et al. established a link between familial socioeconomic status and children's career trajectories only indirectly through its effects on parents' perceived efficacy and academic aspirations. The impact of parental self-efficacy and aspirations on children's perceived career efficacy and choice is, in turn, entirely mediated through the children's perceived efficacy and academic aspirations.

The findings by Bandura et al. (2001) further established that children's perceived academic, social, and self-regulatory efficacy influence the types of occupational activities for which they judge themselves to be efficacious both directly and through their impact on academic aspirations. Thus perceived occupational self-efficacy gives direction to the kinds of career pursuits children seriously consider for their life's work and those they disfavour (Bandura et al., 2001). Furthermore, an analysis of gender differences revealed that perceived occupational self-efficacy predicts traditionality of career choice. The results of this research emphasise the important role that parents (also identified as critical in the theory chapter), as well as admired role models can play in the process of developing a self-concept, and thus shaping occupational aspirations.

The notion that identification with role models helps to form an individual's self-concept has a long history in psychology and sociology (Gibson, 2004). According to Erikson (1950), the adolescent stage in particular is characterized by an effort towards establishing an ego identity and, at this critical juncture, children are prompted to assess and shed childhood identifications and become

open to new idols and ideals who might represent aspects of a stable self-concept. Other theorists have also emphasised the importance of recognizing the influence of role models as essential to the development of self-concept (Kagan, 1958; Kohlberg, 1963; Super, 1957).

The impact of significant others or parental influence on children's occupational aspirations and perceptions is illustrated by Trice and Tollapaugh's (1991) findings that children's aspirations towards their parents' occupations are influenced by their perception of how satisfied their parents are with their work. As children imitate the behaviour of others, they may choose to adopt or discard those aspects of the individual that seem to fit themselves, a process that is seen as one aspect of the development of a self-concept (Sharf, 2002). Imitating career behaviour then forms part of a very early career decision-making process where initial perceptions regarding adult careers are formed. Unfortunately, for many years the process of career development has not been recognised as starting in the preadolescent years. This is reflected in the low number of research studies that have utilized children under the age of thirteen years.

To date, no South African studies have focused on children's beliefs in their personal self-efficacy as shapers of their occupational aspirations, thus, emphasising the need for ongoing research (Cox, 2004). Future research should ideally focus on providing information about the career development of preadolescent children concerning the relationship between self-concept, occupational aspirations, career choice and career maturity as the relatedness between these constructs cannot be underestimated.

The next section describes two additional variables that potentially influence occupational aspirations and perceptions, namely, those of age and gender.

*Age and Gender*

Career development research has lacked an explicit focus on children despite life span theories acknowledging the relevance of career development throughout the life span (Super, 1990). Given prevailing theoretical assumptions concerning the childhood origins of interests, motivation and career behaviour, this notable gap in the literature is disconcerting (Stead & Schultheiss, 2004). According to Stead and Schultheiss (2004), given the changing needs of the 21st-century workforce that requires individuals to be flexible thinkers, effective problem solvers, and lifelong learners, it is imperative to gain a better understanding of the childhood career development process to better prepare children for their future.

The extant literature on childhood career development is sparse (Stead & Schultheiss, 2004). The following research is outlined in Stead and Schultheiss (2004) indicating that several investigations have addressed children's occupational preferences (Gottfredson, 1981; Stockard & McGee, 1990), aspirations and expectations (Helwig, 2001, 2002; Phipps, 1995), and gender role stereotyping and parental influences on career choice (McMahon & Patton, 1997; Trice, Hughes, Odom, Woods, & McClellan, 1995). Of particular interest to this study is the finding that longitudinal research has provided support for Gottfredson's (2002) theory, suggesting that occupational aspirations become

circumscribed by gender, an intrinsic influence on occupational gender stereotyping (Watson & McMahon, 2005), and class in early childhood and that these preferences remain stable over time (Tracey, 2001; Tracey & Ward, 1998).

*Age*

Age as a variable influencing occupational aspirations and perceptions has been consistently research throughout the current longitudinal study (Cox, 2004; Dean, 1998, 2001; Olivier, 2004). Gottfredson (1981, 1996, 2002) and Trice and King (1991) both found support for the perception that occupational aspirations are significantly narrowed during the childhood years. This has important implications for educational systems globally as the implementation of career development programs during the period of childhood has been recognised as critical to their overall development. Today it is widely accepted that there could potentially exist a strong correlation between childhood occupational aspirations and early adult occupational attainment. An interesting study conducted by Trice and King (1991) found that kindergarten children had realistic and stable occupational aspirations and that idealistic occupational aspirations appeared to diminish during this period.

The increase in age of individuals appears to coincide with more complex and abstract perceptions of the world of work. A reason for this could be that cognitive development plays an important role in the occupational perceptions of children (Nelson, 1978). A summative statement by Grobler (2001) emphasizes the impact of cognitive development on career development. Grobler states that children's occupational aspirations and reasoning reflect their changing modes of

understanding the world. This change allows children to eliminate more occupational aspirations with increasing age and their reasons for such rejection follow a developmental sequence (Trice et al., 1995). Therefore, children's knowledge of occupations seems to become more detailed and specific as they become older. However, the manner in which children describe occupations may also change over time. This statement is supported in the research findings of Borgen and Young (1982) who investigated the developmental patterns in which learners describe commonly known occupations. In brief, the results indicated significant differences between older and younger participants' descriptions of occupations. Again, the importance of understanding the influence of age on children's career development is recognised.

One theorist who has acknowledged the significance of age and, to a lesser extent, gender on children's career development is Gottfredson. Gottfredson's theory of circumscription and compromise (1981, 1996, 2000) is the only career stage theory exclusively applied to children. Research has widely supported Gottfredson's description of career development in children (Helwig, 1998a, 1998c, 2001; Trice et al., 1995), although her theory has also been subjected to criticism. Gottfredson proposed that as children grow older they comprehend and integrate information about themselves and occupations in order of complexity. Other career development theories also address interest development over time. Individuals are hypothesized to become more realistic over time (Ginzberg, et al., 1951; Super, 1953, 1980) and the literature has provided some support for this (e.g., Csikszentmihalyi & Schneider, 2000;

McNulty & Borgen, 1988). This forms part of the process of crystallization which is essential for overall career maturity (i.e., the idea that there are age-appropriate skills to be mastered at every career stage) of individuals.

The research support for the importance of crystallization varies (e.g., Edwards, Nafziger, & Holland, 1974; Peiser & Meir, 1978; Sackett & Hansen, 1995; Wiggins, Lederer, Salkowe, & Rys, 1983) with most of this literature based on cross-sectional data relating crystallization to outcome. However, it does not examine if crystallization increases over the adolescent years in a longitudinal manner (Tracey, Robbins, & Hofsess, 2005).

Within the South African context, research regarding the role of age as a determinant of occupational aspirations and perceptions seems to focus primarily on adolescence and early adulthood (Breger, 1976; Erwee, 1980; Horn, 1995; Kuzwayo, 1990; Shannon, 1975, Smith, 1992; Stead, 1988, 1996; Watson, Foxcroft, Horn, & Stead, 1997). However, recent studies (Cox, 2004; Dean, 2001; Grobler, 2000; Olivier, 2004) have emphasised the importance of exploring the influence of age on the occupational aspirations and perceptions of childhood. The results obtained from these later studies suggest that age plays an important role in children's occupational aspirations and perceptions with most children being able to aspire to an adult occupation at an early age. Grobler (2000), for example, found that career development begins early in childhood and that occupational awareness is present much earlier than proposed in career theories. Thus, although there is no urgency for most children to make immediate career choices, it is important for them to develop a meaningful understanding of

the relevance of school-based learning to their future career. In addition, the results from Dean's (2001) study suggest that both the typology of the occupations and the actual occupational aspirations some children hold remained stable over time.

Gender as another variable influencing occupational aspirations and perceptions is discussed in the next section.

*Gender*

Within the research focus on children's occupational aspirations, gender differences have been the most consistently researched aspect (Phipps, 1995; Wahl & Blackhurst, 2000). Research on gender differences over the decades suggests that social forces contribute to predictable gender differences in children's occupational aspirations (Arap-Maritim, 1984; Boynton, 1936; Csikszentmihalyi & Schneider, 2000; Gregg & Dobson, 1980; Hammond & Dingley, 1989; Looft, 1971). Additional research further confirms that children of all ages and across all elementary grades are occupationally gender stereotyped (Bobo et al., 1998; Franken, 1983; Harris & Satter, 1981; Liben, Bigler, & Krogh, 2001; Stockard & McGee, 1990; Stroeher, 1994). Furthermore, research has established that early social factors and personal preferences related to gender influence children's later occupational aspirations and choices (Archer, 1989; Goldstein & Oldham, 1979; Lapan & Jingeleski, 1992; Stockard & McGee, 1990).

Numerous studies have examined gender differences in children's career awareness relative to what they know and how they feel about occupations (Hartung et al., 2005). These studies have established gender-typing along

traditional occupational gender lines in terms of children's gender-stereotyped beliefs and knowledge about occupations (Cann & Garnett, 1984; McMahon & Patton, 1997; Schlossberg & Goodman, 1972). While such differences have been reported cross-culturally (Trice, 2000), research needs to update these findings because of changing gender roles (Hartung et al., 2005). Thus, it has become increasingly important to revisit and revise theoretical assumptions about the influence of gender on occupational aspirations.

Gender-role socialization shapes children's gender schemas, which have been shown to surface in gender-biased questions asked of workers in occupations non-traditional for their gender (Bailey & Nihlen, 1989; Nihlen & Bailey, 1988). According to Turner and Lapan (2005), over recent decades research has consistently demonstrated significant gender differences in the development and expression of children's occupational interests (Swanson & Gore, 2000). Researchers have shown, for example, that children from an early age have strong gender-typed occupational preferences, with boys demonstrating more rigid gender typing than girls (Helwig, 1998b, 1998c; Trice, et al., 1995).

According to Hartung et al. (2005), research has almost invariably indicated that girls prefer stereotypical female occupations, boys prefer stereotypical male occupations, and that boys report a higher number and broader range of occupational interests than girls (Birk & Blimline, 1984; Hammond & Dingley, 1989; Karre, 1976; Looft, 1971; Miller & Stanford, 1987; Stockard & McGee, 1990; Vondracek & Kirchner, 1974). Such gender differences

are attributed to gender identity development and the general process of occupational role knowledge development (Stockard & McGee, 1990). However, there are several studies that have compared children's occupational aspirations over different decades and concluded that occupational gender stereotyping has declined in recent decades (Bobo et al., 1998, Gregg & Dobson, 1980, Helwig, 1998b; Zuckerman & Sayre, 1982). Watson and McMahon (2005) view this decline in the gender stereotyping of occupations as a reflection of children's learning of changing social norms.

The results of the studies conducted by Dean (2001), Cox (2004), and Olivier (2004) suggest that gender plays an important role in children's occupational aspirations and perceptions. The findings of Dean's (2001) study indicate that boys aspired to more physical or Realistic types of occupations as opposed to the Social type (e.g. teacher) occupations that girls had a preference for. There have been inconsistencies found, however, between international and national research trends (Cox, 2004) placing an emphasis on the need for continued research in the field. National research confirmed that children are aware of gender differences and their own gender identity from an early age (Cox, 2004; Dean, 2001; Olivier, 2004). In addition, Cox (2004) found that the occupational aspiration and perception development of participants in her study corresponded with Gottfredson's (1981, 1996) stage of orientation to gender roles, as more girls aspired to occupations that were gender-appropriate, i.e most aspired to occupations traditionally held by their specific gender group. Lastly, gender stereotyping among children seems to decrease over time in both

boys and girls, with boys appearing to be less gender stereotyped than girls (Cox, 2004; Dean, 2001; Olivier, 2004). Boys were more prepared to accept girls into male occupations than girls were to accept these occupations. The present research is a follow-up of the same group of children used in Dean (2001), Cox (2004), and Olivier's (2004) studies in order to investigate the career development of these children in subsequent developmental stages. As such, it attempts to consider further the development of career awareness among South African primary school children.

The focus of discussion now shifts towards identifying some of the interpersonal influences that contribute to the development of occupational aspirations and perceptions.

*Interpersonal Factors*

Interpersonal factors, such as the family, have been described as having considerable influence on children's career development, including their occupational aspirations and expectations (Schulenberg, Vondracek, & Crouter, 1984). Parental background, modelling, and family experiences have all been identified as factors in children's career awareness development, extending to occupational gender-typing, prestige rankings, world-of-work knowledge levels and attitudes towards occupations (Hartung et al., 2005; Miller, 1989; Reid & Stephens, 1985; Seligman, Weinstock, & Owings, 1988). The following section will describe extant research on the influence of family dynamics on the career development of children, both internationally as well as nationally.

*Family Dynamics*

In their review of the literature on family of origin and career development, Whiston and Keller (2004) observed that support, attachment, and other family relationship variables have been identified as important ways in which parents have influenced children, adolescents and young adults to realize outcomes such as career self-efficacy, decisiveness, commitment, and exploration. Consideration of the concurrent as well as the unique contributions of family, teacher and peer emotional support is important in light of the possible complementary and opposing values held by each of these potential support sources (Kenny & Bledsoe, 2005; Phelan, Yu, & Davidson, 1994). Recent career development theory and research (Blustein, 2001; Flum, 2001; Schultheiss, 2003; Whiston & Keller, 2004) has focused primarily on the positive contributions of relational support in negotiating career transitions across the life-span (Kenny & Bledsoe, 2005). According to Kenny and Bledsoe (2005), consistent with that perspective, research among children from diverse cultural and economic background has found that support from family and teachers is positively associated with a range of academic achievement and career indices (e.g., Connell, Halpern-Felsher, Clifford, & Crichlow, 1995; Cooper et al., 2002; Flores & O'Brien, 2002; Gonzales, Cauce, Friedman, & Mason, 1996; Kenny, Blustein, Chaves, Grossman, & Gallagherm, 2003; Kenny, Gallagher, Alvarez-Salvat, & Silsby, 2002; McWhirter, Hackett, & Bandalos, 1998; Newman, Lohman, Newman, Myers, & Smith, 2000; Taylor, 1996).

Research on the influence of the family on the occupational aspirations and perceptions of children is limited as most research has focused on adolescent samples. An overview of such research is nevertheless provided as a background for further discussion. As has already been mentioned, the relationship between family background and career development has been well established (Seligman et al., 1988), with research indicating that parents are active agents in influencing children's career development. Whiston and Keller (2004) have suggested that the relationship children and adolescents have with their parents is an important dimension of career development. Organizational behaviour and career theorists have suggested that identification with role models, such as those found in families, is critical to individual growth and development (Dalton, 1989; Erikson, 1985; Hall, 1976; Krumboltz, 1996; Schein, 1978; Speizer, 1981). The relationship between parents' aspirations and expectations for their children and the aspirations and expectations of the children themselves (Bandura et al., 2001), the relationship between parental support and children's career development (Marjoribanks, 1981), and the relationship between parents' own career choices and the occupational aspirations of their children (Dean, 2001; Weeks, Wise, & Duncan, 1984) are some of the studies that have focused on this research topic.

Research conducted by Young, Valach, Ball, Paseluikho, Wong, De Vries, McLean, and Turkel (2001), and Young, Valach, Ball, Turkel, and Wong (2003) has described how career development is socially constructed through the joint and goal-directed actions and projects of parents and adolescents. Although

these studies focused on adolescent samples, some interesting ideas were identified that have merit for inclusion in this research overview. Specifically, through systematic observation of parent–adolescent conversations, the identification of the cognitive and affective processes associated with these conversations, and other monitoring data collected over a period of six to eight months, these researchers were able to portray parent–adolescent career development projects. An additional study conducted by Young, Marshall, Domene, Arato-Bolivar, Hayoun, Marshall, Zaidman-Zaita and Valach (in press), attempted to addressed two research questions, namely, how do parent–adolescent career projects fit with parent–adolescent relationship projects, and secondly, how are family challenges represented in the family career development and relationship projects. The results of their research highlight for practitioners the centrality of relationship and communication between parents and young adolescents (Young et al., in press). Young's research reiterates, thus, the importance of the relationship between parents and their children. The study also underlines that what is often understood as individual behaviour, such as career development tasks, are better understood as joint projects and embodies the shift from a more traditional understanding of this relationship to an understanding in which intentions and agency are constructed in and through relationships.

Additional research that has been conducted using adolescent samples has shown a strong relationship between family influence, social support and adolescents' occupational aspirations (Cherian, 1991; Kopele, 1999; Nel &

Mkhabela, 1987; Pearce 1999; Sedibe, 1995; Westaway & Skuy, 1984). Clearly, there exists a skewed emphasis in the study of family influence on career development during the adolescent years as few studies have extended this investigation to preadolescent samples. The focus now shifts towards existing research within the preadolescent years.

Parental background, modelling, and family experiences have all been identified in children's career awareness development, their influence extending to occupational gender-typing, prestige rankings, and world-of-work knowledge levels and attitudes (Hartung et al., 2005; Miller, 1989; Reid & Stephens, 1985; Seligman et al., 1988). However, family influence on occupational aspirations seems to decline with increasing age, perhaps reflecting children's growing independence as well as the increasing availability of other role models and sources of information outside the family. According to Seligman, Weinstock, and Heflin (1991), children's career awareness appears to be primarily influenced by fathers until about five years of age when a transition begins toward the mother's influence becoming more important. These findings have been supported by Cox (2004) who found that with children between the ages of six and nine years, the father's influence becomes less important and the mother's more important in terms of their occupational aspirations. Such findings have also been supported by Seligman et al. (1991) who found that the importance of the child's relationship with the father seems to decline, while maternal influence on self-image and future plans seem to increase.

South African research exploring the influence of the family on the occupational aspirations and perceptions of children has reported interesting findings. Dean (2001), for example, found marked inconsistencies between her research and career development theory, especially that of Gottfredson's theory (1981, 1996, 2002). Gottfredson proposed that pre-school children are predominantly influenced by paternal figures thus emphasizing their orientation to power and mastery. However, Dean's (2001) findings suggest children's occupational aspirations and perceptions are influenced to an equal extent by both parents' occupational typologies. Olivier (2004), on the other hand, found that South African children do not generally aspire to the same occupation that their parents hold. From the results of both Dean and Olivier's studies it appears as if children identify with key figures in their environment. These findings provide support for Super's (1996) theoretical proposition that children in the Growth stage of career development obtain occupational information from the key figures which they choose to imitate.

In conclusion, it is clear that both theory (e.g. Holland, 1985; Super, 1990) and empirical research (e.g., Eccles, Barber, & Jozefowicz, 1998; Penick & Jepsen, 1992) emphasise the family's role in the development of occupational aspirations, as well as the primacy role of parents in shaping occupational aspirations. Parents and significant others are critical in providing emotional support, guidance, and information during significant life transitions. However, parents, family systems, and significant others are not the only influences that shape occupational aspiration development. Social factors such as culture as

well as socioeconomic influences have also been identified as important determinants in occupational aspiration development.

*Social Factors*

The influence of society on the career development of children has been more implied than researched (Watson & McMahon, 2005). According to Watson and McMahon, how children learn is a recursive process between children and a broad range of influences from their social and environmental contexts.

Consistent with theoretical, age-graded predictions about children's career development the predominant research trend has been to examine *what* and *to what extent* children understand the world-of-work rather than *how* they come to learn this information (Dorr & Lesser, 1980; Goldstein & Oldham, 1979; Hartung, et al., 2005). School, family, and other contextual variables have been examined to predict what and how much children know about paid work (Goldstein & Oldham, 1979; Trice et al., 1992). A research concern is that few studies have examined how factors such as interests, values, and motivation interact with contextual factors to stimulate occupational awareness during childhood. Little research has attempted to determine, for example, whether and to what extent preadolescent children employ more sophisticated forms of career exploration involving a combination of inner and outer world factors or when the shift to this form of exploration occurs (Hartung et al., 2005). These social influences are described below.

Both culture and socioeconomic status have been recognised as important variables when exploring the occupational aspirations of children.

Much of the research on the effects of culture and socioeconomic status has confounded culture and socioeconomic status. According to Hartung et al. (2005), establishing a mean estimate of the effect of culture on occupational aspirations and expectations, independent of children's socioeconomic status, is therefore not advisable given this limitation within the literature. Nevertheless, there appears to be at least a multiplicative effect involving these two demographic variables.

*Culture and Socioeconomic Status.*

While some researchers and practitioners underscore the importance of cultural issues to better understand occupational behaviour, such issues remain largely sidelined in the career literature (Stead, 2004). This occurs despite the fact that the context in which an individual develops is of critical importance in the formation of self-identity and career development (Watson, 1984). Culture, according to Cox (2004), can be considered one of the most powerful social forces influencing career development, especially in children. In psychology, culture is largely seen as an independent variable that needs to be controlled through sampling in the quest for universal laws and theories that would be applicable for all populations. However, Stead's (2004) discussion on how social constructionism can play a role in firmly embedding cultural and cross-cultural issues in career psychology and thus offer alternative approaches to mainstream research strategies has emphasised that career psychology is cultural and that career psychologists need to infuse their work with cultural issues more than they have to date. A culture-based model of career intervention, according to

Spokane, Fouad, and Swanson (2003), must guide psychologists' work in the future. Therefore the decontextualization of career psychology has been called for by numerous researchers (Bowman, 1993; Carter & Cook, 1992; Fouad, 1995; Fouad & Bingham, 1995; Leong & Brown, 1995; Richardson, 1993). The studies that have been completed on the influence of culture on occupational aspirations are described below.

Limited research is available that has specifically studied the influence of culture on children's occupational aspirations and perceptions and therefore the present discussion will appear skewed towards adolescent samples. Studies conducted by Lipton, O'Connor, Terry and Bellamy (1991), Stockard and McGee (1990), and Liben et al. (2001) suggest that children's occupational interests are affected by occupational status within the dominant culture. Other studies that have focused specifically on the occupational aspirations of children and adolescents from different cultural groups (Pohlman, 2003; Vodracek & Kirchner, 1974) report similar findings. Pohlman (2003) conducted research on a sample of black South African learners and found that these adolescents had a less highly differentiated conceptualisation of their future adult role characteristics than their white peers. In addition, black adolescents perceive their future career as predetermined and entailing limited possibilities.

In South Africa research conducted on black adolescents has indicated that most adolescents aspired to careers in the helping professions with few aspiring to more scientific occupations such as those of engineering, technical trades, and computer science (Watson, Foxcroft, Horn, & Stead, 1997). The

influence of culture is further demonstrated by Pohlman (2003) who studied South African black adolescents' occupational aspirations. His findings suggested that, due to historical inequities, the adolescents were more predisposed to a context in which socioeconomic conditions and family structure affected occupational aspirations. Clearly social influences play a paramount role in shaping occupational aspirations. Children's occupational aspirations are often limited by prevailing ethnic stereotypes and this role of limiting stereotypes appears to be partly mediated by socioeconomic status (Wahl & Blackhurst, 2002). This influence is extended into adolescence where the impact of culture on occupational aspirations and expectations is embedded in contextual issues such as socioeconomic status, family structure, and family support (Pohlman, 2003). The relationship between socioeconomic status and occupational aspirations and perceptions of children appear to be interrelated and is further discussed below.

In a study conducted by Phipps (1995), the most frequently reported occupational preferences of eight to eleven year olds were those of a medical doctor, lawyer, architect, and veterinarian, all professions which fit the description of high-status professions. Research in South Africa has supported additional studies conducted by Cook, Church, Ajanaku, Shadish, Kim, and Cohen (1996) and McNulty and Borgen (1988) with South African adolescents generally aspiring to high status occupations (Horn, 1995; Westaway & Skuy, 1984). But why is it important to understand the career development of children in terms of factors such as status levels? The answer is complex and embedded in career

developmental theory. Occupational status levels often act as a drive behind an individual's career behaviour. Individuals aspire to these high status occupations because they perceive these as more valuable.

It seems that both culture and socioeconomic factors play an important role in shaping children's occupational aspirations. Socioeconomic status, prestige and the socioeconomic class of children's occupational expectations and aspirations have all been found to be positively linked (Hartung et al., 2005). Several studies have confirmed the importance of socioeconomic variables on children's occupational aspirations (Cox, 2004). Holland (1981) and Stroeher (1994) are two additional studies that provide support for previous research in finding preadolescent children's occupational aspirations to be related to socioeconomic status. As was the case with Stroeher's (1994) study, a national study conducted by Dean (1998) found that lower socioeconomic status children chose more traditional types of occupations. A lack of resources and a lack of exposure to a variety of adult role models were hypothesized as causative factors. The question that now presents itself is whether culture or socioeconomic status has the greater influence on the development of occupational aspirations in preadolescent children.

A study conducted by Bobo et al. (1998) suggests that socioeconomic status, rather than culture, plays the central role in occupational aspiration development. This is supported by an earlier study conducted by Dillard and Perrin (1980) who found that differences in the occupational aspirations, expectations and career maturity of children were more reflective of

socioeconomic than cultural background. A number of international studies have emphasised the importance of socioeconomic status rather than culture on the occupational behaviour of children (Bobo et al., 1998; Dillard & Perrin, 1980). However, there are also researchers who have challenged the emphasis placed on socioeconomic status in occupational aspiration development and rather recognised culture as the more powerful influence (Bandura et al., 2001; Phipps, 1995; Sellers et al., 1999). Considering the opposing views of the influence of culture and socioeconomic status, research seems to be inconclusive on the respective (and interactive) influence of these factors on occupational aspiration and perception development. This is understandable as little research has been conducted on issues that confront children of colour in their career development, thus emphasising the need for ongoing research (Sharf, 2002).

Nationally, Grobler (2000) conducted a study to investigate the occupational aspirations and perceptions of 87 five year old black and white South African children. Grobler found that within the black sample, high value was placed on the humaneness concept, with emphasis on the group and its well-being, while white children emphasised the individual and individual needs. The results of this study seem to reflect that social background and social setting play a role in occupational aspiration development, with more black children aspiring to Social occupations than white children. The differences found in occupational aspirations and perceptions between cultural groups support several international studies. Future research is still needed as, according to Leong and Brown (1995), without a culture-comparative approach researchers

would be forever limited to emic studies and a series of principles of career behaviour that has local utility but limited generalizability. While culture and socioeconomic status are important to bear in mind, the current research, because of its homogeneity in terms of socioeconomic status and culture, controls for these potential variables.

*Summary*

It has been suggested that, although substantial progress has been made in establishing the nature and determinants of occupational aspirations, there is still much to be learned about their possible antecedents and their role in occupational aspiration development. Intrapersonal factors such as the development of a self-concept and self-efficacy, in addition to interpersonal factors such as social factors, culture and socioeconomic status, all contribute to the development of occupational aspirations. One of the most important findings of the research cited is that children start to develop a self-concept during these early years of development, something that has not been sufficiently acknowledged until recently. The development of the self-concept has later implications when expressing an occupational aspiration. In theory, making a career choice is seen as implementing the self-concept. The self-concept is also potentially influenced by variables such as age and gender which have been consistently researched throughout the current longitudinal study. Further research on developmental and gender differences is needed to advance our knowledge of childhood career development and inform career education interventions, especially since significant gender stereotyping along traditional

occupational gender lines has been found in terms of children's gender-stereotyped beliefs and knowledge about occupations.

Interpersonal factors such as parental background, modelling, and family experiences have all been reported widely in children's career awareness development, extending to occupational gender-typing, prestige rankings, and world-of-work knowledge levels and attitudes. In addition, research among learners from diverse cultural and economic background has found that support from family and significant others is positively associated with a range of academic achievement and career indices. However, family influence on occupational aspiration development seems to decline with increasing age, perhaps reflecting children's growing independence as well as the increasing availability of other role models and sources of information outside the family.

Social factors such as culture have been said to be one of the most powerful determinants of career development. Research suggests that children's occupational interests are affected by occupational status within the dominant culture. Furthermore socioeconomic status and occupational status levels have been found to be positively related to children's occupational aspirations. The last section of this chapter is devoted to research conducted on occupational gender stereotyping.

## Overview of Occupational Gender Stereotyping Research

According to Hartung et al. (2005), research does not provide a clear picture of the potential consequences of gender differences on occupational aspirations and perceptions and therefore calls for more research to be

conducted in the field. However, a study conducted by McMahon and Patton (1997) found that preadolescent girls, relative to male peers, appear to aspire to a more restricted range of occupations and engage in less career exploration during the primary school years. The reasons for these differences are not clear (Hartung et al., 2005), but social-structural features that foster gender-based socialization differences may be a factor (Dorr & Lesser, 1980). Hartung et al. state further that, regardless of the cause, preadolescent girls appear to lag behind boys in terms of several critical aspects of career development. While girls tend to exhibit greater career decidedness at an earlier age than boys, this may be due to premature occupational foreclosure prompted by fewer identified options relative to boys (Dorr & Lesser, 1980).

Career developmental research demonstrates that children learn cultural gender stereotypes of occupations by the time they start school (Liben et al., 2001). Cultural gender stereotypes, in addition to the perceived status of a given occupation, play an important role in shaping children's occupational interests (e.g., Lipton et al., 1991; Stockard & McGee, 1990). According to Liben et al. (2001), gender stereotyping and the status of occupations are not entirely independent as there is a correlation between the extent to which occupations are culturally viewed as masculine or the degree to which they are dominated by male workers, and the level of status and pay such occupations are accorded.

Liben et al. (2001) investigated the role of gender in children's beliefs about occupational status, children's own occupational interests, and the relation between children's personal endorsement of cultural gender stereotyping and

their ratings of occupational status and interest. These variables were explored in children in early and middle childhood (six to eight years and eleven to twelve years, respectively) as this covers a period in which children are said to have considerable occupational knowledge as well as variation in individual endorsement of cultural gender stereotypes (Liben et al., 2001). The data from their study was consistent with prior research which showed that children, like adults, are aware of status differentials among occupations. With respect to familiar occupations, children rated occupations viewed by their culture as masculine as being higher in status than occupations viewed as feminine. This effect was found even in the younger age bracket, although it became more pronounced with increasing age (Liben et al., 2001).

Liben et al. (2001) further found that, at least by middle childhood, children appear to have acquired the belief that occupations performed by men have higher status than those performed by women. Even in the younger children there was a greater interest in occupations that were stereotypically associated with their own gender. Interestingly, while girls and boys show comparable interest in masculine (i.e. higher status) occupations, girls evidence significantly higher levels of interest in feminine jobs than do boys (Liben et al., 2001).

In a recent review of literature that focused on the career development of children, Hartung et al. (2005) included the gender stereotyping of occupations as one of the main topics of extant research. According to Hartung et al. (2005), many studies on children's career development concern children's gender-stereotyped beliefs and knowledge about occupations, with studies reporting high

degrees of gender stereotyping along traditional occupational gender lines (Barnhart, 1983; Cann & Garnett, 1984; McMahon & Patton, 1997; Schlossberg & Goodman, 1972; Tibbetts, 1975) and such differences being reported cross-culturally (Trice, 2000).

Research examining the impact of gender-role identity on occupational aspirations indicates that kindergarten and grade-school children's occupational aspirations relate to their gender, with boys and girls aspiring to male- and female-dominated occupations, respectively (Archer, 1984; Sellers et al., 1999). However, research conducted by Gorrell and Shaw (1988) found that gender predicted preadolescent children's self-efficacy beliefs about their perceived ability to learn and perform male- and female-dominated occupations. Boys believed to a greater extent than girls that they could learn the tasks required of male-dominated occupations, whereas girls believed to a greater extent than boys that they could learn the tasks required of female-dominated occupations (Hartung et al., 2005).

It has been suggested that objects may be gender typed by virtue of their use by or association with one gender or the other or because they embody qualities that show a nonliteral or metaphorical correspondence to characteristics of or beliefs about males and females. It may then be deduced that certain careers, some more than others, potentially lend themselves to be associated to a specific gender. This has been supported by Turner and Lapan (2005) who established differences in males' and females' employment patterns across Holland's (1985) career typology (i.e., more males work in realistic, investigative,

and enterprising occupations, and more females work in artistic, social, and conventional occupations) (Gottfredson & Lapan, 1997; Lapan, Adams, Turner, & Hinkelman, 2000; Lapan, Hinkelman, Adams, & Turner, 1999; Turner & Lapan, 2002).

*Summary*

The aim of this chapter has been to provide an overview of research that has focused on describing some aspects of the career development of children. Occupational aspirations and occupational expectations have been widely researched internationally as both are considered predictive of later career achievement levels (Pohlman, 2003). These, in addition to exploring gender stereotyping of occupations, have remained the most researched topics in recent years. However, little of this research has focused on the career development of children under the age of thirteen years, and even fewer studies have been conducted nationally. In addition, career research in South Africa has been described as nascent and mostly lacking for the majority of cultural and population groups (De Bruin & Nel, 1996; Kota, 1996; Stead & Watson, 1999; Westaway & Skuy, 1984).

Although there are differences between national and international research, there is agreement that children express occupational aspirations from an early age. The influence of age on the development of occupational aspirations has been recognised as an important variable when conducting career research. General trends indicate that as children become older, their knowledge about occupations increases and fantasy occupations decrease.

Gender differences with regards to occupational aspirations have also been documented with boys, for example, aspiring to more physical occupational types than girls. Cultural gender stereotypes, in addition to perceived status of a given occupation, play an important role in shaping children's occupational aspirations. Furthermore, with respect to familiar occupations, children rate occupations viewed by their culture as masculine as being higher in status than occupations that are viewed by the culture as feminine. This is evident even in young children, although it appears to become more pronounced with age. These are important findings that have to be considered when describing the results of the present study. Lastly, the influence of culture has also indicated differences between urban black and white children. According to Dean (2001), black children are less able to project themselves in future occupations than their white peers.

Considering the above, there is a definite need to further explore how trends in children's occupational aspirations and perceptions change over time (Olivier, 2004). There is also a need for a research emphasis within the South African context in order to expand on the limited extant knowledge base of the career development of children. The majority of research reviewed in this chapter has been of international studies with a bias towards white, middle socioeconomic samples. In addition, the skewed nature of international research on children's career development is particularly evident in the methodological nature of research to date (Olivier, 2004). Most research has used cross-sectional as opposed to longitudinal designs, with the latter being recognised as a means of reinvigorating the study of careers. Previous researchers involved in

the larger study of which the current study is a part, have all indicated the value of longitudinal research despite its complexity and the inherent difficulties that form part of such a research design (Cox, 2004; Dean, 2001; Olivier, 2004).

The following chapter will describe the methodological considerations pertaining to the present longitudinal study of the occupational aspirations and perceptions of nine to twelve year-old South African children. Topics that will be described include the aims of the study, the research design, the population and sampling procedures implemented, the measures used to gather data, the procedure followed, the ethical considerations, and the statistical process chosen to analyse the data.

# CHAPTER 4

## Research Methodology

It is essential to ground the current study within the context of the larger ongoing longitudinal research project. The latter project aims to track the development of the occupational aspirations and perceptions of a sample of children, initially in pre-school, over a twelve-year period. Studies that have already been completed as part of this ongoing research project (Cox, 2004; Dean, 2001; Olivier, 2004) have provided much insight into the process of career development in children, an area of career research that has not received adequate attention to date. The present study attempted to expand on and further explore the growing knowledge base in this field of career research. Research, as it applies to this study, refers to systematic inquiry that is characterized by sets of principles and procedural guidelines, and that is subject to evaluation in terms of criteria such as validity, reliability and representativeness (Hitchcock & Hughes, 1995).

The primary focus of the present study was to accurately describe as well as explore possible changes in the occupational aspirations and perceptions of a group of children over a four-year period.

## Problem Formation

Career development theory has had a relatively short history and it has evolved in the second half of the last century from the trait factor theories that predominated in the early 1900s towards a more developmental perspective (Patton & McMahon, 1999). However, extant career literature still reflects a

prevailing research bias towards adolescent and adult developmental stages and a failure to adequately consider and make linkage to childhood dimensions of lifespan career development (Vondracek, 2001). An overview of research on children's career development by Watson and McMahon (2005) demonstrated this skewed focus. These findings were discussed in greater detail in Chapter 3. Grobler (2000) has also pointed to the lack of baseline information regarding the career development of young children in South Africa. The practical need for such research is critical especially when one considers the assertion that "international research with young children has resulted in career education programmes that have successfully enhanced the career awareness of children" (Olivier, 2004, p. 62-63). Through research the possibility exists for evaluating and modifying the adequacy of both career theory and career education for primary school South African children where necessary (Dean, 2001).

South Africa is not the only country calling for the ongoing monitoring and evaluation of career-focused interventions. Similar forms of quality control and service provision have also been called for in other countries. For example, research conducted in Australia (Prideaux, 2003) led to an appeal for a realignment of the focus in career education in that country. According to Prideaux, this has implications for career education curriculum development in Australia which needed to shift from its ad hoc, information-giving approach to more comprehensive, long-term and intensive programming. Clearly the demand for career education that enhances the personal skills students need to successfully negotiate the world of work in the twenty-first century (Prideaux,

2003) is becoming a prerequisite for ensuring quality education. Therefore the development of a more comprehensive knowledge base of career psychology to inform such intervention programmes is critical.

Career psychology in South Africa has been described as "nascent, emerging or still in its formative stages of development" (Nicholas, Pretorius, & Naidoo, 1999, p. 1), with South African research on career development being limited largely to secondary and tertiary students (Horn, 1995; Stead & Watson, 1999). This emphasizes the need for ongoing career development research to explore South African children's career development. If possible, career development studies should be conducted using a longitudinal design as Savickas (2002b) has proposed longitudinal research as one of the major ways in which the study of careers can be reinvigorated.

The proposed study aims to expand on the longitudinal research conducted by Dean (2001), Cox (2004), and Olivier (2004) by assessing the possible stability and variability of the occupational aspirations and perceptions of a sample of South African children over a four-year period.  Dean assessed the current sample from the ages of four to eight years, Cox (2004) from ages six to nine years, while Olivier (2004) focused on eight to ten-year olds. These studies all appear to provide support for child development and career development theories by confirming childhood as a time of critical development, including the development of occupational aspirations and perceptions.

*Primary and Specific Aims*

The primary aim of the present study was to explore and describe possible changes in the occupational aspirations and perceptions of a group of nine to twelve-year old children over a four-year period. More specifically, the study aimed to:

1. Explore and describe how children's occupational aspirations and perceptions (in terms of their interest typology) may change over a four-year period for the sample as a whole, as well as for gender groups separately.

2. Explore and describe how children's occupational aspirations and perceptions (in terms of their occupational status level) may change over a four-year period for the sample as a whole, as well as for gender groups separately.

3. Explore and describe how children's occupational perceptions (in terms of gender stereotypes and gender traditionality) may change over a four-year period for the sample as a whole, as well as for gender groups separately.

**Research Method**

A major aim of the social and behavioural sciences is to develop explanations for various aspects of human behaviour (Williams, 2003). One way of determining the adequacy or validity of these explanations is to collect pertinent data through research, thereby evaluating the extent to which the data are consistent with the explanation (Cramer, 2003). However, any research project must be preceded by the selection of a research design. This involves

making decisions about the specific methods and procedures used to conduct the research (Gravetter & Forzano, 2003). The present study made use of a quantitative method which is "a form of conclusive research involving large representative samples and fairly structured data collection procedures" (Struwig & Stead, 2001, p.4). Most quantitative research is conducted at the macro level and attempts to explain and predict aggregate behaviour and characteristics (Williams, 2003). It is rooted in the scientific tradition of studies of the social world and depends on statistical and mathematical techniques. Although semi-structured interviews and biographical questionnaires were used to record verbal data, the data obtained were transposed into nominal data for analysis. Throughout this process Huysamen's (1994) guidelines for the provision of high quality research were closely followed. These are: scientific knowledge must be obtained by means of systematic observation; this knowledge must be obtained in a controlled manner; and lastly, the study must be replicable.

An advantage of quantitative studies is that they allow the researcher to present the multiplicity of the collected data in a coherent and functional way (Bless & Kuthuria, 1993; Struwig & Stead, 2001). In addition, quantitative methods used in psychological research follow the tradition and history of quantitative methods in other disciplines (Cox, 2004). Thus researchers who share a common interest can communicate with each other through the use of a common language. A disadvantage of this type of method is that detailed insight into the research problem may be compromised.

Within the broader sphere of quantitative research, this study adopted an exploratory-descriptive approach. Exploratory-descriptive research involves the provision of an accurate and detailed description of, as well as the systematic examination and organisation of, carefully observed information about specific phenomena or constructs (Christensen, 1996; Cozby, 1993; Dane, 1990). Descriptive research attempts to provide a complete and accurate description of a situation by summarizing and communicating what is found in quantitative data. Harris (1998, p. 48) states that "descriptive studies frequently utilize large samples, natural settings, and behaviours or scores that are of general interest". Considering that most career research in South Africa has focused on adolescents to date (Horn, 1995; Stead, 1988; Swartz, 2000; Watson, 1984), research on pre- and primary school children's career development remains a largely unexplored territory. Thus, within this context the present study could be described as exploratory. Exploratory research is the method of choice if previous research on the topic is limited. The goal is primarily to formulate more precise questions that future research can answer and it may constitute the first stage in a sequence of studies (Cox, 2004). Although previous studies have been conducted on the career development of children, this study is unique as it looks at an age range in childhood that has not been examined before in South Africa.

The advantages of using the exploratory-descriptive approach are that it is objective and specific (Dean, 2001) with a disadvantage being the lack of control over extraneous variables. In addition, no cause-and-effect conclusion can be drawn and the researcher cannot progressively investigate aspects of the

independent variable in order to clarify the results. When conducting exploratory research it is important to take cognisance of, and subsequently avoid, the possible influence that preconceived ideas can have on the research (Mouton & Marais, 1990).

The present study can also be described as being longitudinal in nature. According to Magnusson et al. (1991), longitudinal research is the main road to fundamental and valid knowledge of a living system's development. Because this approach implies collecting data about the same subjects across time, the demands on the researcher to be accurate and scrupulous are high (Magnusson, et al., 1991). It is for this reason that longitudinal research on life-span career development is rare and subsequently has been called for (Savickas, 2002b; Silbereinsen, 2002) in order to expand the limited information available concerning the career development of children. Longitudinal research examines features of the same individuals at various times as they grow older (Harris, 1998). According to Verdonik and Sherrod (1984), the minimum criteria for a longitudinal research design are that the information should be collected during at least two time points over a span of at least one year and have an attrition rate that is low enough to maintain the longitudinal quality of the study (Cozby, 1993). Both these criteria were met in the present study (i.e., the same participants were evaluated on four occasions over a four-year period and only children who had been interviewed throughout the study were included in the sample).

The advantage of using a longitudinal design is that detailed insight is gained into the process underlying an individual's way of thinking, feeling, acting

and reacting both at a certain stage of the life process, as well as over a period of time (Magnusson et al., 1991). Furthermore, the use of a longitudinal sample reduces the variability that can be expected when cross-sectional samples are used (Helwig, 1998a). The disadvantage is that this type of research is expensive and time consuming and often has a high attrition rate. Changes in the size of the sample at each successive period of data gathering represent a process of selective reduction in the number of subjects involved (Ruspini, 2002). This attrition rate is cumulative, that is, once a participant has missed one of the data-gathering points they cannot be included in subsequent years (Taris, 2000). The goal for the present longitudinal study was to explore and describe the variance among individuals or groups of individuals in their occupational aspirations and perceptions at any one time, and to describe possible changes in these aspirations and perceptions over extended periods of time.

*Participants and Sampling*

As already mentioned, the proposed study aimed to extend an ongoing longitudinal research project which seeks to explore changes in the occupational aspirations and perceptions of a group of South African children over time. Given this, it was essential to adhere to the sampling procedures followed by previous researchers involved in the project as a means of ensuring consistency. The target population for the initial study consisted of pre-primary school children in the Nelson Mandela Metropole (Dean, 2001). The sampling procedure involved a two-stage process in which schools were selected according to a simple random sampling procedure before the children were selected. A sample of 130 children

was obtained during the first year of the study using convenience, non-probability sampling. This type of sampling procedure is based on the fact that the probability of an element or unit being selected is unknown (Bless & Kuthuria, 1993; Harris, 1998; Struwig & Stead, 2001). This reason, as well as the fact that for the first year of the study all participants were still attending pre-primary school, justified the choice of using a convenience, non-probability sampling procedure (Cox, 2004). An advantage of this method is that it is practical and inexpensive (Cozby, 1993; Struwig & Stead, 2001). However, a disadvantage is that generalization might become difficult or impossible (Dane, 1990; Sheskin, 2000; Struwig & Stead, 2001). Considering that the research adopted an exploratory-descriptive approach, the need to make generalizations was not of central importance (Schonegevel, 1997).

The sample was considered fairly homogenous in terms of socio-economic status (Cox, 2004; Dean, 2001). This was judged to be the case because the majority of pre- and primary schools participating in the study were those where parents paid similar school fees and, in addition to this, such schools catered predominantly for middle- to upper socio-economic status families (Dean, 2001).

A possible pitfall of all longitudinal research is the attrition rate of participants in later years of the study. This was also true for the larger study as the initial sample size of 130 children (between four and six years of age) decreased in the second (n = 90), third (n = 82), fourth (n = 70), fifth (n = 59), and sixth (n = 42) years of study. Initially the selected participants were all still

attending pre-primary school which made it convenient in terms of time and for financial reasons to conduct semi-structured interviews. This, however, meant that the initial sample contained children whose ages ranged between four to six years old. By the end of the third year of the project it was decided to exclude the groups of children who were four and five years of age at the onset of the project. The reason for this decision was that this simplified the reporting of the findings which previously required two age cohorts (Dean, 2001).

At the end of the sixth year of the study there were 42 children in the sample whose data could be tracked over the four years of the present study. This sample was drawn from the larger sample and consisted of all children who were initially assessed at six years of age and during all subsequent years. There were 42 participants in the present study, of which 24 are boys and 18 girls. The sample consisted of predominantly white, English-speaking children. All children who were still available were interviewed in each successive year (Cox, 2004). This was necessary as the size of a sample affects the extent to which the researcher can place confidence in the data. A larger sample will yield statistics that are more reflective of the actual values in the population than with a smaller sample (Harris, 1998; Page & Patton, 1991; Struwig & Stead, 2001). The sample of 42 children in the present study was, nevertheless, large enough to produce useful results (Page & Patton, 1991; Sheskin, 2000).

*Measures*

*Semi-structured Interview*

The task of interviewing children and adolescents presents researchers with unique opportunities and dilemmas (Eder & Fingerson, 2002). As the target population for the initial study consisted of preschool children, it was decided that semi-structured interviews would be the most appropriate means for gathering information on occupational aspirations and perceptions (Cox, 2004). The semi-structured interview, according to Huysamen (1994), is a versatile way of collecting data and may be used with all age groups including pre-school children who are still unable to read (Eder & Fingerson, 2002). As familiar as it is today, the interview as a procedure for securing research knowledge is relatively new historically (Gubrium & Holstein, 2002). Gubrium and Holstein comment on the fact that individuals have not always been viewed as important sources of knowledge about their own experiences. In seeking everyone's opinions, the interview has increasingly democratised experiential information (Gubrium & Holstein, 2002).

One clear reason for interviewing young respondents is to allow them to give voice to their own interpretations and thoughts rather than to rely solely on adults' interpretations of their lives. Another reason, according to Eder and Fingerson (2002), is to study those topics that are salient in children's lives but do not occur in daily conversations or interactions. Therefore, considering the findings that children do indeed express occupational preferences from a very

young age, it was necessary to explore where and when these occupational aspirations and perceptions were shaped.

There are several advantages in using semi-structured interviews. They allow for open and frank responses (Struwig & Stead, 2001), they are flexible and their structure can easily be adjusted should the situation require it, and they allow for the collection of personal information, attitudes, perceptions and beliefs (Sax, 1979). A disadvantage of this type of data collecting is that the interviewee's responses may be constrained and influenced by predetermined questions (Struwig & Stead, 2001). In addition, to initially structure the interview format might be time-consuming. Nevertheless, semi-structured interviews are a relatively quick and effective means to gather much information and their format allows the investigator to make direct comparisons between data provided by different participants (Shaffer, 1999).

The interview schedule, the Career Awareness Questionnaire (CAQ), used from the onset of the longitudinal project, formed the basis of the present study. According to Cox (2004), the questions in the semi-structured interview of the initial study were modelled on research conducted by Nelson (1978) who demonstrated that asking children open-ended questions aids the development of occupational thinking. The format of the initial semi-structured interview (Dean, 2001) has undergone minor changes in subsequent studies (Cox, 2004; Olivier, 2004). For instance, minor adjustments were made to language towards gender free language (e.g. fireman was changed to fire officer) as well as to reflect participants' increasing development. However, the CAQ still contains four main

questions, with supplementary questions that follow the main questions. These questions explore participants' occupational choices, how many occupations they know about, how much they know about the identified occupation, and the extent to which they hold gender-role stereotypes about certain occupations. Considering that the sample of children for the present study have entered Gottfredson's third stage of occupational development (i.e., orientation to social value and status), the children's responses to question 1 (c) of the CAQ were content analysed in terms of Gottfredson's criteria for the social evaluation stage of development. The three CAQ versions (the initial and subsequently modified forms) used during the semi-structured interviews in the initial, the follow-up, as well as the present study can be found in Appendix A, B, and C respectively.

In addition to the traditional questions asked in the CAQ the researcher decided to introduce a section of questions that would enable participants to reflect on their development by looking back at their occupational aspirations from the first year of the study (see Appendix C). These questions did not form part of the data analysis, but served as a valuable indication of how participants viewed and experienced possible changes in their occupational aspirations and perceptions over time, which will be of value to the larger study.

*Biographical Questionnaire*

A biographical questionnaire has also been developed in order to obtain information on important variables, such as the age and gender of the participants (Dean, 2001). This questionnaire (see Appendix D) has been used throughout the duration of the longitudinal study and also serves as the consent

form in which parents or guardians agreed to their children participating in the study.

Items in the biographical questionnaire were set out in such a way as to facilitate easy understanding by the parents or guardians, as well as to simplify coding for the statistical analysis. In addition to asking the occupations of the parents, this questionnaire also asked parents whether their children had ever expressed an interest in a particular occupation and, if so, to identify it. Olivier (2004) suggested that this information allowed for the exploration of a possible relationship between parents' occupation and the child's occupational aspirations.

The procedure for collecting the biographical questionnaires in previous years was to send them out to the parents prior to the scheduled appointment in order to gain parental consent timeously. This process has however become increasingly difficult as many of the participants and their parents do not reside in the Nelson Mandela Metropolitan area any longer and the adapted process used in this study will be discussed in the procedure section.

*Ethical Considerations*

Psychologists, while not ignoring the nature of the external world, are nevertheless concerned with individual consciousness (Williams, 2003). According to Williams, social researchers are concerned about the nature of relationships between people, thereby emphasizing the importance of understanding people as "socially situated agents" (p. 3). This is part of a more strategic positioning that makes certain theoretical assumptions about the social

world; more specifically it provides the connection between 'grand theory' and empirical social science disciplines. The following section comments on the ethical considerations that formed an essential part of the longitudinal study.

Permission for the proposed research study as well as the informed consent of the parents of the participants was obtained through the appropriate channels. As this study forms part of an ongoing longitudinal study the researcher followed the same ethical guidelines and procedures used by previous researchers involved in the project (Cox, 2004; Dean, 2001; Olivier, 2004). These procedures had been conducted in accordance with the code of ethics for research of the former University of Port Elizabeth, which has now been merged into the Nelson Mandela Metropolitan University (Cox, 2004). The research did not harm the participants and participation was of a voluntary nature. Lastly, although anonymity could not be ensured (an objective of this research was to provide feedback to schools and to follow the same children longitudinally), group feedback was provided to the school and participants' parents in the form of a written report on the findings. Previous studies in this longitudinal research project had stressed the value of such feedback.

*Procedure*

The present research needs to be placed within the larger context of the proposed twelve-year longitudinal study. At the start of the longitudinal research (1998) various pre-primary schools in the Nelson Mandela Metropole were contacted, both telephonically and in writing, in order to determine their willingness to take part in the study (Dean, 2001). These schools were offered

feedback on the results of the research as an incentive to participate in the study. Letters of confirmation of dates, times, parental consent forms, and a biographical questionnaire were then sent to these schools. Parents were required to complete both the consent form as well as the biographical questionnaire prior to the scheduled interviews. In addition, parents were asked not to prepare their children in any way regarding their occupational thoughts as this would affect the validity of the results (Cox, 2004). These schools were contacted in subsequent years of the research to confirm their continued participation in the study as well as to establish which children were no longer attending such schools and where these children could be located.

The fieldwork and data collection were carried out predominantly by psychology postgraduate students and intern psychologists from the University of Port Elizabeth (now called the Nelson Mandela Metropolitan University). All students were trained in both the semi-structured interview procedure as well as the capturing of verbal data in order to ensure accuracy and consistency in the data collection. Students were selected as well as evaluated by a team of researchers from the University with each student initially interviewing at least one child under supervision. Once students had been evaluated as being competent, they were allowed to participate in the interviewing of the children. The semi-structured interviews, usually lasting between 10 to 15 minutes, were conducted individually and at a time pre-determined by the schools. These interviews took place outside of the classroom in a place away from other children in order to avoid distraction. This procedure was repeated yearly with

minimal adjustments being made to the format to ensure that the testing environment and administration were standardized. As the years have gone by, only children who have been interviewed annually throughout the longitudinal study are approached each year for continued assessment. Children who no longer reside within the Nelson Mandela Metropole, but who continue to form part of the study, are telephonically interviewed to ensure a low enough attrition rate to continue to make the study viable. Consent forms were individually mailed to the parents of these children prior to conducting the interviews.

Prior to each interview participants are reintroduced to the process and objectives of the study after which the interview commences. The semi-structured interview data are firstly recorded by the student and then captured, scored and linked to the previous assessment data by the researcher. For the purpose of this study only data pertaining to the nine to twelve-year period were coded and analysed.

*Data Coding*

Magnusson et al. (1991) question whether knowledge acquisition adheres to an invariant sequence which is identical for all children, or whether cognitive development follows different pathways for different children. According to Magnusson et al. (1991), in terms of data analysis, "such different developmental pathways are inferred from interindividual differences in the form of intra-individual variability" (p.190).

In order to quantify the occupational aspirations of the children, responses were coded according to Holland's (1985) classification system of occupational

interest types (Dean, 2001). The person-environment fit paradigm proposed by Holland matches a person's specific abilities and interests with an occupational field that involves the same abilities and interests (Cox, 2004). Holland's (1985) RIASEC model identifies six specific modal personality styles and work environments, namely Realistic, Investigative, Artistic, Social, Enterprising and Conventional. These types are outlined below:

*Realistic Type*

Realistic people enjoy working in an environment that can provide them with activities involving the use of equipment, machinery, and tools. These activities should ideally be presented in a structured manner. The outstanding characteristic of this type of person is that they prefer working with their hands. Some occupations that will appeal to them include: mechanic, farmer, builder, surveyor, and pilot.

*Investigative Type*

Investigative people normally acquire skills concerning mathematical and scientific activities. They prefer to work on their own, possibly in an environment where they can observe, investigate, learn and try to find solutions to problems. According to Cox (2004), they prefer to have a substantial amount of freedom in what they are doing. Some occupations that will appeal to people with this interest type includes: chemist, biologist, geologist, researcher, mathematician, and research engineer.

*Artistic Type*

Artistic type individuals have a strong preference for free, ambiguous, unsystematic activities, and they like to work in an aesthetic environment. In addition, Artistic individuals tend to be expressive, non-conforming, original and introspective. Artistic occupations presuppose creative ability, in among other things, art (for instance music, writing, sculpting, dancing), as well as other relatively unstructured and creative mental tasks. Artistic-type occupations would include: musician, artist, interior designer and writer.

*Social Type*

Individuals with strong Social preferences are interested in other people and they enjoy training, developing, curing, or enlightening others. They tend to learn skills concerned with human relations competencies and this, in turn, leads to their placing a high premium on the development of good interpersonal relationships. They enjoy solving problems through discussion and work rather than through delegation. Typical work settings include classrooms, hospitals, counselling offices and churches.

*Enterprising Type*

Enterprising type individuals tend to learn persuasive and interpersonal skills, and they are often found in leadership positions. They enjoy persuading people and leading companies with the aim of reaching economic or organisational goals. Recognition and power are important to people with a strong Enterprising preference. Some occupations that will appeal to these people include: salesperson, lawyer, manager, politician, and estate agent.

*Conventional Type*

Conventional type individuals prefer occupations where routine and predetermined instructions are important. Such individuals relate to the systematic manipulation of data in a structured environment. They enjoy clerical and computational tasks, identify with business and value economic matters greatly. Conventional type occupations include: banker, secretary, accountant, and clerk.

Although Holland's typology of occupations was not developed specifically for use with children, the model has been successfully used in previous studies with children to classify and code the children's occupational aspirations and perceptions (Cox, 2004; Dean, 2001; Olivier, 2004). The use of such coding has also been explored and found to provide support for using Holland's code with children (McMahon & Watson, 2005; Watson & McMahon, 2004). The data obtained from the semi-structured interview were coded using a simple three-letter typology code, with the first letter of the code representing the major occupational type. The responses of the sample of this study were only coded according to the first letter of their three-letter occupational typology.

In addition, the status level of the participants' first choice occupation was coded in accordance with the RIASEC model, using the levels described in the South African Dictionary of Occupations (Taljaard & Von Mollendorf, 1987). These occupational status levels range from five (requiring less than high school education) through to one (requiring postsecondary education). The codes include, in descending order: 1 (high status / professional occupations), 2 (semi-

professional occupations), 3 (skilled occupations), 4 (semi-skilled occupations), and 5 (unskilled occupations) and are summarized in the table below.

Table 1

Status Levels of Occupational Aspirations

| Level | Description |
|-------|-------------|
| 1 | High-level workers (e.g., university degree, technikon diploma) |
| 2 | Middle-level workers (e.g. college diploma for nursing/teaching) |
| 3 | Skilled workers (e.g. technical college, matric) |
| 4 | Semi-skilled workers (e.g. grade 8, 9, or 10) |
| 5 | Unskilled workers (e.g. primary school or no education) |

The data coding procedure used since the onset of the research remained unchanged for the coding of the data for each subsequent year.

In order to establish the accuracy with which interest typology and status level codes were assigned to the children's occupational aspirations, a second rater assigned codes to a randomly selected sample of children's occupational aspirations (Cox, 2004; Dean, 2001; Olivier, 2004). Inter-rater reliability was then determined as this provided an index of how closely observers agree when coding the same observations (Cozby, 1993). This was done through the use of a second rater who assigned codes to a randomly selected sample of children's occupational aspirations. Throughout these studies a high level of agreement was obtained indicating acceptable inter-rater reliability.

*Data Analysis*

As the current study adopted an exploratory-descriptive approach, descriptive statistics were used as they allowed the researcher to organize and easily interpret the data observed or recorded (Bless & Kuthuria, 1993; Harris, 1998; Page & Patton, 1991; Sheskin, 2000; Struwig & Stead, 2001). The statistical analysis had a threefold purpose. Firstly, to provide a detailed description of the occupational aspirations and perceptions of the sample of participants over a four-year period. Secondly, to provide a description of how these occupational aspirations and perceptions have developed and, in addition to this, how these occupational aspirations and perceptions may have changed in terms of their occupational typology and their occupational status levels over this four-year period. Thirdly, the statistical analysis provided a description of the extent to which the sample's gender perceptions, in terms of gender stereotyping and gender traditionality, may have changed over time.

In order to achieve the first two aims of the study, descriptive statistics in the form of frequency counts were computed for the coded typology and status level data generated across the age groups, for the total sample and for the gender groups separately. These frequency counts were then converted into percentages for further descriptive analysis. At this stage, Holland's typology (1985) for occupations and status levels was used to cross-tabulate the children's occupational aspirations and expectations over the four-year period. The number of children who maintained the same occupational aspirations over the four-year period with regard to their occupational typology and those whose occupational

aspirations changed were tracked. The same procedure was followed to determine the number of children who maintained the same occupational aspiration status level over the four-year period and the number whose occupational aspiration status levels changed.

Lastly, to determine if any changes over time had occurred in occupational gender perceptions (in terms of gender stereotyping and gender traditionality) frequency counts and percentages were used. This was done in order to describe the gender stereotypical views the sample held about certain occupations, as well as the gender traditionality of their occupational aspirations over time.

## Summary

This chapter looked at the methodology used in the current study. Specific attention was given to aspects such as the method used, the sampling procedures employed, and the procedures followed to obtain consent for the research. It also looked at the assessment measures and the data analysis procedures followed. The next chapter will present these results and discuss the findings. Following the broad overview of the results the focus of the discussion is narrowed to further explore and describe the findings. This is necessary to highlight the links between developmental and career development theories and the occupational aspirations and perceptions of participants included in the study.

# CHAPTER 5

## Results

The focus of the present research now shifts towards presenting the results in such a manner as to facilitate a discussion of the findings in the final chapter, Chapter Six. The present chapter will be organized according to the broad and three specific aims of this study which was to explore and describe possible changes in the occupational aspirations and perceptions of a group of children over a four-year period. This entailed providing a detailed description over a four-year period for the total sample as well as for girls and boys separately of: the development of the occupational aspirations and perceptions (in terms of their occupational typology); how these occupational aspirations and perceptions may have changed in terms of their occupational status levels; and the extent to which gender perceptions, in terms of gender stereotyping and gender traditionality, may have changed over time. The following subsection reports on the findings relating to the occupational aspiration typology of the sample.

## Occupational Aspiration Typology over Time

*Total Sample*

Describing how children's occupational aspirations in terms of their interest typology may change over a four-year period was the first aim of the study. This section of the chapter describes the findings for the total sample, as well as for the gender groups separately. The focus of the results will be on trends that may have emerged over the four-year period of the study. The results

are described both in relation to the sample as well as in terms of intra-individual changes that may have occurred from year to year. The results of the occupational aspirations of the total sample over four years are reported in terms of Holland's typological classification system (i.e., Realistic, Investigative, Artistic, Social, Enterprising, and Conventional). Table 2 summarizes these findings by providing the frequency counts per interest typology for the total sample (N = 42). Previous researchers of this longitudinal project (Dean, 2001; Olivier, 2004) had included a fantasy category in addition to Holland's classification. However, Cox (2004) discontinued the use of a fantasy category as none of the children in her study aspired to fantasy-type occupations. For the purpose of this study the fantasy category has also been excluded, although a no choice category remains.

Throughout the duration of the present study most children were able to aspire to an occupation with a limited number unable to express a particular aspiration. For example, during the first year of the study two children were unable to aspire to an occupation, with only one child failing to aspire to an occupation in the second year of the study.

Table 2 presents a summary of the occupational aspirations of the total sample in terms of Holland's typology over the four-year period. Percentages are provided in brackets below the frequency counts. The classification of occupations revealed some interesting trends. Social type occupations were consistently the most popular occupations throughout the four year period.

However, a decline in the popularity of these occupations was noticeable with fewer children aspiring to Social type occupations in the fourth year of the study.

Table 2

Frequency Counts for Occupational Aspiration Typology over Four Years:

Total Sample

| | Age | | | |
|---|---|---|---|---|
| Holland's typology | 9 years | 10 years | 11 years | 12 years |
| Realistic | 1 (2.38%) | 4 (9.52%) | 5 (11.90%) | 6 (14.29%) |
| Investigative | 12 (28.57%) | 9 (21.43%) | 11 (26.19%) | 10 (23.81%) |
| Artistic | 7 (16.66%) | 6 (14.29%) | 4 (9.52%) | 6 (14.29%) |
| Social | 18 (42.86%) | 16 (38.10%) | 12 (28.57%) | 14 (33.33%) |
| Enterprising | 1 (2.38%) | 3 (7.14%) | 3 (7.14%) | 2 (4.76%) |
| Conventional | 1 (2.38%) | 3 (7.14%) | 3 (7.14%) | 1 (2.38%) |
| No choice | 2 (4.76%) | 1 (2.38%) | 4 (9.52%) | 3 (7.14%) |

In contrast to the decline noted in the popularity of Social occupations, an increase was observed for the Realistic category. A closer observation of these results indicated a steady increase in the popularity of Realistic occupations. During the final year of the study most children (57.14%) aspired to Social or

Investigative occupations, with the remaining 42.86% divided between the Realistic, Artistic, Enterprising, and Conventional categories. Amongst the remaining four categories, aspirations towards Realistic and Artistic typologies were considerably higher than those towards Enterprising and Conventional typologies.

The Investigative and Artistic categories were found to be second and third in popularity. These two categories, in addition to the Enterprising and Conventional typologies, had the most consistent aspiration patterns throughout the four-year period. The Enterprising and Conventional type occupations remained the least popular over time.

In addition to a description of the types of occupations aspired to by the total sample the researcher investigated individual changes in occupational aspirations over the four-year period. These changes are summarized in Table 3 and track individual changes in occupational typologies aspired to during subsequent years of the study. The nine year-old data was used as a baseline. During this year the sample expressed a range of occupational aspirations, with all six of Holland's typologies being represented. During subsequent years children were tracked in order to establish whether they evidenced stability in terms of their original occupational aspiration typology.

The occupation types children aspired to at age nine are indicated in the far left hand column of the table. The stability of these occupational aspirations was tracked during years two, three, and four of the study with individual

changes being noted and documented. The following years' results can be found

in the right hand columns.

Table 3

Frequency Counts for Intraindividual Occupational Aspiration Typology over Four

Years: Total Sample

| Age | | | | | | | |
|-----|---|-----|---|-----|---|-----|---|
| 9 years | | 10 years | | 11 years | | 12 years | |
| Typology | n | Typology | n | Typology | n | Typology | n |
| No choice | 2 | Social | 1 | Social | 1 | Social | 1 |
| | | Realistic | 1 | Realistic | 1 | Investigative | 1 |
| Realistic | 1 | Realistic | 1 | Investigative | 1 | Investigative | 1 |
| Investigative | 12 | Realistic | 2 | Realistic | 1 | Realistic | 1 |
| | | | | Social | 1 | Social | 1 |
| | | Investigative | 4 | Social | 1 | Social | 1 |
| | | | | Artistic | 1 | Realistic | 1 |
| | | | | Investigative | 1 | Realistic | 1 |
| | | | | No response | 1 | No response | 1 |
| | | Artistic | 2 | Artistic | 1 | Artistic | 1 |
| | | | | No response | 1 | Artistic | 1 |
| | | Social | 3 | Social | 2 | Social | 2 |
| | | | | Investigative | 1 | Investigative | 1 |
| | | Enterprising | 1 | Artistic | 1 | Social | 1 |
| Artistic | 7 | Artistic | 4 | Realistic | 1 | Realistic | 1 |
| | | | | Investigative | 2 | Investigative | 1 |
| | | | | | | Enterprising | 1 |
| | | | | Conventional | 1 | No response | 1 |
| | | Social | 3 | Realistic | 1 | Realistic | 1 |

| Age | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9 years | | 10 years | | 11 years | | 12 years | |
| | | | | Investigative | 1 | Artistic | 1 |
| | | | | Social | 1 | Social | 1 |
| Typology | n | Typology | n | Typology | n | Typology | n |
| Social | 18 | Investigative | 5 | Investigative | 2 | Investigative | 2 |
| | | | | Artistic | 1 | Artistic | 1 |
| | | | | Social | 2 | Social | 2 |
| | | Social | 9 | Realistic | 1 | No response | 1 |
| | | | | Investigative | 2 | Investigative | 2 |
| | | | | Social | 3 | Social | 2 |
| | | | | | | Artistic | 1 |
| | | | | Enterprising | 1 | Social | 1 |
| | | | | No choice | 2 | Artistic | 1 |
| | | | | | | Social | 1 |
| | | Enterprising | 1 | Social | 1 | Investigative | 1 |
| | | Conventional | 2 | Enterprising | 1 | Realistic | 1 |
| | | | | Conventional | 1 | Social | 1 |
| | | No choice | 1 | Enterprising | 1 | Enterprising | 1 |
| Enterprising | 1 | Enterprising | 1 | Investigative | 1 | Investigative | 1 |
| Conventional | 1 | Conventional | 1 | Conventional | 1 | Conventional | 1 |

For example, during the first year of the study seven children aspired to Artistic occupations. At age ten these seven children expressed an interest in both Artistic and Social typologies. Thus, while four of the seven children continued to express a preference towards Artistic occupations, three children now aspired to Social occupations. At age eleven the four who consistently aspired to Artistic occupations changed to occupations found in the Realistic (n = 1), Investigative (n = 2), and Conventional (n = 1) typologies. Two of the children who had aspired to Social occupations changed to Realistic (n = 1) and Investigative (n = 1) typologies, with one child staying within the Social (n = 1) typology.

Because of the small sample size the results should be interpreted with caution. However, there were several interesting findings. Individual changes reflect an inconsistent pattern of stability as most children (i.e. 38 of the 42) throughout the study expressed an aspiration towards occupations other than the first occupation that they indicated when they were nine years.

In summary, limited intraindividual stability was found for all occupational typology aspirations during the four year period. However, greater stability was noted during the final two years of the study (ages 11 and 12). During the first two years of the study, 20 (47.61%) of the children expressed the same occupational aspiration, while in the final two years of the study, 27 children (64.29%) displayed stability in terms of their occupational aspirations. This suggests that as age increases children's occupational aspirations may begin to stabilize. Only four children (9.52% of the sample) consistently expressed the

same occupational aspiration throughout the four year period. For example, the only child who aspired to a Conventional occupation at age nine expressed the same aspiration during years two, three, and four of the study.

The focus now shifts towards describing occupational aspirations in terms of gender differences.

*Girls' Occupational Aspirations*

Table 4

Frequency Counts for Occupational Aspiration Typology over Four Years:

Girls

| Holland's typology | Age | | | |
|---|---|---|---|---|
| | 9 years | 10 years | 11 years | 12 years |
| No choice | 0 (0.00%) | 0 (0.00%) | 3 (16.67%) | 2 (11.11%) |
| Realistic | 0 (0.00%) | 0 (0.00%) | 1 (5.56%) | 1 (5.56%) |
| Investigative | 3 (16.67%) | 4 (22.22%) | 6 (33.33%) | 5 (27.78%) |
| Artistic | 5 (27.78%) | 3 (16.67%) | 0 (0.00%) | 2 (11.11%) |
| Social | 8 (44.44%) | 9 (50.00%) | 6 (33.33%) | 6 (33.33%) |
| Enterprising | 1 (5.56%) | 1 (5.56%) | 0 (0.00%) | 1 (5.56%) |
| Conventional | 1 (5.56%) | 1 (5.56%) | 2 (11.11%) | 1 (5.56%) |

Table 4 provides a summary of the frequency counts of the occupational aspirations according to Holland's typology for the female participants (n = 18) over time. Percentages are provided in brackets below the frequency counts. Because of the small sample size the researcher decided not to track individual changes in occupational aspirations and rather limit the discussion to the trends observed in the group as a whole from year to year.

From Table 4 it can be seen that all girls at the age of nine years were able to aspire to an occupational typology. Social occupations were the most popular, with Artistic and Investigative occupations found to be second and third in popularity for girls during the first year of the study. Both the Enterprising and Conventional typologies only had one child each aspiring to these typologies with no girls aspiring to Realistic occupations.

Of interest was the increase over time in the number of girls that were unable to aspire to a specific occupation. At ages nine and ten all girls were able to aspire to adult occupations, however, at ages eleven and twelve three girls and two girls respectively expressed no occupational aspiration.

Throughout the duration of the study the number of girls aspiring to Realistic, Enterprising, and Conventional occupations remained consistently low. Two other typologies, Artistic and Social, showed a decrease in popularity. During the first year of the study 44.44% of girls aspired to Social occupations as opposed to 33.33% at age twelve. Similarly, 27.78% of girls aspired to Artistic occupations at age nine but this number decreased to only 11.11% at age twelve. The only increase in popularity was found for the Investigative typology

with 16.67% of girls aspiring to this typology at age nine and at age twelve 27.78% of girls expressing an aspiration towards this type of occupation.

The occupational aspirations for the male participants will now be described.

*Boys' Occupational Aspirations*

Table 5

Frequency Counts for Occupational Aspiration Typology over Four Years:

Boys

| | Age | | | |
|---|---|---|---|---|
| Holland's typology | 9 years | 10 years | 11 years | 12 years |
| No choice | 2 (8.33%) | 1 (4.17%) | 1 (4.17%) | 1 (4.17%) |
| Realistic | 1 (4.17%) | 4 (16.67%) | 4 (16.67%) | 5 (20.83%) |
| Investigative | 9 (37.50%) | 5 (20.83%) | 5 (20.83%) | 5 (20.83%) |
| Artistic | 2 (8.33%) | 3 (12.50%) | 4 (16.67%) | 4 (16.67%) |
| Social | 10 (41.67%) | 7 (29.17%) | 6 (25.00%) | 8 (33.33%) |
| Enterprising | 0 (0.00%) | 2 (8.33%) | 3 (12.50%) | 1 (4.17%) |
| Conventional | 0 (0.00%) | 2 (8.33%) | 1 (4.17%) | 0 (0.00%) |

Table 5 provides a summary of the frequency counts of the occupational aspirations according to Holland's typology for the male participants (n = 24) over time. As can be seen from Table 5, not all boys at age nine were able to express an occupational aspiration. Indeed, across all the years of the study, there was one boy who consistently failed to express an occupational aspiration. As was the case with the results presented for the girls, because of the small sample size the researcher decided not to track individual changes in occupational aspirations for the boys and rather limit the discussion to the boys as a whole group.

From the results it can be seen that the most popular occupations for boys during the first year of the study were those classified as Social and Investigative occupations. A similar trend to their female peers was found in that the Enterprising and Conventional typologies throughout the four year period remained relatively unpopular.

The largest increase in popularity of occupational aspirations was noted for the Realistic typology in that there was an increase of 16.66% over the four years. Another typology that increased in popularity with increasing age was that of Artistic occupations.

Although Social occupations remained the most popular aspiration for boys throughout the four year period, the number of boys aspiring to this typology decreased from 41.67% at age nine to 33.33% at age twelve. A decrease in the number of boys aspiring to a particular typology was also noted for the Investigative typology. The two typologies of Social and Investigative represented

a combined total of 79.17% of all occupational aspirations for boys during the first year of the study. At the age of twelve, however, the combined total of the Social and Investigative typologies was 54.17%, indicating a considerable decrease over time. This decrease indicates that boys increasingly began to aspire to occupations found in the other typologies.

The reporting of the results now moves to a description of the occupational aspirations status levels for the sample as a whole, as well as for the two gender groups.

**Occupational Aspiration Status Levels over Time**

*Total sample*

The second aim of the study was to explore and describe how children's occupational aspirations in terms of their occupational status levels may change over a four-year period for the sample as a whole as well as for both gender groups. Occupational aspiration status levels were coded according to Holland's (1985) status level classification system. The findings for the sample as a whole will be discussed first, followed by a discussion of the results for both girls and boys. Table 6 provides a summary of the frequency counts of the occupational aspiration status levels for the total sample (N = 42).

The occupational status levels can range from unskilled occupations (requiring less than high school education) through to high status occupations or professional occupations (requiring postsecondary education). The occupations were coded as follows: 1 (high status/professional occupations), 2 (middle status occupations), 3 (skilled occupations), 4 (semi-skilled occupations), and 5

(unskilled occupations). In addition to these categories, a "No choice" category was also included. This category reflects the number of children who were unable to aspire to an occupation and could subsequently not be coded according to Holland's status level typology.

Table 6

Frequency Counts for Occupational Aspiration Status Levels over Four Years:

Total Sample

| Status Level | Age | | | |
|---|---|---|---|---|
| | 9 years | 10 years | 11 years | 12 years |
| No choice | 2 (4.76%) | 1 (2.38%) | 4 (9.52%) | 3 (7.14%) |
| High | 37 (88.10%) | 37 (88.10%) | 36 (85.71%) | 29 (69.05%) |
| Middle | 2 (4.76%) | 2 (4.76%) | 1 (2.38%) | 6 (14.29%) |
| Skilled | 0 (0.00%) | 0 (0.00%) | 1 (2.38%) | 3 (7.14%) |
| Semi-skilled | 1 (2.38%) | 2 (4.76%) | 0 (0.00%) | 1 (2.38%) |
| Unskilled | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |

Clearly children throughout the four year period predominantly expressed aspirations towards high status or professional occupations. At age nine 37 of the 42 participants aspired to this occupational status category. This remained the most popular choice for children in the second year, with 37 participants

expressing a preference towards occupations found in this status level category. During the third year of the study 36 children aspired to occupations found in this status level category. However, during the final year of the study at age twelve, the number of children who expressed high status or professional occupations as their first choice decreased to 29 (69.05%) of the sample. This decrease could be linked to an increase in the popularity of middle status/semi-professional and skilled occupations. Unskilled occupations were not aspired to by any children throughout the study.

The high status/professional occupational category remained dominant in terms of popularity throughout the study. Even during the final year of the study, when the popularity of high status/professional occupations was recorded at its lowest percentage, there was still a very large difference between the percentage of children aspiring to this status category and the percentage of children aspiring to the second most popular status category, that of middle status/semi-professional occupations. These results suggest stability in terms of children's occupational aspirations towards high status/professional occupations.

In addition to a description of the occupational status levels aspired to by the total sample, intraindividual changes in occupational status levels over the four-year period were tracked with respect to each individual's initial occupational aspiration status level at the age of nine years. A similar procedure in terms of tracking occupational aspiration status levels over time was followed to that applied to the tracking of occupational aspirations.

Table 7

Frequency Counts for Intraindividual Occupational Aspiration Status Levels over

Four Years: Total Sample

| Age | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 9 years | | 10 years | | 11 years | | 12 years | |
| Status Level | n | Status Level | n | Status Level | n | Status Level | n |
| High | 37 | High | 34 | High | 29 | High | 20 |
|  |  |  |  |  |  | Middle | 4 |
|  |  |  |  |  |  | Skilled | 3 |
|  |  |  |  |  |  | Semi-skilled | 1 |
|  |  |  |  |  |  | No choice | 1 |
|  |  |  |  | Skilled | 1 | Middle | 1 |
|  |  |  |  | No choice | 4 | High | 3 |
|  |  |  |  |  |  | No response | 1 |
|  |  | Middle | 1 | High | 1 | High | 1 |
|  |  | Semi-skilled | 1 | High | 1 | High | 1 |
|  |  | No choice | 1 | Middle | 1 | Middle | 1 |
| Middle | 2 | High | 1 | High | 1 | High | 1 |
|  |  | Middle | 1 | High | 1 | No response | 1 |
| Skilled | 0 |  | 0 |  | 0 |  | 0 |
| Semi-skilled | 1 | Semi-skilled | 1 | High | 1 | High | 1 |
| Unskilled | 0 |  | 0 |  | 0 |  | 0 |
| No choice | 2 | High | 2 | High | 2 | High | 2 |

Table 7 provides a summary of the frequency counts of occupational aspiration status levels indicating intraindividual changes for the total sample over the four year period.

At the age of nine two children were unable to express an occupational aspiration and hence could not be coded according to an occupational status level. However, during the following three years both these children aspired to high status/professional occupations. Similarly, the only child who aspired to a semi-skilled occupation at ages nine and ten subsequently aspirated towards high status/professional level occupations during the final two years of the study.

Almost half of the present sample (n = 20) showed stability in terms of their occupational aspiration status levels over time. For the sample as a whole 85.71% showed stability over the first two years of the study. However, stability of occupational aspirations decreased to 69.05% when considered over the first three years of the study, and to 47.62% when assessed over all four years of the study. The majority of children in the total sample selected a high/professional occupational status level over the first two years, the first three years, as well as over all four years of the study, suggesting that these children's aspirations towards occupations of high status/professional levels remained stable throughout the study. There were only two children who showed stability in terms of occupational aspiration status levels toward middle and semi-skilled occupations during the first two years of the study. However, results indicated that these children subsequently aspired to high status level occupations which suggest limited stability of middle and semi-skilled occupations.

The discussion will now focus on a description of the occupational aspiration status levels for the gender groups. It was decided to not report on intraindividual changes of girls' and boys' occupational aspiration status levels as the sample sizes are somewhat small.

*Girls*

Table 8

Frequency Counts for Occupational Aspiration Status Levels over Four Years:

Girls

| Status Level | Age | | | |
|---|---|---|---|---|
| | 9 years | 10 years | 11 years | 12 years |
| No choice | 0 (0.00%) | 0 (0.00%) | 3 (16.67%) | 2 (11.11%) |
| High | 17 (94.44%) | 18 (100.00%) | 14 (77.78%) | 12 (66.67%) |
| Middle | 1 (5.56%) | 0 (0.00%) | 0 (0.00%) | 4 (22.22%) |
| Skilled | 0 (0.00%) | 0 (0.00%) | 1 (5.56%) | 0 (0.00%) |
| Semi-skilled | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |
| Unskilled | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |

Table 8 provides a summary of the frequency counts for the occupational aspiration status levels for the female participants (n = 18) of the study. Again a "No Choice" category was included. This category reflects the number of girls

who were unable to express an occupational aspiration and consequently could not be coded according to Holland's classification for status levels.

At age nine and ten all girls were able to aspire to an occupation. However, three girls at age eleven and two girls at age twelve were unable to express an occupational aspiration and therefore could not be coded according to an occupational status level.

High status/professional occupations remained the most popular choice for girls throughout the four-year period. However, during the third and fourth years of the study there was a noticeable decrease in girls' aspirations towards high status/professional occupations. Nevertheless, this still remained the most popular category. There was an increase in popularity of middle status/semi-professional occupations in the final year of the study. The semi-skilled and unskilled occupational status level categories were not aspired to by girls throughout the study. Only one girl aspired to a skilled occupation at age eleven, but by age twelve she aspired to an occupation in a higher status category.

*Boys*

Table 9 provides a summary of the frequency counts for occupational aspiration status levels for the male participants (n = 24) of the study. Again a "No Choice" category was included. This category reflects the number of boys who were unable to express an occupational aspiration and consequently could not be coded according to Holland's classification for occupational status levels.

Table 9

Frequency Counts for Occupational Aspiration Status Levels over Four Years:

Boys

| | Age | | | |
|---|---|---|---|---|
| Status Level | 9 years | 10 years | 11 years | 12 years |
| No choice | 2 (8.33%) | 1 (4.17%) | 1 (4.17%) | 1 (4.17%) |
| High | 20 (83.33%) | 19 (79.17%) | 22 (91.67%) | 17 (70.83%) |
| Middle | 1 (4.17%) | 2 (8.33%) | 1 (4.17%) | 2 (8.33%) |
| Skilled | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 3 (12.50%) |
| Semi-skilled | 1 (4.17%) | 2 (8.33%) | 0 (0.00%) | 1 (4.17%) |
| Unskilled | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |

During the first year of the study two boys were unable to express an occupational aspiration. In the subsequent three years one child in each year was unable to express an occupational aspiration and consequently could not be coded with an occupational aspiration status level.

As with their female peers, boys primarily aspired to high status/professional occupations throughout the four year period. The number of boys aspiring to high status/professional occupations may be reflective of the

influence of social valuation (as described by Gottfredson (1981, 1996, 2005)) on children's occupational aspirations.

Middle status/semi-professional occupations were aspired to by few boys over the four year period of this study. The only increase in occupational aspiration status level categories was noted for the twelve year-olds. At age twelve three boys (12.50%) aspired to occupations classified as skilled occupations. As was the case with the girls, no boys aspired to unskilled occupations throughout the four-year period.

**Gender Stereotyping of Occupations**

It was an aim of the present study to examine whether children hold gender-stereotypical perceptions about certain occupations and whether these perceptions change over time. Therefore, the third aim of the study was to explore and describe how children's occupational aspirations, in terms of gender stereotypes, may change over a four-year period. This was accomplished through asking the children whether or not girls and boys could become a number of different occupations. Their responses were recorded and analysed using percentages. Thus, this section of the results chapter will report on whether or not children hold gender-stereotypical views regarding certain occupations and whether these views change over time.

Summary tables of girls' and boys' responses can be found on the following pages. The discussion will initially focus on the gender-stereotypical views girls hold regarding occupations for girls. Table 10 presents the frequency counts of the girls' responses to whether girls could undertake fourteen

occupations when asked the question "Could a girl be a …? in the semi-structured interview. Table 11 reports the responses of the girls when asked the question "Could a boy be a …?". Following this, the focus of the results will shift towards exploring the gender-stereotypical views boys hold regarding occupations for themselves and for girls. Table 12 presents the frequency counts of the boys' responses concerning whether boys could undertake the fourteen occupations and Table 13 reports their responses to the same occupations when asked "Could a girl be a …?".

The tables present the results of all four years in adjacent columns.  In the far left hand column the different occupations are listed ranging from a fire fighter to a president. Children's responses to the questions were recorded as either "yes", "no", or "unsure" if they were undecided at the time of the interview. During Dean's (1998) study, the researcher found that some children responded to the proposed questions without having an accurate idea of what the occupations being presented actually entailed, and it was suggested that this might negatively affect the validity of the results. Thus, for the subsequent years of the study it was decided to first ask the children if they knew what the occupations entailed (Cox, 2004). "No occupational information (NOI)" was selected if the child did not know what the occupation entailed and therefore the interviewer discontinued questioning for that particular occupation. Percentages in boldface across these tables are indicative of the majority of the responses for that particular occupation.

*Extent to which Girls Stereotype Occupations*

     *Extent to which girls stereotype occupations for girls*

     Table 10 provides a summary of the percentages of the girls' responses indicating the extent to which girls gender stereotype occupations for girls over four years. Table 11 provides a summary of girls' responses indicating the extent to which girls gender-stereotype occupations for boys over four years.

     From the results presented in Table 10 it can be seen that girls at the age of nine years generally regarded all fourteen occupations as more suitable for girls than not, with all percentages being above 50%. However, there was some variance in the degree to which girls viewed the suitability of various occupations for themselves. For example, at age nine the occupations of hairdresser, pop singer, author, chemist, nurse, police officer, teacher, and secretary reached percentages greater than 80%, indicating greater gender suitability. All the girls agreed that girls could become a nurse and a teacher, suggesting that girls at the age of nine viewed these occupations as being highly suitable for girls. Occupations that were endorsed by less than 80% of the girls as being suitable for girls were those of a fire fighter, a doctor, a TV announcer, a lawyer, a bank teller, and a president. Of the fourteen occupations, fire fighter (56%), lawyer (61%), and secretary (61%) were endorsed least by the girls as being suitable occupations for girls.

Table 10

Extent to which Girls Stereotype Occupations for Girls over Four Years

| Could a girl be a…? | 9 years | | | | 10 years | | | | 11 years | | | | 12 years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yes | No | Unsure | NOI | Yes | No | Unsure | NOI | Yes | No | Unsure | NOI | Yes | No | Unsure | NOI |
| Fire Fighter | **56%** | 44% | 0% | 0% | **67%** | 22% | 6% | 6% | **72%** | 28% | 0% | 0% | **67%** | 28% | 0% | 6% |
| Hairdresser | **94%** | 6% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **94%** | 6% | 0% | 0% |
| Pop Singer | **83%** | 6% | 0% | 11% | **89%** | 6% | 0% | 6% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Author | **83%** | 6% | 0% | 11% | **89%** | 0% | 0% | 11% | **89%** | 6% | 0% | 6% | **100%** | 0% | 0% | 0% |
| Doctor | **78%** | 22% | 0% | 0% | **89%** | 11% | 0% | 0% | **94%** | 6% | 0% | 0% | **94%** | 6% | 0% | 0% |
| Chemist | **83%** | 6% | 0% | 11% | **94%** | 0% | 0% | 6% | **100%** | 0% | 0% | 0% | **94%** | 6% | 0% | 0% |
| Nurse | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **94%** | 6% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Police Officer | **89%** | 11% | 0% | 0% | **94%** | 6% | 0% | 0% | **89%** | 6% | 6% | 0% | **94%** | 6% | 0% | 0% |
| Teacher | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| TV Announcer | **72%** | 11% | 6% | 11% | **89%** | 6% | 0% | 6% | **94%** | 0% | 0% | 6% | **100%** | 0% | 0% | 0% |
| Lawyer | **61%** | 22% | 0% | 17% | **83%** | 11% | 0% | 6% | **94%** | 6% | 0% | 0% | **94%** | 6% | 0% | 0% |
| Secretary | **83%** | 0% | 0% | 17% | **89%** | 0% | 0% | 11% | **89%** | 0% | 0% | 11% | **100%** | 0% | 0% | 0% |
| Bank Teller | **72%** | 6% | 0% | 22% | **83%** | 6% | 0% | 11% | **94%** | 0% | 0% | 6% | **100%** | 0% | 0% | 0% |
| President | **61%** | 39% | 0% | 0% | **50%** | 50% | 0% | 0% | **61%** | 39% | 0% | 0% | **83%** | 17% | 0% | 0% |

**Note that due to rounding-off, some year's totals might not add up to exactly 100%

In addition, some girls appeared to have limited knowledge concerning the occupations of pop singer, author, chemist, TV announcer, lawyer, secretary, and bank teller. These occupations had a number of responses recorded under the "No Occupational Information" (NOI) column, with the greatest percentages noted for bank teller (22%), and lawyer and secretary (17%). Some of the occupations for which there was less strong agreement regarding their suitability for girls were also those which a reasonable percentage of girls lacked information (i.e., lawyer, bank teller and TV announcer). Consequently, these results need to be interpreted with caution given that there were girls in the sample who had no knowledge of these occupations at the time.

During the second year of the study (age ten years) there was a decrease in gender-stereotypical notions about most occupations except for that of a president, which received the lowest percentage endorsement in being suitable for girls. There was a decrease in gender-stereotypical views about the occupation of a fire fighter with 67%, while the largest decrease in gender-stereotypical views for any of the fourteen occupations was for the occupation of a lawyer.

At age eleven there was a further decrease in gender-stereotypical views of most occupations, with a small increase in gender-stereotypical views recorded for the occupation of a police officer. The only two occupations which were endorsed by less than 80% of the girls as being suitable for girls were the occupations of fire fighter and president.

Finally, at age twelve only one occupation, that of a fire fighter, was endorsed by less than 80% of the girls as being suitable for girls, indicating the presence of some gender stereotypical views regarding this occupation. There was a considerable decrease in gender-stereotypical views regarding the occupation of a president over the four years. All other occupations were endorsed by 94% to 100% of the girls. Thus, with increasing age girls seem to become less gender-stereotypical in terms of occupations viewed as suitable for girls.

*Extent to which girls stereotype occupations for boys*

It is interesting to examine the extent to which girls stereotype occupations for boys over the four-year period. These results, which are summarized in Table 11, indicate that all the girls regard the occupations of a doctor, police officer, teacher, and president as suitable options for boys across the four years. At age twelve, all the girls regarded nine out of the fourteen occupations as being suitable for boys (i.e., pop singer, author, doctor, chemist, police officer, teacher, TV announcer, lawyer, and president).

Girls did, however, hold gender-stereotypical views regarding the occupations of a nurse and a secretary at age nine. In subsequent years varying degrees of gender-stereotypical views regarding the extent to which boys could become a nurse and a secretary were found. For instance, at age ten, 39% of girls said boys could become a nurse as opposed to 56% who said they could not. These results suggest an increase in occupational gender stereotypical views between the ages of nine and ten.

Table 11

Extent to which Girls Stereotype Occupations for Boys over Four Years

| Could a boy be a…? | 9 years | | | | 10 years | | | | 11 years | | | | 12 years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yes | No | Unsure | NOI | Yes | No | Unsure | NOI | Yes | No | Unsure | NOI | Yes | No | Unsure | NOI |
| Fire Fighter | **100%** | 0% | 0% | 0% | **94%** | 0% | 0% | 6% | **100%** | 0% | 0% | 0% | **94%** | 0% | 0% | 6% |
| Hairdresser | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **94%** | 6% | 0% | 0% | **94%** | 0% | 6% | 0% |
| Pop Singer | **89%** | 0% | 0% | 11% | **94%** | 0% | 0% | 6% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Author | **89%** | 0% | 0% | 11% | **89%** | 0% | 0% | 11% | **94%** | 0% | 0% | 6% | **100%** | 0% | 0% | 0% |
| Doctor | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Chemist | **89%** | 0% | 0% | 11% | **94%** | 0% | 0% | 6% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Nurse | 44% | **56%** | 0% | 0% | 39% | **56%** | 6% | 0% | **50%** | 50% | 0% | 0% | **67%** | 28% | 6% | 0% |
| Police Officer | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Teacher | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| TV Announcer | **78%** | 6% | 6% | 11% | **94%** | 0% | 0% | 6% | **94%** | 0% | 0% | 6% | **100%** | 0% | 0% | 0% |
| Lawyer | **78%** | 6% | 0% | 17% | **94%** | 0% | 0% | 6% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Secretary | **61%** | 17% | 6% | 17% | **56%** | 33% | 0% | 11% | **44%** | 44% | 0% | 11% | **61%** | 33% | 6% | 0% |
| Bank Teller | **78%** | 0% | 0% | 22% | **89%** | 0% | 0% | 11% | **94%** | 0% | 0% | 6% | **94%** | 6% | 0% | 0% |
| President | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |

**Note that due to rounding-off, some year's totals might not add up to exactly 100%

However, at age eleven 50% of girls said that boys could become a nurse and 50% responded negatively. Therefore between the ages of ten and eleven a decrease in stereotypical views regarding the suitability of the occupation of a nurse for boys was recorded. Similarly, at age twelve, 67% of girls responded positively towards this occupation being suitable for their male counterparts, with only 28% of the girls indicating that this occupation was not suitable for boys.

The extent to which girls viewed the occupation of a secretary as being suitable for boys followed an interesting pattern. The percentage of girls who believed that boys could become a secretary decreased over the first three years of the study (61%, 56%, 44%) before returning to its original level of endorsement (61%) in the final year. From the results it is clear that girls regard most of the fourteen occupations as suitable options for boys; however, traditional female occupations (such as a nurse and a secretary) were still endorsed by less girls as being suitable for boys. It is also interesting to note that 'hairdresser', which is gender traditional for females, is so strongly endorsed by girls as suitable for boys.

*Extent to which Boys Stereotype Occupations*

*Extent to which boys stereotype occupations for boys*

Table 12 provides a summary of the percentages of boys' responses in terms of the extent to which boys gender stereotype occupations for boys over four years. Table 13 provides a summary of the boys' responses indicating the extent to which boys gender-stereotype occupations for girls over four years.

Table 12

Extent to which Boys Stereotype Occupations for Boys over Four Years

| Could a boy be a…? | 9 years | | | | 10 years | | | | 11 years | | | | 12 years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yes | No | Unsure | NOI | Yes | No | Unsure | NOI | Yes | No | Unsure | NOI | Yes | No | Unsure | NOI |
| Fire Fighter | **96%** | 4% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Hairdresser | **79%** | 21% | 0% | 0% | **96%** | 4% | 0% | 0% | **96%** | 4% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Pop Singer | **83%** | 8% | 0% | 8% | **96%** | 0% | 4% | 0% | **96%** | 4% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Author | **92%** | 0% | 0% | 8% | **96%** | 0% | 0% | 4% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Doctor | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Chemist | **92%** | 0% | 4% | 4% | **100%** | 0% | 0% | 0% | **96%** | 4% | 0% | 0% | **92%** | 4% | 0% | 4% |
| Nurse | 33% | **63%** | 4% | 0% | **50%** | 46% | 4% | 0% | **54%** | 46% | 0% | 0% | **63%** | 29% | 8% | 0% |
| Police Officer | **96%** | 0% | 0% | 4% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Teacher | **100%** | 0% | 0% | 0% | **96%** | 0% | 0% | 4% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| TV Announcer | **75%** | 0% | 0% | 25% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Lawyer | **75%** | 0% | 4% | 21% | **96%** | 0% | 0% | 4% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Secretary | **63%** | 25% | 4% | 8% | **67%** | 21% | 8% | 4% | **67%** | 25% | 4% | 4% | **83%** | 13% | 4% | 0% |
| Bank Teller | **63%** | 4% | 0% | 33% | **92%** | 0% | 0% | 8% | **96%** | 0% | 0% | 4% | **100%** | 0% | 0% | 0% |
| President | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |

**Note that due to rounding-off, some year's totals might not add up to exactly 100%

From the results presented in Table 12 it can be deduced that more than 80% of the boys at the age of nine years regarded the occupations of a fire fighter, pop singer, author, doctor, chemist, police officer, teacher, and president as being suitable for boys. The occupations of a hairdresser, a TV announcer, a lawyer, and a bank teller were endorsed by between 60% and 80% of the boys in terms of their suitability as occupations for boys. Boys were thus slightly less certain that these occupations could be pursued by boys if they wished to do so. These percentages, with the exception of hairdresser, may have been influenced by the number of responses coded in the NOI column. Clear gender-stereotypical views were recorded for the occupations of a nurse, in particular, and a secretary, to a lesser extent. The results indicated that the majority of boys (63%) regarded an occupation of a nurse as unsuitable for boys, and a quarter felt that being a secretary was a less suitable occupation for boys.

From the results presented in Table 12 it can be further deduced that boys at the age of ten years regarded twelve of the fourteen occupations as suitable for boys with all percentages higher than 90%. However, the two occupations of a nurse and a secretary were still regarded as less suitable for boys, although a reduction in stereotypical views were noted for both. Overall, these results suggest limited gender-stereotypical views regarding the suitability of most of the fourteen occupations for boys.

Throughout the remaining years of the study a steady decrease in gender-stereotypical views regarding the occupations of a nurse and a secretary were recorded. During the final year of the study 63% of boys regarded nursing as a

suitable option available to boys and only 29% still held gender reservations. A similar decrease in gender-stereotypical views was found for the occupation of secretary. During the final year of the study, there was a considerable decrease in gender-stereotypical views, with 83% of boys responding positively to this occupation as being suitable for boys. During the final year of the study, eleven of the fourteen occupations were endorsed as being 100% suitable for boys by the boys.

*Extent to which boys stereotype occupations for girls*

It was also important to gain insight into the extent to which boys hold gender-stereotypical views regarding occupations for girls. These results are summarized in Table 13. From these results it is clear that boys regarded the occupations of a hairdresser, pop singer, author, doctor, chemist, nurse, police officer, teacher, and secretary as suitable options for girls at age nine. At age twelve boys regarded eight out of the fourteen occupations as 100% suitable for girls.

Boys did, however, hold occupational gender-stereotypical views regarding the occupations of a fire fighter, a TV announcer, a lawyer, a bank teller, and a president during the initial year of the study. The low percentages recorded for a TV announcer, a lawyer, and a bank teller may be accounted for by the number of responses coded as NOI. During subsequent years the majority of the boys viewed these occupations as suitable for girls. Decreases in gender-stereotypical views were also recorded for the occupations of a fire fighter and a president. Between the ages of ten and eleven there was a noticeable decrease

in stereotypical views regarding the suitability of the occupation of a fire fighter for girls. Similarly, at age twelve, 92% of boys responded positively towards this occupation being suitable for their female counterparts.

The extent to which boys viewed the occupation of a president as being suitable for girls followed a similar trend as that described for a fire fighter. For instance, at ages nine and ten 63% of boys viewed this occupation as suitable for girls. However, this increased to 83% of boys viewing this occupation as being suitable for girls during the ages of eleven and twelve. From the final year's results for Table 13 it is clear that the majority of boys regarded all fourteen occupations as being suitable for girls, although the occupation of a president remained the occupation about which there was less agreement.

Some interesting trends emerge when the results for girls and boys are compared. Both genders displayed limited gender stereotypical views regarding the suitability of certain occupations for girls and boys. In addition, where gender stereotypical views were expressed, these seemed to decrease over time. Interestingly, both girls and boys were less certain about the occupations of a fire fighter and a president, in particular, for girls. Both boys and girls were less certain about the suitability of the occupations of a secretary and a nurse, in particular, for boys. However, for all these occupations by the fourth year of the study, these stereotypical views had decreased considerably.

Table 13

Extent to which Boys Stereotype Occupations for Girls over Four Years

| Could a girl be a…? | 9 years | | | | 10 years | | | | 11 years | | | | 12 years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yes | No | Unsure | NOI | Yes | No | Unsure | NOI | Yes | No | Unsure | NOI | Yes | No | Unsure | NOI |
| Fire Fighter | **67%** | 33% | 0% | 0% | **75%** | 17% | 8% | 0% | **92%** | 8% | 0% | 0% | **92%** | 4% | 4% | 0% |
| Hairdresser | **96%** | 4% | 0% | 0% | **96%** | 0% | 4% | 0% | **96%** | 4% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Pop Singer | **92%** | 0% | 0% | 8% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Author | **92%** | 0% | 0% | 8% | **96%** | 0% | 0% | 4% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Doctor | **83%** | 17% | 0% | 0% | **75%** | 21% | 4% | 0% | **88%** | 13% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Chemist | **96%** | 17% | 0% | 4% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **96%** | 0% | 0% | 4% |
| Nurse | **92%** | 8% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Police Officer | **92%** | 4% | 0% | 4% | **92%** | 8% | 0% | 0% | **96%** | 4% | 0% | 0% | **100%** | 0% | 0% | 0% |
| Teacher | **100%** | 0% | 0% | 0% | **96%** | 0% | 0% | 4% | **100%** | 0% | 0% | 0% | **96%** | 4% | 0% | 0% |
| TV Announcer | **75%** | 0% | 0% | 25% | **100%** | 0% | 0% | 0% | **100%** | 0% | 0% | 0% | **96%** | 4% | 0% | 0% |
| Lawyer | **63%** | 13% | 4% | 21% | **92%** | 0% | 4% | 4% | **92%** | 8% | 0% | 0% | **96%** | 4% | 0% | 0% |
| Secretary | **83%** | 4% | 4% | 8% | **96%** | 0% | 0% | 4% | **96%** | 0% | 0% | 4% | **100%** | 0% | 0% | 0% |
| Bank Teller | **67%** | 0% | 0% | 33% | **92%** | 0% | 0% | 8% | **92%** | 4% | 0% | 4% | **100%** | 0% | 0% | 0% |
| President | **63%** | 38% | 0% | 0% | **63%** | 29% | 8% | 0% | **83%** | 17% | 0% | 0% | **83%** | 17% | 0% | 0% |

 **Note that due to rounding-off, some year's totals might not add up to exactly 100%

*Summary*

This chapter has reported the results of the quantitative data that was obtained from the four-year data collection period. The results for the total sample and gender groups have been described in terms of occupational aspiration development both at an inter – and intra-individual level. In addition, the chapter has reported on gender stereotypical perceptions of certain occupations. These findings will be further discussed in the next chapter in relation to theory and past research. In addition to this, a discussion of the limitations of the study as well as recommendations for future research will be provided.

# CHAPTER 6

## Discussion, Limitations, and Recommendations

The results presented in the previous chapter sets the backdrop for this chapter which aims to provide some perspective on the development of occupational aspirations and perceptions of a sample of preadolescent children in South Africa. This development was researched at a group as well as an individual level. In addition, specific attention was given to differences noted between gender groups. The present chapter aims to summarize the major research findings and to discuss these within the theoretical and research parameters proposed in earlier chapters. In addition, the chapter will explore the limitations of the research and provide some recommendations that may assist future researchers with similar studies. The latter recommendations may be of particular importance to the ongoing nature of the larger research project of which this study forms a part.

The chapter will be structured according to the broad aims of the study which were to explore and describe possible changes in the occupational aspirations and perceptions of a group of nine to twelve-year old children over a four-year period. Firstly, the discussion of results focuses on the exploration and description of children's occupational aspirations and perceptions (in terms of their interest typology) over the four-year period of the study. These results are discussed for the sample as a whole, as well as for gender groups separately. Secondly, the chapter explores and describes children's occupational aspirations and perceptions (in terms of their occupational status level) over a four-year

period for the sample as a whole, as well as for gender groups separately. Finally, the chapter focuses on an exploration and description of children's occupational perceptions (in terms of gender stereotyping and gender traditionality) over the four-year period for the sample as a whole, as well as for gender groups separately. Statistics South Africa's (2000) Occupational survey has defined South African occupations as traditional or non-traditional male and female when the majority of the workers in the specific occupation are either male or female (gender traditionality). Both Cox (2004) and Olivier (2004) utilized a similar classification system and specified occupations as being traditional male or female occupations if more than 70% of the workers in an occupation were of a particular gender.

## Occupational Aspiration Typology over Time

The first aim of the current research was to explore and describe children's occupational aspirations and perceptions in terms of their interest typology over a four year period. These results will be compared to human and career developmental theory as well as to both national and international research in the field. A major finding of the current study was that most of the sample was able to consistently express an occupational aspiration. This supports the view that career development begins much earlier in the life span than generally assumed (Hartung et al., 2005). The results further broadly support both child and career development theory which view this developmental stage as a time of rapid growth with critical development in various competency areas (including occupational aspirations and perceptions).

The current study is a continuation of three previous research studies that have followed the same sample of children for the past seven years (Cox, 2004; Dean, 2001; Olivier, 2004). Each research study has focused on different developmental age spans with Dean (2001) focusing on five to eight year-olds, Cox (2004) on the six to eight year-old period, and Olivier (2004) researching the occupational aspiration and perception development of eight to ten year-olds. These earlier studies have consistently found that Social type occupations have been the most popular choice aspired to by the participants and confirm additional national (Grobler, 2000) and international research (e.g. Phipps, 1995). In terms of gender groups, Social occupations were the most popular occupational aspiration expressed by both genders. A further examination of the results revealed characteristic differences between gender groups that will be discussed further.

As has already been mentioned, within the occupational aspirations expressed by the current sample, the popularity of Social occupations remained the most frequently expressed occupational aspiration for both boys and girls thereby supporting the limited national longitudinal research in this field to date (Cox, 2004; Dean, 2001; Olivier, 2004). Results from the current study indicate that the popularity of the Social interest typology decreased with increasing age as more children aspired to Investigative, Artistic and, to a lesser extent, Realistic typologies by age twelve. As with the earlier longitudinal studies (Cox, 2004; Dean, 2001; Olivier, 2004), Enterprising and Conventional type occupations remained the least popular over time. The most striking difference recorded

between the gender groups was that boys aspired to more Realistic occupations than girls. Differences between gender groups seem to persist over time as Turner and Lapan (2005) established differences in males' and females' employment patterns across Holland's (1985) career typology (i.e., more males work in realistic, investigative, and enterprising occupations, and more females work in artistic, social, and conventional occupations) (Gottfredson & Lapan, 1997; Lapan, Adams, Turner, & Hinkelman, 2000; Lapan, Hinkelman, Adams, & Turner, 1999; Turner & Lapan, 2002).

When the current research results are related to human and career developmental theory, it is clear that there is mixed support for some of their theoretical propositions. During the early stages of human development both Piaget (1971, 1977) and Erikson (1963, 1993) recognized the presence of limitations to a child's thinking that restrict their ability to engage with abstract concepts. As children enter the concrete operational stage, as proposed by Piaget, it marks the start of an important transition towards reality based thinking where children acquire the ability to differentiate reality from fantasy. The results from the current study provide support for Piaget's human development theory in so far as none of the participants aspired to fantasy-type careers throughout the nine to twelve year-old period. An interesting finding in previous research conducted as part of this longitudinal study (Cox, 2004) revealed that most of the children were able to aspire to adult occupations by the age of six years, thus indicating an ability to differentiate between reality and fantasy at a younger age than Piaget proposed. In addition, another research study that forms part of this

longitudinal project (Olivier, 2004) found that children were able to form perceptions about their future occupational roles. Such findings challenge Piaget's proposition that the cognitive development of children in the concrete operational stage is still related to concepts that are bound by the limits of their experience, making them unable to perform certain operations that are purely verbal and therefore not sufficiently concrete for them.

Although previous research (Cox, 2004; Olivier, 2004) has alerted readers to discrepancies between theory and research, the results of the current research appear to support Piaget's proposition that children in the formal operational stage can explore logical solutions to a problem, imagine things contrary to fact, think realistically about the future and form ideals that younger children cannot comprehend. The present sample possessed a greater awareness of the different occupations (there were few responses coded as NOI during the final year of the study as opposed to the first year) mentioned in the CAQ, thus indicating a capacity to function on a more complex level of thinking and reasoning than in previous years of the study. When one considers that an important output of the current research could be to aid curriculum developers with guidelines for career education in primary schools, this information calls for careful consideration. More specifically, it alerts the reader to the critical importance and care that needs to be taken when designing and implementing career education programs as there may need to be continual adjustment in order to compensate for changes in children's thinking as they progress through increasingly more complex developmental stages.

Consideration of two of Erikson's psychosocial stages, the *latency stage* (ages six to eleven years) and the *puberty and adolescence stage* (ages twelve to eighteen years) can provide additional theoretical insight into the occupational aspiration and perception development of children. During the *latency stage*, children are expected to develop a variety of competencies in school, at home, and in the outside world of their peers. The reflective questions introduced as part of the CAQ in 2004 provided a valuable opportunity for children to reflect on their own career development and to comment on changes that they thought had occurred. These preliminary findings suggest that the inclusion of reflective questions could enhance the understanding of the findings in the larger longitudinal research project. Although these results were not analysed or described within the confines of the current study, preliminary findings appear to support Erikson's belief that the skills that children develop during these early years also influence their occupational aspirations. For example, when the participants were asked to provide retrospective reasons for choosing certain occupations, a large percentage of them said that they chose occupations based on their participation or involvement in similar kinds of activities. Thus, a child that expressed an interest in becoming a ballerina said that she only choose so because she was "doing it at the time". Similarly, most children who wanted to pursue a professional career in sport chose the sport in which they were participating and/or excelling in. For example, a child aspiring to become a professional tennis player participated most in tennis at school.

Stage five of Erikson's (1963, 1993) psychosocial theory, the *puberty and adolescence stage*, starts at age twelve and carries through to age eighteen and describes a period of development when some of the more dramatic changes occur in all spheres of life including defining interests in terms of occupational choice. The sample of participants in the current study has just entered into this stage of development which makes it difficult to comment on the relevance of theoretical assumptions when examining the research results. Considering that a major determinant of occupational aspirations is the progressive circumscription of aspirations during self-concept development, that is from the child's rather simplistic and concrete view of life to the more comprehensive, complex, abstract thinking of the adolescent and adult (Zunker, 2006) this period is seen as one of great change and excitement. The current research results indicated that children do express a variety of occupational aspirations over time and that this could be ascribed to a developing self-concept. As children are exposed to more career information they begin to integrate aspects of such information into their self-concepts which are either confirmed (stability of occupational aspirations) or refuted (constantly changing occupational aspirations) in later years.

The variability found in the stability of occupational aspirations throughout the four year period indicates that childhood is an important period of career exploration. The results of the current study provide support for this statement as most children reported varying degrees of change in occupational aspiration typologies. The changes observed varied from choosing different occupations within a certain typology (e.g., teacher and nurse which are both Social

occupations), to changes reflecting interest in different and sometimes unrelated, interest typologies (e.g., engineering as a Realistic typology and professional sportsman as a Social typology). Changing occupational aspirations at this developmental stage is not necessarily problematic, in fact it may be indicative of a healthy exploration of careers and a testing out of a self-concept. Such career exploration emphasises the need for supportive career education programmes during this developmental stage.

The results of the current study confirm that children start to develop a career self-concept during these early years of development. This has also been acknowledged both nationally and internationally by Cox (2004), Hartung et al. (2005), and Zunker (2006) amongst others. Super, to a greater extent than Gottfredson, viewed the formation of a self-concept as a cornerstone of career development and regarded the process of career decision-making as the implementation of the self-concept.

The nine to twelve year-old age bracket places the participants in Super's first stage of development, that is, the Growth stage (birth to age 14 or 15 years). This life stage of *Growth*, according to Super (1990) and Super et al. (1996), includes four major developmental tasks: becoming concerned about the future, increasing personal control over one's own life, convincing oneself to achieve in school and at work, and acquiring competent work habits and attitudes. Dean (2001) and Cox (2004) have already established the presence of career thoughts in the same sample of children during the first years of the larger longitudinal study when most children were only six years of age. The children in the current

phase of the research were able to express aspirations towards adult occupations throughout the duration of the study. This suggests that children can acknowledge the importance of careers and reflect a realistic concern about future expectations.

The results from the current study also provide support for Gottfredson's theory in that children progressively eliminate occupations that they perceive to be unsuitable. Gottfredson proposed a life-stage theory of career development in childhood and adolescence that emphasizes the importance that gender roles and prestige play in occupational aspiration development. The participants of the current study fell within Gottfredson's third stage, approximately nine to thirteen years, where children become aware of the social value and status differences that exist around them. Occupational aspirations in terms of occupational status levels will be discussed in more detail in the next subsection of the current chapter.

Although the results from the current study provide support for career developmental theories which view childhood as an important period during which the foundation is laid for future career behaviour, the results provide mixed support for previous research findings. For example, while Trice and King (1991) found that children had realistic and stable occupational aspirations, none of the six typologies in the current study showed stability in terms of the number of children consistently expressing an occupational aspiration towards them throughout the four year period. There was, however, some limited evidence of

occupational aspiration stability during the final two years of the study for the Social, Investigative, and Artistic typologies.

*Summary*

Results from the current study indicate that most children regarded Social occupations as their first choice. However, the popularity of the Social typology decreased with increasing age as more children aspired to Investigative, Artistic, and to a lesser extent, Realistic typologies at age twelve. A finding that has been supported by all previous research involving the larger longitudinal project is that the Enterprising and Conventional type occupations remained the least popular with the children over the four year period. The results further provide broad support for both child and career development theory which view this developmental stage as a time of increasing career exploration.

The second aim of the research was to explore and describe children's occupational aspirations in terms of their occupational aspiration status level and is discussed below. The overall trend observed included that most children consistently aspired to high status level/professional occupations.

**Occupational Aspiration Status Level over Time**

The results of the present research clearly indicate that children throughout the four years predominantly expressed occupational aspirations towards high status or professional occupations. When differences between gender groups were examined, no noticeable difference was observed between boys and girls. Both genders primarily aspired to high status/professional occupations throughout the four year period.

The current research findings therefore highlight the fact that children are acutely aware of high and low status occupations from an early age and that they begin to reject occupations that they perceive as lower in occupational status level. This supports Gottfredson's assumptions about the influence of social valuation during the nine to thirteen year-old period. In terms of the expected developmental level when children are thought to be influenced by social valuation, the participants in Cox's (2004) study seemed to have developed an awareness of occupational status levels at a younger age than that proposed by Gottfredson. This seems to challenge Gottfredson's assumptions about the onset of social valuation as more than half of the children in Cox's study aspired to high status occupations by the age of six years. The sample during the first year of Cox's study were six years old and theoretically fell within the *orientation to gender roles* stage when children are said to choose occupations based on gender role differences. It is only during the next developmental stage, *orientation to social valuation* (ages nine to thirteen), where occupational aspirations are expected to be primarily shaped by occupational status levels. An examination of the current research results clearly supports the influence of social valuation on occupational aspirations of the nine to thirteen year-old period. In addition, the high number of children aspiring to professional careers in sport further provides support for the notion of social valuation as these careers are seen as particularly high in status and prestige.

When the current results are further examined across the four year period it appears that the aspiration towards high status occupations remained stable and

dominant over time. This finding was only partly supported by Dean (2001) and Cox (2004). Olivier (2004), on the other hand, studied the children at older ages and also found that occupational aspirations were more readily influenced by social values as the children increasingly aspired to high status level/professional occupations. The current research results also mirror international research such as that of  Phipps's (1995) who established that the most frequently reported occupational preferences of eight to eleven year olds were those of medical doctor, lawyer, architect, and veterinarian, all professions which illustrate high-status/professional occupations.

Thus, the present results further support both national and international research on this topic. For instance, international research conducted by Liben, Bigler, and Kroch (2001) found that children were aware of status differentials among occupations and were more interested in higher prestige occupations, a finding supported by the current study.  By the final year of the current study most girls aspired to high status level occupations, a finding which mirrors other international research in which the status level of occupational aspirations of girls was studied across a similar age spectrum (e.g., Trice et al., 1995). Furthermore, the results from the current study suggest greater stability of girls' than boys' occupational aspiration status levels over time. The results indicated a consistently higher percentage of occupational aspiration status level stability for girls, a finding that is supported by Cox (2004).

*Summary*

The current research confirms that children, like adults, are aware of status differentials among occupations and that children from an early age begin to reject occupations when these are perceived unsuitable in terms of their occupational status level. Clearly when the research results are further examined much support can be found for the recognition and acknowledgment of the impact of social valuation on occupational aspiration development during the nine to thirteen year-old period

**Gender Stereotyping of Occupations**

The results from the current longitudinal study reflect an awareness of gender differences in occupational aspiration development, some of which can potentially influence future occupational aspirations. From an early age children increasingly become exposed to the world of work and subsequently become aware that men and women perform different roles and work and, according to Helwig (2004), children choose occupations consistent with their gender. The results of the present research provide considerable support for this statement as more boys aspired to Realistic occupations (which are traditionally male dominated occupations) throughout the study.

The occupational aspirations expressed during Gottfredson's second developmental stage (six to eight years old) are postulated to centre on what children deem appropriate for their own gender, ruling out other occupations that do not meet this criterion (Gottfredson, 1981, 1996). Cox's (2004) research provides support for this theoretical proposition as children's awareness of what

is appropriate for their gender was reflected in their occupational perceptions, with most children aspiring to occupations traditionally held by their specific gender. The children in the current sample are in Gottfredson's third stage of development, which suggests that children's occupational aspirations are shaped more by social valuation than by gender perceptions. As the impact of social valuation has been discussed earlier in this chapter, the discussion will now focus on the third aim of the research, namely exploring and describing the sample's occupational perceptions in terms of gender stereotyping.

An examination of the current research results reveals a decrease in gender-stereotypical views for girls and boys with increasing age. There were, however, differences recorded between the two gender groups, one of which was that with increasing age girls became less gender-stereotypical in terms of occupations viewed as suitable for themselves. As girls become older they start to accept traditional male-dominated occupations as suitable options for themselves. Overall the results revealed that girls regard most occupations as suitable options for boys; however, traditional female occupations (such as a nurse and a secretary) were still considered with some gender-stereotypical caution.

Boys, on the other hand, had clear gender-stereotypical views for the occupations of a nurse and a secretary as suitable options for boys at age nine. The results indicated that boys initially regarded these occupations as unsuitable for boys. However, through subsequent years of the study a steady decrease in these gender-stereotypical views was recorded. At age twelve boys held few

gender-stereotypical views about the fourteen occupations used in the present study, thus, suggesting that they would more readily allow themselves to aspire to most occupations. A steady decrease in gender-stereotypical views related to occupations suitable for girls was recorded, especially for the occupations of fire fighter and president, as boys became older.

Previous researchers involved in the larger longitudinal study (Cox, 2004; Dean, 2001; Olivier, 2004) have established that gender-stereotypical perceptions about certain occupations were present from an early age in both girls and boys. These studies found that the younger the child the more gender-stereotyped perceptions the child possessed. The findings of the current study also found a greater level of gender-stereotyped perceptions at younger ages. However, the study also established that with increasing age gender-stereotypical views decreased, thus supporting research by both Dean (2001) and Cox (2004). These findings also suggest similarities with several international studies that have compared children's occupational aspirations over different decades and concluded that occupational gender stereotyping has declined in recent decades (Bobo et al., 1998, Gregg & Dobson, 1980, Helwig, 1998b; Zuckerman & Sayre, 1982).

When examining the differences between gender groups, the results of the current study appear to provide some support for research conducted by McMahon and Patton (1997). They found that preadolescent girls, relative to male peers, appear to aspire to a more restricted range of occupations and engage in less career exploration during the primary school years. Other studies

on children's career development which have focused on children's gender-stereotyped perceptions and knowledge about occupations, have reported high degrees of gender stereotyping along traditional occupational gender lines (Barnhart, 1983; Cann & Garnett, 1984; McMahon & Patton, 1997; Schlossberg & Goodman, 1972; Tibbetts, 1975). Although the research results obtained during the first year of the current study broadly support these findings, subsequent results indicated a considerable decrease in both boys' and girls' gender-stereotyped perceptions. This supports the viewpoint of most researchers that gender development is a continuing process over the entire lifespan in which behaviour is modified and reinforced by contextual and situational factors (Zunker, 2006). Therefore, decreases in occupational gender stereotyping for both genders in the current sample provide support for viewing gender development as a continuing process.

Although the findings of the current research provide support for both child and career development theory, the influence of gender-stereotyping on occupations is not as pronounced as initially suggested. A body of research has found that children of all ages and across all elementary grades gender stereotype occupations (Bobo et al., 1998; Franken, 1983; Harris & Satter, 1981; Liben, Bigler, & Krogh, 2001; Stockard & McGee, 1990; Stroeher, 1994). It is clear, however, that children from an early age internalize differences between male and female roles and expectations. The current research established that as children grow older the influence of gender stereotyping on occupational aspirations becomes less influential. A possible explanation for this can be found

in the career development theory of Gottfredson which proposes that children are increasingly expected to base their occupational aspirations on social valuation and not on gender differences. Despite the fact that there are still occupations that are regarded as primarily male and female dominated professions (e.g., nurse for females and fire fighter for boys), children seem to increasingly realize that both genders can pursue these occupations if they choose to do so.

Although insight has been gained into the extent to which children hold gender-stereotypical views regarding certain occupations, additional research needs to be conducted to further explore these findings. This is especially critical if one considers Olivier's (2004) comparison of her research findings with current trends in the South African labour market. Olivier's (2004) findings indicate that children hold gender traditional perceptions about certain occupations and question whether children form occupational perceptions on the basis of what they see in society, or whether the gender traditionality evident in the South African labour market is a result of occupational perceptions formed early in childhood. Within the limits of the current research this question could not be explored and it is recommended that future research be encouraged to address this.

*Summary*

The results of the current study indicate that both boys and girls became less gender traditional in their aspirations towards traditional male or female occupations. Girls become less gender traditional with regards to boys becoming nurses and secretaries over the four year period. Similar trends were observed

with boys as they became less gender traditional with regards to girls becoming fire-fighters and presidents. The findings broadly provide support for both national and international research of occupational gender stereotyping in that an increase in age reflects a decrease in gender-stereotypical perceptions.

The next section discusses some of the limitations that were present in the current study.

## Limitations

The methodological underpinnings of quantitative research made it an attractive approach to adopt in the present study. There were, however, also limitations in using this type of research method that restricted the study. Within the broad sphere of quantitative research, an exploratory-descriptive design was adopted. This approach, because it is often regarded as the first stage in a sequence of studies (Neuman, 1997), rarely yields definite answers. The very nature of the data collected contributes to the direction of inquiry changing frequently as much of the information is potentially important. Another limitation was the fact that there is little or no control for extraneous variables in this kind of research. Factors that could not be accounted for include parental guidance and preparation of children prior to each interview, and the level of competence of interviewers to establish rapport with participants. These were two areas of concern also recognized by Dean (2001) during the initial study. The researcher did, however, make attempts to deal with this as parents were asked not to prepare children prior to the interviews and interviewers were trained and rated on their training. In addition, Dean (2001) identified extraneous variables

occurring as a result of a rapidly transforming South Africa as another potential factor that could not be controlled. A developing country inevitably recognizes differences in social class and these often run parallel to occupations that may become more visible as a result of transition.

Generalizability of the research results also could not be established as the sample consisted of a limited range in terms of socioeconomic status when compared to the greater population of preadolescent children in South Africa. Selecting schools according to a simple random sampling procedure and subsequently selecting children using non-probability convenience sampling reduced the external validity of the study. In future, a national study that explores the occupational aspiration and perception development of children across South African population groups would help redress this limitation.

Longitudinal research, as important as it is in reinvigorating the study of careers, poses numerous obstacles to researchers undertaking this form of data collection. Some of these limitations, including its complexity and financial implications, were acknowledged by other researchers involved in the current project (Cox, 2004; Dean, 2001; Olivier, 2004). However, a major limitation that could jeopardize the continuation of this study is the unscheduled sample attrition rate that inevitably forms part of most longitudinal projects. The continued use of quantitative methods will be dependent on the stability of sample size over subsequent years of the study. If the attrition rate continues as it has for the past few years, the study runs the risk of facing major methodological changes. A possible solution to this problem would be to redefine the process of data

collection by incorporating unstructured interviews as the primary means of gathering information. This practical methodological transformation would also be consistent with changes called for by recent career theory development and career counselling practice internationally. Such a development can be seen in the redefinition of Super's life-span life-space theory as career construction theory recognizing the primary role of clients as active agents shaping career development.

## Recommendations

Since the aim of the current study was to explore the career development of children, this section will firstly focus on providing recommendations for future researchers involved in the study and secondly on recommendations for broader career research in general. According to Watson and McMahon (2005), the diversity of methodologies evident in research on children's career development, when coupled with the limited research to date, makes a cohesive, comprehensive understanding of children's career development difficult to achieve. In the light of the previously mentioned limitations, the following recommendations are provided to assist researchers in formulating initial hypotheses as well as aiding the formalization of a coherent and well structured research project.

The present research followed a similar method of exploration to that of Dean (2001), Cox, (2004), and Olivier (2004), with only age and gender being described as variables impacting on occupational aspiration and perception development. The results of the present study support research conducted by

Grobler (2000) in recognizing the need for further research into other factors that could be influential in the development of occupational aspirations in preadolescent children. This need for continued research has also been recognized by Dean (2001), Cox (2004), and Olivier (2004). Since the current sample size does not allow for more extensive statistical analyses a recommendation for the larger and other longitudinal career studies would be to explore how the variables of socioeconomic status and culture impact on the development of occupational aspirations and perceptions of children as variables these largely remain marginalised in most career development research studies. Although the researcher attempted to examine intraindividual development in the current study, there was still a skewed focus towards primarily exploring and describing age and gender as the main constructs impacting on career development. Future researchers involved in the larger longitudinal study will benefit from broadening their research focus to include these aspects as part of their projects.

Because of the longitudinal nature of the present study, observations gathered over the duration of the study more clearly represent actual similarities and differences at various chronological ages than would be true for cross-sectional research samples. The present research supports findings by previous researchers involved in the project by reiterating the importance of viewing occupational aspiration development as a process that starts at an early age and is, to some extent, dependent on the developmental level of the participants. With increasing age the sample will enter into a stage of development where

more complex forms of investigation can be introduced as a means of data collection. This holds exciting possibilities for future research. During the final year of the present study the sample presented with a greater capacity than before in terms of thinking about their own career development, thus, suggesting an increasing maturity for more complex forms of data collecting, interventions or programmes.

The need for providing learners at this early age with suitable career related interventions seems paramount if theory is to transcend the barriers that for so many years prohibited the acknowledgment of career development already beginning during the preadolescent years. The fact remains that career development knowledge would provide career education programme developers with much needed baseline information which would enable them to contextualize their proposed curricula. In the light of the present research findings, and additional research conducted by Grobler (2000), it is proposed that children may benefit from exposure to alternative information about occupational gender roles in these career education programmes.

It will be valuable to track the development of the development of children's occupational aspirations and perceptions throughout the duration of their formal schooling (an aim of the larger longitudinal study) in order to assess the validity of both Piaget and Erikson's as well as Super and Gottfredson's theoretical propositions. In particular, establishing a mean estimate of when children start to employ career decision strategies based on the implementation of their self-

concept will greatly add to the understanding of the career developmental process.

The following recommendations are not specifically aimed at assisting future researchers involved in the larger longitudinal project, but also serve as a reminder to the broader society to recognize the importance of career education programmes as part of the education of all children. Career programmes in elementary schools require the development of model programs, resources, and strategies and, most importantly, carefully planned methods of curriculum integration (Zunker, 2006). A critical step in establishing career-related programs in elementary schools will be to convince teachers, administrators, and parents of the need for career education (Zunker, 2006). This could be accomplished in part by basing recommendations on accepted academic findings and research.

Zunker (2006) suggests several ideas that can be applied to career intervention programs in primary schools. The first is that self-concept begins to form early in childhood. Because of the influence of self-concept formation on career development, there is strong evidence to support directed experiences in enhancing the self-concept of school-going children. The results of the current research, in addition to earlier studies (Cox, 2004; Dean, 2001; Olivier, 2004), supports this belief.

Secondly, an important aspect of career development is building an understanding of strengths and limitations. This has also been recognized by Bandura et al. (2001) and children should be encouraged to learn how to identify and express strengths and limitations as a good way of building a foundation for

self-understanding. Although the competency-link to occupational aspirations was not explored in the present research, there was sufficient evidence to suggest the presence of a potential link between these aspects. For example, some children aspired to professional occupations in the sport they participated and excelled in. Future research into this area is clearly needed.

In addition to understanding the influence of self-concept and self-understanding on children's career development, the results of the present study established the presence of occupational gender stereotyping at younger ages than have been theoretically proposed. Although gender stereotyping appeared to decrease with increasing age, Zunker (2006) states that children learn to associate work roles by gender stereotyping and that this happens from an early age. Therefore, a recommendation from the current research would be to expose children to career information that discourages gender role stereotyping. This will broaden the range of occupations that children of both genders perceive as being available to explore. Learning about occupations and about people who are actually involved in occupations builds an awareness of differences among people and occupations.

What remains lacking is that not enough emphasis is placed on the process suggested for the implementation of career education programmes. In order to achieve this goal, the following recommendations for implementing career intervention programmes in schools have been adapted from Stakes and Hornby (2000). Stakes and Hornby did not specifically recommend the use of these guidelines for career education as they had a broader focus on creating a

learning environment for learners with special educational needs. However, since career education is still an unknown quantity for most learners in the South African schooling system, the use of these guidelines can be justified when, and if, appropriately adapted to this context.

Firstly, those responsible for implementing career intervention programs must be sensitive to a child's developmental level and their ability to deal with career information or concepts that results from this (Stakes & Hornby, 2000). Asking children to deal with career information or decision-making tasks that are too difficult for them will result in confusion and may cause distress or frustration. Secondly, the career exploration of children should begin from concrete examples and any conceptual thinking should be introduced slowly. Concept formation can only come through the use of the internalisation of the concrete examples used with children. Thirdly, explanation should accompany experience. The career intervention program presenters should explain exactly what is required and children need to be helped to understand not only what has been reached in the lesson but also how it was done. And lastly, careful records must be kept documenting the progress of children so that their development in terms of occupational aspirations and perceptions can be tracked. Considering that most educational institutions are continually changing and adjusting to meet societal and governmental expectations the need for ongoing research in order to monitor development and progress is essential.

However, in depth research has not only been called for within the educational system, but also within career psychology. The following

recommendations thus focus on career research in general. According to Stead and Schultheiss (2004), it would be important for future research to explore the correlates of effective progress within the career domain during childhood. Wahl and Blackhurst (2000), on the other hand, indicated a need for future research related to the development of educational and occupational aspirations. Another avenue of exploration that has been called for is for the continued investigation of the current influence of gender stereotypes on children's career development. The latter seems warranted especially since conflicting results have been found in recent gender studies (Phillips et al., 1995).  In addition, research is needed to clarify the process by which children come to associate occupational status levels with certain occupations or occupational clusters. The age at which children first begin to associate higher learning with specific occupational clusters and the influence of this association on children's occupational and educational aspirations are two related questions for future research posed by Wahl and Blackhurst (2000). The results of the present study indicate that it would be valuable to further research the stability of children's occupational aspirations and perceptions in order to examine whether there are critical points when children crystallize occupational aspirations. If possible, this should be done using a longitudinal design.

The process of tracking individual children's occupational aspirations has been a primary aim of the study. However, children in previous years of the larger project did not have the opportunity to reflect on their own development. This deficiency has recently been addressed with the inclusion of a reflective question

in the CAQ and marked an important transition from a "confirmation of theory" approach towards a more post-modern perspective viewing children as actively constructing their careers from an early age. These questions, although not analysed in this study, have the potential to provide much insight into the process of occupational development as viewed by the children themselves. An exciting possibility is to continue the exploration of the current sample's occupational aspiration development throughout their formal education using a personal reflective style to gather information. The success of such a study will, to a large extent, depend on the continuation of the larger project in view of the financial resources needed and the need to maintain an appropriate sample size.

### Final words

Today, work has prevailed as a most viable subject within the scientific community and has occupied scholars from a variety of disciplines who "dared to venture into the complex arena associated with work" (Zunker, 2006, p. 465). No researcher in this field has seriously doubted that social structures such as culture, gender and occupation or socio-economic status have a significant impact upon the life chances and life experiences of young adults (Evans, 2003). Such a view has driven much post-war theoretical thinking on the position of young people in society and the possibilities that they have in higher education, training and employment. The lack of focus on the process of most research reflects its cross-sectional nature, that is, it focuses on *where* children are at particular developmental ages but not *how* they got there nor *how* they are changing (Watson & McMahon, 2005). According to Watson and McMahon

(2005), the focus of research has been on identifying behaviour but not on researching the recursive nature of influences and processes on such behaviour. It tends to describe the status quo but fails to describe how this learned status can be changed or what processes need to be implemented.

The recent emphasis on the concept of 'agency', however, is a relatively new development, recognising that young people's experiences of life are complicated by the fact that they can react and respond to structural influences, that they can make their own decisions with respect to a number of major, as well as minor, life experiences and can actively shape some important dimensions of their experiences. However, without the necessary career guidance for learners there exists a persisting concern regarding the ability of the school going child to effectively negotiate the transition from school to work. The introduction of career programmes as part of the Life Orientation curriculum in schools has increasingly become recognized as critical to the overall enhancement of learning and learner development.

The present study found supportive evidence relating to how the process of career development occurs in preadolescent children. This calls for the implementation of credible and sustainable career intervention programs in schools across South Africa in order to remain accountable for why we conduct research. Considering that two factors have been identified as important to enhancing career exploration, namely *developmental timing* and the *quality of interventions* (Linn, Ferguson, & Egart, 2004), any career programme developer will have to conduct thorough research studies prior to designing and

implementing any intervention. Phillips (1992) reviewed career counselling research and concluded that when career exploration interventions include self-assessment, feedback, specific and general information about work, and advice on career decision making, more significant gains are achieved than when interventions are more narrowly focused. Unfortunately, the steps involved in implementing such a programme are vast and should not be undertaken without the investment of all stakeholders concerned.

In conclusion, when placing the findings of the current research into both human and career developmental contexts, it can be deduced that much needed information regarding occupational development of children has been obtained. In comparison to other fields of study, the career development of children significantly lags behind in breadth and depth in research and theory. It is therefore hoped that the results of the present study will stimulate continued research in the field in order to facilitate the development of suitable career interventions at learning institutions across South Africa.

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**APPENDIX A**

**<u>CAREER AWARENESS QUESTIONNAIRE FOR CHILDREN</u>**


Child's name: ………………………… Age:………… School:……………………………


CAREER AWARENESS QUESTIONNAIRE FOR CHILDREN


What would you like to be when you grow up?


1.      Please draw a picture of what you would like to be when you grow up.
        Tell me about your picture.


        What have you drawn?


        What does a ……………….. do?
        ……………………………………………………………………………………


        Why would you like to be a …………………?
        ……………………………………………………………………………………


        Do you know what you have to do to become a ……………………?
        ……………………………………………………………………………………


        Who first told you about a ……………..? .…………………………………………...
        Where did you first see a ………………?...………………………………………


2.      What other types of work that grown ups do, do you know about?
        a) …………………………………………………………………………………...


        What does a ……………………….. do? ……………………………………………

Where does a …………………………. Work? …………………………………...

How do you become a …………………? ………………………………………

What else do you know about a ………………………………………………

b) ………………………………………………………………………………...

What does a ……………………….. do? ………………………………………

Where does a …………………………. Work? …………………………………...

How do you become a …………………? ………………………………………

What else do you know about a ………………………………………………

c) ………………………………………………………………………………...

What does a ……………………….. do? ………………………………………

Where does a …………………………. work? …………………………………...

How do you become a …………………? ………………………………………

What else do you know about a ………………………………………………

PLEASE TURN OVER

3.    What type of work could boys/girls do? (opposite gender)

………………………………………………………………………………………

4.    (Before every question, first ask the child if he/she knows what it is).

| | Knows what it is. Yes/No | Yes | No | Don't Know |
|---|---|---|---|---|
| Could a boy be a soldier when he is big? | | | | |
| Could a girl be a soldier when she is big? | | | | |
| Could a boy be a president when he is big? | | | | |
| Could a girl be a president when she is big? | | | | |
| Could a boy be a nurse when he is big? | | | | |
| Could a girl be a nurse when she is big? | | | | |
| Could a boy be a fireman when he is big? | | | | |
| Could a girl be a fireman when she is big? | | | | |
| Could a boy drive a truck when he is big? | | | | |
| Could a girl be drive a truck she is big? | | | | |
| Could a boy be a teacher when he is big? | | | | |
| Could a girl be a teacher when she is big? | | | | |
| Could a boy be a policeman when he is big? | | | | |
| Could a girl be a policeman when she is big? | | | | |
| Could a boy be a vet when he is big? | | | | |
| Could a girl be a vet when she is big? | | | | |
| Could a boy be a singer when he is big? | | | | |
| Could a girl be a singer when she is big? | | | | |

**CAREER AWARENESS QUESTIONNAIRE FOR CHILDREN**

Child's name: ………………………… Age:………… School:…………………………

CAREER AWARENESS QUESTIONNAIRE FOR CHILDREN

1. a) What would you like to be when you grow up?

   ………………………………………………………………………………………….

   b) What does a ……………………… do?

   …...……………………………………………….…………………………………….

   c) Why would you like to be a …………………?

   …...……………………………………………….…………………………………….

   d) Do you know what you have to do to become a ……………………?

   …...……………………………………………….…………………………………….

   e) Who first told you about a ……………..? …………………………………………...

   f) Where did you first see a ……………?…...…………………………………………

   g) What would make it <u>easy</u> for you to become a ……………….?

   …...……………………………………………….…………………………………….

   h) What would make it <u>difficult</u> for you to become a ………………..?

   …...……………………………………………….…………………………………….

2. Other than a …………….. (from Question 1), what else would you like to be when you grow up?

   ………………………………………………………………………………………….

   ………………………………………………………………………………………….

3. Can you name other types of jobs grown ups do?

   …...………………………………………………….…………………………………

   …………………………………………………………………………………………...

4.a)  What are some jobs you think women **can** do?

………………………………………………………………………………………….

………………………………………………………………………………………….

………………………………………………………………………………………….

b)  What are some jobs you think women **cannot** do?

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

c)  What are some jobs you think men **can** do?

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

………

d)  What are some jobs you think men **cannot** do?

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

e)  What are some jobs you think **both** men and women **can** do?

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

PLEASE TURN OVER

5.  (Before every question, first ask the child if he/she knows what it is).

| | Knows what it is. Yes/No | Yes | No | Don't Know |
|---|---|---|---|---|
| Could a boy be a fire-fighter when he is big? | | | | |
| Could a girl be a fire-fighter when she is big? | | | | |
| Could a boy be a hairdresser when he is big? | | | | |
| Could a girl be a hairdresser when she is big? | | | | |
| Could a boy be a pop singer when he is big? | | | | |
| Could a girl be a pop singer when she is big? | | | | |
| Could a boy be an author (write stories / books) when he is big? | | | | |
| Could a girl be an author (write stories / books) when she is big? | | | | |
| Could a boy be a doctor when he is big? | | | | |
| Could a girl be a doctor when she is big? | | | | |
| Could a boy be a chemist when he is big? | | | | |
| Could a girl be a chemist when she is big? | | | | |
| Could a boy be a nurse when he is big? | | | | |
| Could a girl be a nurse when she is big? | | | | |
| Could a boy be a police officer when he is big? | | | | |
| Could a girl be a police officer when she is big? | | | | |
| Could a boy be a teacher when he is big? | | | | |
| Could a girl be a teacher when she is big? | | | | |
| Could a boy be a TV announcer when he is big? | | | | |
| Could a girl be a TV announcer when she is big? | | | | |
| Could a boy be a lawyer when he is big? | | | | |
| Could a girl be a lawyer when she is big? | | | | |
| Could a boy be a secretary when he is big? | | | | |
| Could a girl be a secretary when she is big? | | | | |
| Could a boy be a bank teller when she is big? | | | | |
| Could a girl be a bank teller when she is big? | | | | |
| Could a boy be a president when he is big? | | | | |
| Could a girl be a president when she is big? | | | | |

# APPENDIX C

## <u>CAREER AWARENESS QUESTIONNAIRE FOR CHILDREN</u>

Child's name: ………………………  Age:…………  School:…………………………

CAREER AWARENESS QUESTIONNAIRE FOR CHILDREN

1. a) What would you like to be when you grow up?

   ………………………………………………………………………………………………

   b) What does a ……………………… do?

   ……...………………………………………………………………………………………

   c) Why would you like to be a …………………?

   ……...………………………………………………………………………………………

   d) Do you know what you have to do to become a ……………………?

   ……...………………………………………………………………………………………

   e) Who first told you about a ……………..? …………………………………………...

   f) Where did you first see a ……………?…...…………………………………………

   g) What would make it <u>easy</u> for you to become a ……………….?

   ……...………………………………………………………………………………………

   h) What would make it <u>difficult</u> for you to become a ………………..?

   ……...………………………………………………………………………………………

2. Other than a …………….. (from Question 1), what else would you like to be when

   you grow up?

   ………………………………………………………………………………………………

   ………………………………………………………………………………………………

3. Can you name other types of jobs grown ups do?

   ……...………………………………………………………….…………………………

   …………………………………………………………………………………………...

4.a)  What are some jobs you think women **can** do?

……………………………………………………………………………………….

……………………………………………………………………………………….

……………………………………………………………………………………….


b)  What are some jobs you think women **cannot** do?

………………………………………………………………………………………

………………………………………………………………………………………

………………………………………………………………………………………


c)  What are some jobs you think men **can** do?

………………………………………………………………………………………

………………………………………………………………………………………

………………………………………………………………………………………

………


d)  What are some jobs you think men **cannot** do?

………………………………………………………………………………………

………………………………………………………………………………………

………………………………………………………………………………………


e)  What are some jobs you think **both** men and women **can** do?

………………………………………………………………………………………

………………………………………………………………………………………

………………………………………………………………………………………

6.  (Before every question, first ask the child if he/she knows what it is).

| | Knows what it is. Yes/No | Yes | No | Don't Know |
|---|---|---|---|---|
| Could a boy be a fire-fighter when he is big? | | | | |
| Could a girl be a fire-fighter when she is big? | | | | |
| Could a boy be a hairdresser when he is big? | | | | |
| Could a girl be a hairdresser when she is big? | | | | |
| Could a boy be a pop singer when he is big? | | | | |
| Could a girl be a pop singer when she is big? | | | | |
| Could a boy be an author (write stories / books) when he is big? | | | | |
| Could a girl be an author (write stories / books) when she is big? | | | | |
| Could a boy be a doctor when he is big? | | | | |
| Could a girl be a doctor when she is big? | | | | |
| Could a boy be a chemist when he is big? | | | | |
| Could a girl be a chemist when she is big? | | | | |
| Could a boy be a nurse when he is big? | | | | |
| Could a girl be a nurse when she is big? | | | | |
| Could a boy be a police officer when he is big? | | | | |
| Could a girl be a police officer when she is big? | | | | |
| Could a boy be a teacher when he is big? | | | | |
| Could a girl be a teacher when she is big? | | | | |
| Could a boy be a TV announcer when he is big? | | | | |
| Could a girl be a TV announcer when she is big? | | | | |
| Could a boy be a lawyer when he is big? | | | | |
| Could a girl be a lawyer when she is big? | | | | |
| Could a boy be a secretary when he is big? | | | | |
| Could a girl be a secretary when she is big? | | | | |
| Could a boy be a bank teller when she is big? | | | | |
| Could a girl be a bank teller when she is big? | | | | |
| Could a boy be a president when he is big? | | | | |
| Could a girl be a president when she is big? | | | | |

| Occupational Choice | | | | | | |
|---|---|---|---|---|---|---|
| 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
| | | | | | | |

Over the last seven years we have been talking to you about careers that you have been thinking about. Now here is a chance to look back at the careers you have thought about and to discuss them.

i)      What do you think the reasons were for choosing each of these careers?

_____

_____

_____

_____

ii)     Have your careers thoughts changed over the last few years?    YES    NO

      If yes, how have your career thoughts changed?

_____

_____

_____

      If no, how have your career thoughts stayed the same?

_____

_____

_____

If the examiner can identify a theme, e.g. an interest in animals, all medical professions, art as a theme, etc., clarify with the child if this is accurate.

_____

_____

_____

**APPENDIX D**

**<u>BIOGRAPHICAL QUESTIONNAIRE</u>**

Name of Child ………………………………………….. Age………………….

School…………………………………………………... Gender………………

Parent's Name …………………………………………………………………...

Address …………………………………………………………………………

Contact telephone numbers: ..…………………. (home) …………………………(cell)

Email: ………………………………………….

<u>Father's or breadwinner's occupation</u>

      a)     Place of employment ………………………………………………….

      b)     What type of work do you do…………………………………………....

<u>Mother's occupation</u>

      c)     Place of employment ………………………………………………….

      d)     What type of work do you do…………………………………………....

Has your child expressed an interest in a particular occupation during the last year?

Yes ……………        No……………..

If yes, what occupation? …………………………………………………………...

I hereby grant permission for my child to take part in a career awareness study conducted

by postgraduate students in the Psychology Department of the Nelson Mandela

Metropolitan University.

………………………………………

**SIGNATURE OF PARENT**

**APPENDIX E**

<u>**PARENT'S CONSENT FORM**</u>

Dear Sir/Madam

For the past number of years you have kindly agreed for your child to be part of a study that is investigating the career awareness and aspirations of children in the Nelson Mandela Metropole.

Although the results of the study have not yet been finalized, the research has attracted much national as well as international interest. Interim results of the study, which have involved your child, have been presented at congresses both locally and abroad. Due to the continued interest in this research on South African children, it has been decided to continue to explore the career aspirations and perceptions of the same group of children over a number of years. We would very much like your child to continue to be part of this study.

The study would entail us contacting you annually in order to interview your child. Interviews may be conducted at your child's school, if permitted, or in your home at your convenience. The length is approximately 15 minutes.

If you are willing for your child to take part in this study, please be so kind as to complete the attached form. Without your help, this research would not be possible and your help in this regard is greatly appreciated. Please note that all information supplied will be treated as strictly confidential.

If you have any queries, please do not hesitate to contact us.

Yours sincerely

<u>**Prof. M. B. Watson**</u>
<u>**SUPERVISOR**</u>

<u>**Prof. C. D. Foxcroft**</u>
<u>**CO-SUPERVISOR**</u>